

Handbook of Research on

# Nascent Entrepreneurship and Creating New Ventures



António Carrizo Moreira and José Guilherme Leitão Dantas



Copyright 2021. Business Science Reference. All rights reserved. May not be reproduced in any form without permission from the publisher, except fair uses permitted under U.S. or applicable copyright law.

# Handbook of Research on Nascent Entrepreneurship and Creating New Ventures

António Carrizo Moreira  
*University of Aveiro, Portugal*

José Guilherme Leitão Dantas  
*CARME, School of Technology and Management, Polytechnic of Leiria, Portugal*

A volume in the Advances in Business Strategy  
and Competitive Advantage (ABSCA) Book Series



Published in the United States of America by  
IGI Global  
Business Science Reference (an imprint of IGI Global)  
701 E. Chocolate Avenue  
Hershey PA, USA 17033  
Tel: 717-533-8845  
Fax: 717-533-8661  
E-mail: [cust@igi-global.com](mailto:cust@igi-global.com)  
Web site: <http://www.igi-global.com>

Copyright © 2021 by IGI Global. All rights reserved. No part of this publication may be reproduced, stored or distributed in any form or by any means, electronic or mechanical, including photocopying, without written permission from the publisher. Product or company names used in this set are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark.

Library of Congress Cataloging-in-Publication Data

Names: Moreira, António Carrizo, editor. | Dantas, Jose Guilherme Leitao, 1955- editor.

Title: Handbook of research on nascent entrepreneurship and creating new ventures / António Carrizo Moreira and José Guilherme Leitão Dantas, editors.

Description: Hershey : Business Science Reference, 2020. | Includes bibliographical references and index. | Summary: "This book defines nascent entrepreneurship as the process of creating of a new business venture and provides entrepreneurs, researchers and the business world with a publication on the contribution of nascent entrepreneurship to the business world"-- Provided by publisher.

Identifiers: LCCN 2020023187 (print) | LCCN 2020023188 (ebook) | ISBN 9781799848264 (hardcover) | ISBN 9781799848271 (ebook)

Subjects: LCSH: Entrepreneurship. | New business enterprises. | Small business.

Classification: LCC HB615 .H265984 2020 (print) | LCC HB615 (ebook) | DDC 658.1/1--dc23

LC record available at <https://lccn.loc.gov/2020023187>

LC ebook record available at <https://lccn.loc.gov/2020023188>

This book is published in the IGI Global book series Advances in Business Strategy and Competitive Advantage (ABSCA) (ISSN: 2327-3429; eISSN: 2327-3437)

British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book is new, previously-unpublished material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

For electronic access to this publication, please contact: [eresources@igi-global.com](mailto:eresources@igi-global.com).



# Advances in Business Strategy and Competitive Advantage (ABSCA) Book Series

Patricia Ordóñez de Pablos  
Universidad de Oviedo, Spain

ISSN:2327-3429  
EISSN:2327-3437

## MISSION

Business entities are constantly seeking new ways through which to gain advantage over their competitors and strengthen their position within the business environment. With competition at an all-time high due to technological advancements allowing for competition on a global scale, firms continue to seek new ways through which to improve and strengthen their business processes, procedures, and profitability.

The **Advances in Business Strategy and Competitive Advantage (ABSCA) Book Series** is a timely series responding to the high demand for state-of-the-art research on how business strategies are created, implemented and re-designed to meet the demands of globalized competitive markets. With a focus on local and global challenges, business opportunities and the needs of society, the **ABSCA** encourages scientific discourse on doing business and managing information technologies for the creation of sustainable competitive advantage.

## COVERAGE

- Foreign Investment Decision Process
- Strategic Management
- International Business Strategy
- Competitive Strategy
- Resource-Based Competition
- Balanced Scorecard
- Small and Medium Enterprises
- Strategy Performance Management
- Adaptive Enterprise
- Business Models

IGI Global is currently accepting manuscripts for publication within this series. To submit a proposal for a volume in this series, please contact our Acquisition Editors at [Acquisitions@igi-global.com](mailto:Acquisitions@igi-global.com) or visit: <http://www.igi-global.com/publish/>.

The Advances in Business Strategy and Competitive Advantage (ABSCA) Book Series (ISSN 2327-3429) is published by IGI Global, 701 E. Chocolate Avenue, Hershey, PA 17033-1240, USA, [www.igi-global.com](http://www.igi-global.com). This series is composed of titles available for purchase individually; each title is edited to be contextually exclusive from any other title within the series. For pricing and ordering information please visit <http://www.igi-global.com/book-series/advances-business-strategy-competitive-advantage/73672>. Postmaster: Send all address changes to above address. © © 2021 IGI Global. All rights, including translation in other languages reserved by the publisher. No part of this series may be reproduced or used in any form or by any means – graphics, electronic, or mechanical, including photocopying, recording, taping, or information and retrieval systems – without written permission from the publisher, except for non commercial, educational use, including classroom teaching purposes. The views expressed in this series are those of the authors, but not necessarily of IGI Global.

## Titles in this Series

For a list of additional titles in this series, please visit:

<https://www.igi-global.com/book-series/advances-business-strategy-competitive-advantage/73672>

### ***Advanced Models and Tools for Effective Decision Making Under Uncertainty and Risk Contexts***

Vicente González-Prida (University of Seville, Spain & UNED, Spain) and María Carmen Carnero (University of Castilla-La Mancha, Spain)

Business Science Reference • © 2021 • 423pp • H/C (ISBN: 9781799832461) • US \$195.00

### ***Knowledge Management for Corporate Social Responsibility***

Gregorio Martín-de Castro (Complutense University of Madrid, Spain) and Jaime González-Masip (Rey Juan Carlos University, Spain)

Business Science Reference • © 2021 • 300pp • H/C (ISBN: 9781799848332) • US \$195.00

### ***Handbook of Research on Quality Management for Competitive Advantage in Global Markets***

José Manuel Saiz-Álvarez (EGADE Business School, Tecnológico de Monterrey, Mexico & Mexican Academy of Sciences, Mexico) and Beatriz Olalla-Caballero (Pontifical University of Salamanca, Spain)

Business Science Reference • © 2021 • 400pp • H/C (ISBN: 9781799850366) • US \$265.00

### ***Applications of Soft Systems Methodology for Organizational Change***

Maryam Ebrahimi (Independent Researcher, Germany)

Business Science Reference • © 2021 • 236pp • H/C (ISBN: 9781799845041) • US \$195.00

### ***Handbook of Research on Multidisciplinary Approaches to Entrepreneurship, Innovation, and ICTs***

Luísa Cagica Carvalho (Instituto Politécnico de Setúbal, Portugal & CEFAGE, Universidade de Évora, Portugal)  
Leonilde Reis (Instituto Politécnico de Setúbal, Portugal) Alcina Prata (Instituto Polytechnic of Setúbal, Portugal)  
and Raquel Pereira (Instituto Polytechnic of Setúbal, Portugal)

Business Science Reference • © 2021 • 455pp • H/C (ISBN: 9781799840992) • US \$295.00

### ***Ethical Standards and Practice in Managerial and Financial Accounting***

Ionica Oncioiu (Titu Maiorescu University, Romania)

Business Science Reference • © 2021 • 300pp • H/C (ISBN: 9781799840121) • US \$195.00

### ***Sustainability Reporting, Ethics, and Strategic Management Strategies for Modern Organizations***

Ionica Oncioiu (Titu Maiorescu University, Romania) Sorinel Căpușneanu (Titu Maiorescu University, Romania)  
Dan Ioan Topor (1 Decembrie 1918 University, Romania) and Dana Maria (Oprea) Constantin (University of Bucharest, Romania)

Business Science Reference • © 2021 • 320pp • H/C (ISBN: 9781799846376) • US \$195.00



701 East Chocolate Avenue, Hershey, PA 17033, USA

Tel: 717-533-8845 x100 • Fax: 717-533-8661

E-Mail: [cust@igi-global.com](mailto:cust@igi-global.com) • [www.igi-global.com](http://www.igi-global.com)

## Editorial Advisory Board

Luísa Cagica Carvalho, *Institute Polytechnic of Setúbal, Portugal & CEFAGE, University of Évora, Portugal*

Susana Cristina Fernandes Rodrigues, *CARME, School of Technology and Management, Polytechnic of Leiria, Portugal*

Álvaro Lopes Dias, *Universidade Lusófona, Lisbon, Portugal*

Fernando Manuel Valente, *CINEA, ESTS, Institute Polytechnic of Setúbal, Portugal*

Marilena Vecco, *Burgundy Business School, Dijon, France*

# List of Contributors

<b>Bagheri, Mohammad</b> / IPAM, Portugal.....	163
<b>Basheer, Muhammad Farhan</b> / School of Economics, Finance, and Banking (SEFB), College of Business (COB), Universiti Utara Malaysia, Malaysia .....	211
<b>Bernardino, Susana</b> / CEOS, ISCAP, Polytechnic of Porto, Portugal.....	228
<b>Campbell, Tessa</b> / Tasmanian School of Business and Economics, University of Tasmania, Australia .....	143
<b>Cardella, Giuseppina Maria</b> / Universidad de Salamanca, Spain .....	34, 372
<b>Conceição, Oscarina</b> / Polytechnic Institute of Cavado and Ave, Portugal & Dinâmia’CET-IUL, Portugal.....	316
<b>Cruz, Rui Nunes</b> / Universidade Europeia, Portugal.....	172
<b>Cui, Anna Anna</b> / University of Tasmania, Australia.....	143
<b>Dang, Cat-My</b> / University of Bremen, Germany .....	351
<b>Dantas, José Guilherme Leitão</b> / CARME, School of Technology and Management, Polytechnic of Leiria, Portugal .....	1
<b>Derera, Evelyn</b> / University of KwaZulu-Natal, South Africa .....	253
<b>Dias, Isabel Simões</b> / Life Quality Research Centre, School of Education and Social Sciences, Instituto Politécnico de Leiria, Portugal .....	1
<b>Dzingirai, Mufaro</b> / Midlands State University, Zimbabwe .....	194
<b>Fernandes, Filipa</b> / IPAM, Portugal .....	172
<b>Ferreira, Marisa R.</b> / CIICESI, ESTG, Polytechnic of Porto, Portugal .....	335
<b>França, Alexandra</b> / University of Vigo, Spain .....	61, 163
<b>Frankenbach, Silja</b> / University of Aveiro, Portugal .....	61
<b>Freitas Santos, J.</b> / CEOS, ISCAP, Polytechnic of Porto, Portugal .....	228
<b>Gabriel, Vítor M. S.</b> / Guarda’s Polytechnic Institute, Portugal.....	372
<b>Gallardo-Vázquez, Dolores</b> / University of Extremadura, Spain .....	117
<b>Hameed, Waseem Ul</b> / School of Business, Management, and Administrative Sciences (SBM&AS), Department of Islamic and Conventional Banking (ICB), The Islamia University of Bahawalpur (IUB), Pakistan .....	211
<b>Hernández-Sánchez, Brizeida Raquel</b> / Universidad de Salamanca, Spain .....	34, 372
<b>Iqbal, Jawad</b> / School of Business, Management and Administrative Sciences (SBM&AS), The Islamia University of Bahawalpur (IUB), Pakistan.....	211
<b>Knox, Matthew</b> / University of Tasmania, Australia .....	143
<b>López-Cózar-Navarro, Cristina</b> / Universidad Politécnica de Madrid, Spain .....	273
<b>Malheiro, Joana</b> / Porto Business School, Portugal.....	335
<b>Meo, Muhammad Saeed</b> / Superior University, Lahore, Pakistan .....	211

<b>Moreira, António Carrizo</b> / <i>University of Aveiro, Portugal</i> .....	61
<b>Natário, Maria Manuela Santos</b> / <i>Research Unit for Inland Development, Polytechnic Institute of Guarda, Portugal</i> .....	92
<b>Nisar, Qasim Ali</b> / <i>Superior University, Lahore, Pakistan</i> .....	211
<b>Nunes, Beatriz Cunha</b> / <i>Porto Business School, Portugal</i> .....	335
<b>Oguntuase, Oluwaseun James</b> / <i>Lagos State University, Nigeria</i> .....	295
<b>Oliveira, Silvie</b> / <i>ISCAP, Polytechnic of Porto, Portugal</i> .....	228
<b>Pimentel, Juciely</b> / <i>Porto Business School, Portugal</i> .....	335
<b>Priede-Bergamini, Tiziana</b> / <i>Universidad Europea de Madrid, Spain</i> .....	273
<b>Proença, João F.</b> / <i>Faculty of Economics, University of Porto, Portugal &amp; ADVANCE/CSG, ISEG, University of Lisbon, Portugal</i> .....	335
<b>Raimundo, Ricardo Gomes</b> / <i>IPAM, Portugal</i> .....	172
<b>Razzaq, Shazma</b> / <i>Awang Had Salleh Graduate School of Art and Sciences, Universiti Utara Malaysia, Malaysia</i> .....	211
<b>Rodrigues, Vanessa</b> / <i>Polytechnic Institute of Cavado and Ave, Portugal</i> .....	316
<b>Rosário, Albérico Travassos</b> / <i>University of Aveiro, Portugal</i> .....	172
<b>Rowlands, Josh</b> / <i>Tasmanian School of Business and Economics, University of Tasmania, Australia</i> .....	143
<b>Sánchez-Domínguez, Juan de la Cruz</b> / <i>University of Extremadura, Spain</i> .....	117
<b>Sánchez-García, Jose C.</b> / <i>Universidad de Salamanca, Spain</i> .....	372
<b>Sánchez-García, José Carlos</b> / <i>Universidad de Salamanca, Spain</i> .....	34
<b>Saraiva, Helena I. B.</b> / <i>Guarda's Polytechnic Institute, Portugal</i> .....	372
<b>Valente, Fernando Manuel</b> / <i>CINEA, ESTS, Polytechnic Institute of Setúbal, Portugal</i> .....	1
<b>Vereb, Vanda</b> / <i>University of Minho, Portugal</i> .....	61
<b>Vilares, Alexandra</b> / <i>University of Minho, Portugal</i> .....	61



# Table of Contents

**Preface**..... XX

## **Chapter 1**

Is Entrepreneurship a Bio-Social Phenomenon? The Role of Non-Cognitive Skills and Education..... 1

*José Guilherme Leitão Dantas, CARME, School of Technology and Management,  
Polytechnic of Leiria, Portugal*

*Fernando Manuel Valente, CINEA, ESTS, Polytechnic Institute of Setúbal, Portugal*

*Isabel Simões Dias, Life Quality Research Centre, School of Education and Social Sciences,  
Instituto Politécnico de Leiria, Portugal*

## **Chapter 2**

The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs: Psychological  
Characteristics and Socio-Cultural Background ..... 34

*José Carlos Sánchez-García, Universidad de Salamanca, Spain*

*Brizeida Raquel Hernández-Sánchez, Universidad de Salamanca, Spain*

*Giuseppina Maria Cardella, Universidad de Salamanca, Spain*

## **Chapter 3**

Much More Than Meets the Eye: Unveiling the Challenges Behind Nascent Entrepreneurship ..... 61

*Alexandra França, University of Vigo, Spain*

*Silja Frankenbach, University of Aveiro, Portugal*

*Vanda Vereb, University of Minho, Portugal*

*Alexandra Vilares, University of Minho, Portugal*

*António Carrizo Moreira, University of Aveiro, Portugal*

## **Chapter 4**

Factors Influencing Nascent Entrepreneurship Across Countries: An Evolutionary Perspective ..... 92

*Maria Manuela Santos Natário, Research Unit for Inland Development, Polytechnic Institute  
of Guarda, Portugal*

## **Chapter 5**

Analysis of Entrepreneurial Dynamics in Spain: The Role of Corporate Social Responsibility ..... 117

*Dolores Gallardo-Vázquez, University of Extremadura, Spain*

*Juan de la Cruz Sánchez-Domínguez, University of Extremadura, Spain*

## **Chapter 6**

Will They or Won't They? Understanding Nascent Entrepreneurship and Entrepreneurial

Emergence Through Authentic Leadership Behaviours ..... 143

*Josh Rowlands, Tasmanian School of Business and Economics, University of Tasmania, Australia*

*Matthew Knox, University of Tasmania, Australia*

*Anna Anna Cui, University of Tasmania, Australia*

*Tessa Campbell, Tasmanian School of Business and Economics, University of Tasmania, Australia*

## **Chapter 7**

Knowledge Spillovers and Strategic Entrepreneurship Revisited: A Review ..... 163

*Mohammad Bagheri, IPAM, Portugal*

*Alexandra França, University of Vigo, Spain*

## **Chapter 8**

Determinants of Nascent Entrepreneurship Development ..... 172

*Albérico Travassos Rosário, University of Aveiro, Portugal*

*Filipa Fernandes, IPAM, Portugal*

*Ricardo Gomes Raimundo, IPAM, Portugal*

*Rui Nunes Cruz, Universidade Europeia, Portugal*

## **Chapter 9**

Challenges to Necessity-Driven Nascent Entrepreneurship ..... 194

*Mufaro Dzingirai, Midlands State University, Zimbabwe*

## **Chapter 10**

Women Entrepreneurs and Microfinance Institutions: A Way to Create New Ventures ..... 211

*Waseem Ul Hameed, School of Business, Management, and Administrative Sciences*

*(SBM&AS), Department of Islamic and Conventional Banking (ICB), The Islamia*

*University of Bahawalpur (IUB), Pakistan*

*Muhammad Farhan Basheer, School of Economics, Finance, and Banking (SEFB), College of Business (COB), Universiti Utara Malaysia, Malaysia*

*Jawad Iqbal, School of Business, Management and Administrative Sciences (SBM&AS), The Islamia University of Bahawalpur (IUB), Pakistan*

*Qasim Ali Nisar, Superior University, Lahore, Pakistan*

*Muhammad Saeed Meo, Superior University, Lahore, Pakistan*

*Shazma Razaq, Awang Had Salleh Graduate School of Art and Sciences, Universiti Utara Malaysia, Malaysia*

## **Chapter 11**

- Financing Nascent Entrepreneurs by Reward-Based Crowdfunding: Lessons From Indiegogo Campaigns..... 228  
*Susana Bernardino, CEOS, ISCAP, Polytechnic of Porto, Portugal*  
*J. Freitas Santos, CEOS, ISCAP, Polytechnic of Porto, Portugal*  
*Silvie Oliveira, ISCAP, Polytechnic of Porto, Portugal*

## **Chapter 12**

- Awareness of Government Entrepreneurial Support Programmes: A Survey of Women Entrepreneurs in South Africa ..... 253  
*Evelyn Derera, University of KwaZulu-Natal, South Africa*

## **Chapter 13**

- Social Entrepreneurship and Related Concepts: The Path of Opportunity to Foster New Ventures .. 273  
*Cristina López-Cózar-Navarro, Universidad Politécnica de Madrid, Spain*  
*Tiziana Priede-Bergamini, Universidad Europea de Madrid, Spain*

## **Chapter 14**

- Advancing a Framework for Entrepreneurship Development in a Bioeconomy ..... 295  
*Oluwaseun James Oguntuase, Lagos State University, Nigeria*

## **Chapter 15**

- Academic Entrepreneurship in Portugal: Case Study of Academic Spin-Off Companies..... 316  
*Oscarina Conceição, Polytechnic Institute of Cavado and Ave, Portugal & Dinâmia'CET-IUL, Portugal*  
*Vanessa Rodrigues, Polytechnic Institute of Cavado and Ave, Portugal*

## **Chapter 16**

- Life in a Bag: Sustainability, Green Economy, and Business Strategy – A Case Study ..... 335  
*Beatriz Cunha Nunes, Porto Business School, Portugal*  
*Juciely Pimentel, Porto Business School, Portugal*  
*Joana Malheiro, Porto Business School, Portugal*  
*Marisa R. Ferreira, CIICESI, ESTG, Polytechnic of Porto, Portugal*  
*João F. Proença, Faculty of Economics, University of Porto, Portugal & ADVANCE/CSG, ISEG, University of Lisbon, Portugal*

## **Chapter 17**

- The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship ..... 351  
*Cat-My Dang, University of Bremen, Germany*

**Chapter 18**

Entrepreneurship and Happiness: Which Is the Link?..... 372

*Helena I. B. Saraiva, Guarda's Polytechnic Institute, Portugal*

*Vitor M. S. Gabriel, Guarda's Polytechnic Institute, Portugal*

*Jose C. Sánchez-García, Universidad de Salamanca, Spain*

*Brizeida Raquel Hernández-Sánchez, Universidad de Salamanca, Spain*

*Giuseppina Maria Cardella, Universidad de Salamanca, Spain*

**Compilation of References** ..... 390

**About the Contributors** ..... 473

**Index**..... 480

# Detailed Table of Contents

**Preface**..... XX

## **Chapter 1**

Is Entrepreneurship a Bio-Social Phenomenon? The Role of Non-Cognitive Skills and Education..... 1

*José Guilherme Leitão Dantas, CARME, School of Technology and Management,  
Polytechnic of Leiria, Portugal*

*Fernando Manuel Valente, CINEA, ESTS, Polytechnic Institute of Setúbal, Portugal*

*Isabel Simões Dias, Life Quality Research Centre, School of Education and Social Sciences,  
Instituto Politécnico de Leiria, Portugal*

The entrepreneur is regarded as a driver of economic development encouraging researchers to delve into the causes that lead some people to choose the entrepreneurial activity. The response has followed two approaches: biological and sociological. The former privileges non-cognitive skills while the sociological favors factors are associated with learning and contextual conditions. Thus, the question arises: Is behavior determined by non-cognitive skills or can it be ‘shaped’ throughout an individual’s lifetime? Using an exploratory approach supported by a literature review and contacts with the Portuguese (context under analysis) educational system, the authors aim to understand which skills are critical, the way they are acquired and developed, and the role the educational system plays in their development, concluding that entrepreneurial activity implies cognitive and non-cognitive skills which the system must deliver provided the teachers’ training in advance.

## **Chapter 2**

The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs: Psychological Characteristics and Socio-Cultural Background..... 34

*José Carlos Sánchez-García, Universidad de Salamanca, Spain*

*Brizeida Raquel Hernández-Sánchez, Universidad de Salamanca, Spain*

*Giuseppina Maria Cardella, Universidad de Salamanca, Spain*

Research confirms that entrepreneurial intention plays an important role in the decision to start a new firm. For this reason, it has received a lot of attention from researchers who have studied it from different perspectives, using different variables. The goal of this chapter is to investigate the reasons why some individuals tend more to entrepreneurship than others. By utilizing Schwartz’s theory of cultural values as the explaining model, this paper analyzes cultural values in relation to three bipolar dimensions: conservation vs. autonomy, hierarchy vs. egalitarianism, and mastery vs. harmony. The authors applied the EOQ scale to a sample of 600 nascent entrepreneurs aged between 25 and 35, belonging to several autonomous communities in Spain. The results show significant differences in the variables of personal, contextual, and entrepreneurial intention regarding the gender, occupation, or professions of the parents and the autonomous community.

### **Chapter 3**

Much More Than Meets the Eye: Unveiling the Challenges Behind Nascent Entrepreneurship ..... 61

*Alexandra França, University of Vigo, Spain*

*Silja Frankenbach, University of Aveiro, Portugal*

*Vanda Vereb, University of Minho, Portugal*

*Alexandra Vilares, University of Minho, Portugal*

*António Carrizo Moreira, University of Aveiro, Portugal*

Nascent entrepreneurship plays an important role in the study of entrepreneurship. It has been studied from different angles, especially from the psychological and sociological perspective as nascent entrepreneurs have distinctive traits and competencies. Other important foci of research are the investigation of the environment in which nascent entrepreneurs operate, as well as the way both the identification and exploitation of entrepreneurial opportunities have emerged. The main objective of this chapter is to address (1) the main individual characteristics that entrepreneurs have in common; (2) the environmental factors contributing to new venture creation; and (3) the steps in the creation process. The chapter departs from the fundamental process of nascent entrepreneurship, which is centered on opportunity recognition, evaluation, and exploitation, and is complemented by the way how contextual factors and personal characteristics and competencies influence the new venture creation process.

### **Chapter 4**

Factors Influencing Nascent Entrepreneurship Across Countries: An Evolutionary Perspective ..... 92

*Maria Manuela Santos Natário, Research Unit for Inland Development, Polytechnic Institute of Guarda, Portugal*

Nascent entrepreneurship is one phase of entrepreneurial activity that covers the first months in creating new ventures after the identification of business opportunities. On the other hand, the 4.0 revolution has created new opportunities but also disruption and polarization within and between economies and societies. Thus, this chapter reflects upon factors that influence nascent entrepreneurship across countries in an evolutionary approach, considering the previous findings and the influence of Fourth Industrial Revolution. The aim is to verify the conditions associated to nascent entrepreneurship using different perspectives of analysis. Correlation analysis is applied using various explanatory variables derived from different approaches. Clusters analysis is applied to verify how different countries are positioned in terms of nascent entrepreneurship. Scheffe's test of mean differences distinguishes the unique characteristics of each cluster and assesses the principal determinants of the nascent entrepreneurship capacity.

### **Chapter 5**

Analysis of Entrepreneurial Dynamics in Spain: The Role of Corporate Social Responsibility ..... 117

*Dolores Gallardo-Vázquez, University of Extremadura, Spain*

*Juan de la Cruz Sánchez-Domínguez, University of Extremadura, Spain*

Entrepreneurship is becoming one of Spain's economic driving forces. The Triple Bottom Line concept has gained notoriety in the last 30 years, creating a theoretical framework that justifies the measuring of the organizations' results not only economically, but also socially and environmentally, which has raised the awareness of the need to add Corporate Social Responsibility to the organizations' strategies. The goals of this study are to analyse the current state of entrepreneurship in Spain, to link entrepreneurship with CSR and to establish which aspects of CSR can be challenging for entrepreneurs.

## Chapter 6

Will They or Won't They? Understanding Nascent Entrepreneurship and Entrepreneurial Emergence Through Authentic Leadership Behaviours ..... 143

*Josh Rowlands, Tasmanian School of Business and Economics, University of Tasmania, Australia*

*Matthew Knox, University of Tasmania, Australia*

*Anna Anna Cui, University of Tasmania, Australia*

*Tessa Campbell, Tasmanian School of Business and Economics, University of Tasmania, Australia*

Our society faces many obstacles in its continuing growth and development. With the shared anxiety of recent threats such as COVID-19, individuals around the world are forming their own ways to combat change and degradation. Even small hospitality businesses in Tasmania have been deeply impacted, with many close to closing their doors due to the reliance on the tourism industry. The absence of relevant and extensive research into nascent entrepreneurship continues to limit the pragmatic and theoretical application of the potential individuals have to instigate change. As such, the authors highlight the need for further study into the emergence and potential of entrepreneurs to further explore their behavioral development and growth. In doing so, they look to answer our research question: How can authentic leadership behaviors provide a clearer understanding to the phenomena of nascent entrepreneurial emergence and aid in their ethical development?

## Chapter 7

Knowledge Spillovers and Strategic Entrepreneurship Revisited: A Review ..... 163

*Mohammad Bagheri, IPAM, Portugal*

*Alexandra França, University of Vigo, Spain*

The new concepts of knowledge spillovers and strategic entrepreneurship have received attention from both academia and professionals alike. The association between the two and the impacts of one on another is of great interest to both segments due to the significant potentials of the knowledge spillovers on the economic growth of its surrounding regions. Thus, this chapter aims to uncover the theoretical and empirical research on knowledge spillovers and strategic entrepreneurship in the management context. The chapter follows a review approach to discover and extract the most relevant concepts in this conversation. This chapter is set forth to introduce a brief look at the background of the knowledge spillover theory of entrepreneurship and the relationship between knowledge spillovers and strategic entrepreneurship. It is finalized by the avenues of the research and conclusion.

## Chapter 8

Determinants of Nascent Entrepreneurship Development ..... 172

*Albérico Travassos Rosário, University of Aveiro, Portugal*

*Filipa Fernandes, IPAM, Portugal*

*Ricardo Gomes Raimundo, IPAM, Portugal*

*Rui Nunes Cruz, Universidade Europeia, Portugal*

The current international economic crisis, at the moment of writing, will affect global economy and will demand entrepreneurial attitude to seize business opportunities. Nascent entrepreneurship emerged as an important concept in the boundary between entrepreneurship and organizational contexts. Literature on nascent entrepreneurship has only gained attention recently, thus remaining diverse and limited, particularly concerning their interplay with contexts and varying entrepreneurial processes. This study reviews those themes on nascent entrepreneurship and it enhances the way contextual challenges are addressed by nascent entrepreneurs, through diverse entrepreneurial leaning and entrepreneurial capability.

## Chapter 9

Challenges to Necessity-Driven Nascent Entrepreneurship.....	194
<i>Mufaro Dzingirai, Midlands State University, Zimbabwe</i>	

Necessity-driven nascent entrepreneurship, which often associated with new firm creation and innovation, has emerged as a topical issue in entrepreneurship scholarship across the globe in recent times especially in developing countries. While the increase in necessity-driven nascent entrepreneurs appears to be widely regarded as a powerful tool for the reduction or elimination of unemployment and poverty worldwide, insufficient attention has been given to the challenges faced by necessity-driven nascent entrepreneurs. With this literature gap in mind, this chapter aims at providing a comprehensive understanding of challenges faced by necessity-driven nascent entrepreneurs. The research establishes six challenges, namely, personal or family problems, lack of entrepreneurial self-confidence, lack of information, lack of entrepreneurial mentorship, legal and regulatory issues, and lack of adequate personal funds. The recommendations to deal with these challenges are proffered and the suggestions for further study are captured.

## Chapter 10

Women Entrepreneurs and Microfinance Institutions: A Way to Create New Ventures .....	211
<i>Waseem Ul Hameed, School of Business, Management, and Administrative Sciences (SBM&amp;AS), Department of Islamic and Conventional Banking (ICB), The Islamia University of Bahawalpur (IUB), Pakistan</i>	
<i>Muhammad Farhan Basheer, School of Economics, Finance, and Banking (SEFB), College of Business (COB), Universiti Utara Malaysia, Malaysia</i>	
<i>Jawad Iqbal, School of Business, Management and Administrative Sciences (SBM&amp;AS), The Islamia University of Bahawalpur (IUB), Pakistan</i>	
<i>Qasim Ali Nisar, Superior University, Lahore, Pakistan</i>	
<i>Muhammad Saeed Meo, Superior University, Lahore, Pakistan</i>	
<i>Shazma Razzaq, Awang Had Salleh Graduate School of Art and Sciences, Universiti Utara Malaysia, Malaysia</i>	

The objective of this chapter is to highlight the important relationship between microfinance institutions and women entrepreneurs in new venture creation. This chapter is proposed because women-empowerment is one of the crucial issues worldwide. In certain parts of the world, women are bound to customs, norms, beliefs, which are unique. These issues are found to promote social problems and hinder the economic contribution from women. In this direction, microfinance institutions are playing a vital role to promote women-empowerment through providing various opportunities to create new ventures. New venture creation increases the women social and economic empowerment through income generation. Various microfinance factors such as micro-credit, micro-saving, micro-insurance, and micro-training/skill development have a significant positive contribution to create new ventures. Finally, this chapter could be beneficial for microfinance institutes, state bank and government in making the strategies to enhance women-empowerment through new venture creation.



## Chapter 11

Financing Nascent Entrepreneurs by Reward-Based Crowdfunding: Lessons From Indiegogo Campaigns.....	228
---	-----

*Susana Bernardino, CEOS, ISCAP, Polytechnic of Porto, Portugal*

*J. Freitas Santos, CEOS, ISCAP, Polytechnic of Porto, Portugal*

*Silvie Oliveira, ISCAP, Polytechnic of Porto, Portugal*

A problem faced by nascent entrepreneurs is to attract outside capital to finance a new venture. A new promising funding mechanism created outside the banking system is crowdfunding (CF). The reward-based model of CF allows nascent entrepreneurs to capture funds from a large group of small investors through a campaign on the Internet. In return for the contribution of the backers, crowdfundees provide rewards (tangible items or services) or other types of incentives. However, in order to be successful a campaign must be designed according to a strategy that encompasses important steps. This study collects data from projects posted in the Indiegogo platform to identify the critical factors of a successful reward-based campaign. The results indicate that it is possible to find an explanation for the different levels of success of reward CF campaigns based on the analysis of the characteristics of the project (depth of the description, updates, and type) and its founders (own presentation, number of backers, team involved, and previous experience).

## Chapter 12

Awareness of Government Entrepreneurial Support Programmes: A Survey of Women Entrepreneurs in South Africa .....	253
---	-----

*Evelyn Derera, University of KwaZulu-Natal, South Africa*

Women's entrepreneurship plays a significant role in economic and social development. It represents a large pool of untapped entrepreneurial talent that nations could benefit from. This chapter explores the nexus between women entrepreneurship and awareness of government support programmes designed to stimulate the growth and sustainability of women-owned businesses. Drawing from a mixed-method research, the empirical data was gathered from 50 women entrepreneurs operating small businesses in Pietermaritzburg, South Africa. A snowballing sampling technique was used to identify the women. The findings revealed that the majority of women entrepreneurs were not aware of existing government support programmes that are targeting them. Consequently, the majority of these women entrepreneurs were not benefiting from these programmes. The study recommended a review of the mechanisms that are used to disseminate information on the available government support initiatives. This is necessary because women entrepreneurship in South Africa has the potential for transforming the economy.

### **Chapter 13**

Social Entrepreneurship and Related Concepts: The Path of Opportunity to Foster New Ventures .. 273

*Cristina López-Cózar-Navarro, Universidad Politécnica de Madrid, Spain*

*Tiziana Priede-Bergamini, Universidad Europea de Madrid, Spain*

In the past few decades, a new way of responding to social and environmental problems has emerged: the social entrepreneurship. It is presented as a special type of venture, in which the creation of social value prevails over the maximization of profits. Thus, the main objective of these types of ventures is to serve the community and to search for a positive social change. In this chapter, in addition to presenting the concept of social entrepreneurship and its various approaches within the so-called third sector and the emergent fourth sector, the main sources of funding that can be used by social entrepreneurs are also presented, especially business angels and crowdfunding, are detailed. New paradigms such as the collaborative economy and the circular economy are also addressed within social economy, highlighting the relationship with social entrepreneurship and the path of opportunity to foster new ventures in these fields.

### **Chapter 14**

Advancing a Framework for Entrepreneurship Development in a Bioeconomy ..... 295

*Oluwaseun James Oguntuase, Lagos State University, Nigeria*

This chapter frames bioeconomy as a pathway to sustainable development, and entrepreneurship as the bedrock of a bioeconomy. Its objective is threefold. First, the chapter enumerates the importance of innovation and entrepreneurship in a bioeconomy. Second, the chapter identifies the key production determinants and transformative game changers in a bioeconomy that should be the focus of innovative entrepreneurial activities. Third, it presents a conceptual framework for entrepreneurship development in a bioeconomy. The chapter employs systematic literature review approach to achieve its objectives. In total, the chapter asserts that there are several entrepreneurial opportunities in a bioeconomy, spanning the production determinants, the development of transformative game changers, and in distinct innovations like substitute products, new (bio-based) products and new (bio-based) processes.

### **Chapter 15**

Academic Entrepreneurship in Portugal: Case Study of Academic Spin-Off Companies..... 316

*Oscarina Conceição, Polytechnic Institute of Cavado and Ave, Portugal & Dinâmia'CET-*

*IUL, Portugal*

*Vanessa Rodrigues, Polytechnic Institute of Cavado and Ave, Portugal*

It is important to understand the role of higher education institutions in promoting entrepreneurship and supporting the creation of new companies to commercialize the knowledge generated in the academic field. The objective of this chapter is to analyze the creation and survival of academic spin-off companies in Portugal from 2005 to 2015. The results show that financial crisis did not change the academic spin-offs dynamics patterns, which shows that, even in crisis period, academic spin-offs maintain creation high levels (perhaps due to necessity-driven) and reveal survival high rates. In addition, a questionnaire was carried out to obtaining the academic entrepreneur's perception about the entrepreneurial process (individual characteristics; organizational resources/capabilities and entrepreneurial orientation). In fact, these results can help policy makers to reflect on the motivations and difficulties of the entrepreneurial process of this type of companies, and thus, develop an effective regional policy agenda in supporting the academic spin-offs development.

## Chapter 16

Life in a Bag: Sustainability, Green Economy, and Business Strategy – A Case Study ..... 335

*Beatriz Cunha Nunes, Porto Business School, Portugal*

*Juciely Pimentel, Porto Business School, Portugal*

*Joana Malheiro, Porto Business School, Portugal*

*Marisa R. Ferreira, CIICESI, ESTG, Polytechnic of Porto, Portugal*

*João F. Proença, Faculty of Economics, University of Porto, Portugal & ADVANCE/CSG,  
ISEG, University of Lisbon, Portugal*

Capacity for innovation is mainly the courage to try. A couple from the municipality of Vila Nova de Famalicão, Portugal, started growing a vegetable garden at home in 2013, hardly knowing that this would become the project of their lives. The experiments that this professional designer and this computer engineer carried out were successful with family and friends, and so, motivated on entrepreneurial spirit, they decided to encourage others to grow their own food, even in confined spaces. That is how the company Life in a Bag was born. This chapter discusses the strategic dimension of the company and its relationship with the market, through the application of the model of Porter's Five Forces, Bowman's Strategy Clock, and the types of diversification. This analysis was enriched by company document analysis and a meeting with the owners of the startup to gather more details.

## Chapter 17

The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic

Entrepreneurship ..... 351

*Cat-My Dang, University of Bremen, Germany*

This chapter investigates the interaction between legitimacy and nascent ethnic entrepreneurship in the country of residence. The study relies on institutional theory to demonstrate that host institutions and ethnic institutions play different roles in the early stages of second-generation ethnic entrepreneurship. The qualitative data in this study demonstrate that second-generation ethnic entrepreneurs are firmly embedded in the mainstream community and, therefore, earn proper legitimacy in various industries in the mainstream market. On the one hand, the prevailing connections between entrepreneurs and their ethnic communities provide second-generation ethnic entrepreneurship with the legitimacy to contribute to society. On the other hand, ethnic society legitimates the entrepreneurial activities of second-generation ethnic entrepreneurs because of these contributions. Moreover, the results of this study illustrate the reciprocal process in which institutions recognize the legitimacy of nascent second-generation ethnic entrepreneurship in different contexts.

## Chapter 18

Entrepreneurship and Happiness: Which Is the Link?..... 372

*Helena I. B. Saraiva, Guarda's Polytechnic Institute, Portugal*

*Vítor M. S. Gabriel, Guarda's Polytechnic Institute, Portugal*

*Jose C. Sánchez-García, Universidad de Salamanca, Spain*

*Brizeida Raquel Hernández-Sánchez, Universidad de Salamanca, Spain*

*Giuseppina Maria Cardella, Universidad de Salamanca, Spain*

Subjective well-being and happiness have taken on increasing interest and relevance. Recently some governments and entities have been presenting, developing, and supporting happiness indexes. Regarding entrepreneurial activity, the presentation of global indexes has been developed for some more years until now. However, despite the existence of these two kinds of analysis, few studies have, so far, focused on comparing the evolution of the two sets of indicators, as well as on the hypothetical relationship between them, which prefigures a gap in the literature. In the present work, an exploratory analysis is performed on this theme, trying to establish the basis for identifying the existence of relationship between both types of indicators, using the comparison between two of the main open access databases, namely data from the World Happiness Report (WHR) and from the Global Entrepreneurship Index (GEI).

**Compilation of References** ..... 390

**About the Contributors** ..... 473

**Index**..... 480

## Preface

Entrepreneurship is far from being a novel concept. To find its roots we have to go back to the 18th century and to the original authors of the concept, namely Richard Cantillon and Jean-Baptiste Say.

Nevertheless, despite the multiple authors who have successively addressed this issue over the many decades, entrepreneurship only earned “citizenship rights” in the economy from the 1970s/80s onwards, given the evidence that SMEs were critical regarding wealth and jobs creation, the reduction of regional asymmetries, and being more effective than larger firms in terms of innovation (particularly in the early stages of the innovation process).

Three more recent events have contributed to increasing the critical role of entrepreneurship in most economies: the 2008-2009 crisis, the United Nations’ 2030 Agenda for Sustainable Development and the COVID-19 pandemic.

The 2008-2009 crisis had its genesis in the subprime crisis of the U.S. mortgage market and the declaration of bankruptcy by Lehman Brothers on September 15<sup>th</sup>, 2008 was a painful milestone. As a result, the world was devastated by the biggest financial crisis since the 1930s crash. The effects had been catastrophic for the worldwide economy and in many countries its consequences have not yet been fully overcome.

As the saying goes, it never rains but it pours, and this applies to the emergence of the coronavirus pandemic while many economies are still in a weakened condition. By now the number of infected people is approaching 14 million and about 600,000 deaths throughout the world. It is too early to figure out the consequences, but its impact in terms of destruction of wealth and jobs (and of course human lives) is already overwhelming. Whether from the perspective of renewal/enhancement (intrapreneurship) of surviving businesses, or by launching new ventures, the role of entrepreneurship will be decisive for the revitalization of economies.

Although from a somewhat distinct but much broader perspective in terms of geography and objectives, the role of the United Nations’ 2030 Agenda for Sustainable Development, and the recognition by that organization of the role of entrepreneurship not only as driver of economic growth but also as the path to address social and environmental challenges in order to achieve the Sustainable Development Goals in all countries will be a further incentive to foster the entrepreneurial activity.

We might also admit that the emerging protectionist policies (Brexit and many decisions of the Trump Administration are just two examples) are further encouraging the emergence of new entrepreneurial projects, particularly to replace goods and services traditionally provided by third countries.

It is against this background of turbulence, of extreme uncertainty, that *Handbook of Research on Nascent Entrepreneurship and Creating New Ventures* finds its *raison d’être*. This book is the result of both these challenging times, in which the authors of the chapters found themselves ‘drowned’ in the C-19 pandemic, and the response of intrepid academics making their way through the challenging world of Nascent Entrepreneurship.

## **Preface**

This book is composed of 18 chapters that deal with diverse topics.

In Chapter 1, José Dantas, Fernando Valente, and Isabel Dias address the predisposition to undertake, that is, the roots of the entrepreneurial attitude. Aware of the importance of entrepreneurship for economic development, the authors make an extensive literature review regarding the factors that influence entrepreneurial behavior which allows them to conclude that the greater or lesser predisposition to undertake is influenced both by contextual factors and by genetic factors.

Based on that conclusion and analyzing the Portuguese education system, the authors conclude that entrepreneurship education has to start in the early stages of the educational system and, therefore, advise the strengthening of primary and secondary education (and consequent training of teachers) in this area, particularly aiming at the development of non-cognitive skills.

José Sánchez-García and Brizeida Hernández-Sánchez, in Chapter 2, intend to uncover the causes why some individuals are more prone to entrepreneurship than others, that is, to focus on the concept of entrepreneurial intention.

Aware of the importance of the cultural dimension in entrepreneurial intention and supported by Schwartz's Theory of Cultural Values, the authors applied the Entrepreneurship Orientation Questionnaire to a sample of 600 nascent entrepreneurs (450 men and 150 women) from the different Spanish Autonomous Communities.

The researchers conclude that gender, parents' occupations, and Autonomous Community of origin play a significant role in differentiating personal and contextual entrepreneurial intentions. They also point out that women are more conditioned by social factors whereas men are more motivated by work-related factors.

Chapter 3, "Much More Than Meets the Eye: Unveiling the Challenges Behind Nascent Entrepreneurship," authored by Alexandra França, Silja Frankenbach, Vanda Vereb, Alexandra Vilares and António C. Moreira, addresses nascent entrepreneurship from the psychological and sociological perspective as nascent entrepreneurs have distinctive traits and competencies. The chapter also addresses the environment in which nascent entrepreneurs operate and the way both the identification and exploitation of entrepreneurial opportunities have emerged. The chapter seeks to answer to the following three questions: (1) What are the main individual characteristics that entrepreneurs have in common?; (2) What are the environmental factors contributing to new venture creation?; and (3) What are the steps in the creation process? The chapter is centered on opportunity recognition, evaluation and exploitation, and is complemented by the way how contextual factors and personal characteristics and competencies influence the new venture creation process.

Chapter 4, by Maria Manuel Natário, makes use of international comparative data (GEM database, WEF competitiveness database, Global Competitiveness Index 4.0, and Hofstede's cultural dimensions) to perform an evolutionary (2015 and 2018) analysis of the factors which affect nascent entrepreneurship across countries.

She concludes that nascent entrepreneurship rates are influenced by national culture (collectivism, short-term normative orientation, and indulgence dimensions have a positive impact), and less developed economies display higher values of nascent entrepreneurship. In addition, countries with higher nascent entrepreneurship rates often use less national research and development, which leads to new commercial opportunities available to SMEs, and have a lower level of change in markets each year converting in weak internal market dynamics.

Dolores Gallardo-Vázquez and Juan de la Cruz Sánchez-Domínguez, in Chapter 5, based on descriptive statistics of the evolution of entrepreneurship in Spain during the 2005–2017 period, conclude that although the 2008 global crisis affected entrepreneurship, the entrepreneurial activity index has recovered after the crisis for all ages, except for those in the 55 to 64. The authors conclude that those in that range of age are the most affected ones as they are less likely to create new ventures. They also conclude that the perception of the opportunities to start a new business is linked to economic cycles: during periods of economic crises the creation of new ventures diminishes as a result of fewer opportunities to start new ventures. Previous experience to start a new business is also an important driver of new venture creation as those who have previously started a business are more likely to reopen new ventures as a result of their previous experience (during crises there are less opportunities to start new businesses) and to previous knowledge and experience in business activities.

Risk tolerance is lower among women than among men. As women have more fear of failure, they start fewer new ventures than men because they are less prone to risk their personal finances. Moreover, among women two characteristics stand out: starting a new business is the solution for problems like precarious conditions or labor disputes; and new business opportunities are born as a result of frustration with their bosses and the belief that they can do better. Economic results and innovation are more important for men than for women, who value independency more. In Spain, although entrepreneurship culture is highly supported and there is a positive opinion of entrepreneurship as a professional option, there is a generally negative opinion about whether entrepreneurship gives social and economic status.

Matthew Knox, Josh Rowlands, Anna Cui and Tessa Campbell address in Chapter 6 the challenge of entrepreneurial emergence through authentic leadership behavior, which is especially noticed in times of distress and anxiety, such as those we are going through with the COVID-19 pandemic. Based on the concept of authentic leader behavior, they seek to respond to the following research question: How can authentic leadership behaviors provide a clearer understanding to the phenomena of nascent entrepreneurial emergence, and aid in their ethical development? For that, using examples of small hospitality businesses in Tasmania, the authors highlight that just as occurred in the aftermath of 9/11 and the Financial Crisis in 2008, it is mandatory entrepreneurs develop a positive behavioral development to instigate change and overcome difficult times. For that, authors explore the theories of authentic leadership and authentic followership, highlighting their significance in improving the development of positive organizational ethics and in facing unprecedented obstacles. It is clear the need to deepen the understanding of the enablers of ethical behavior in nascent entrepreneurs and entrepreneurial emergence.

In Chapter 7 Mohammad Bagheri and Alexandra França address the significant potential of knowledge spillovers on the economic growth of its surrounding regions. The aim of “Knowledge Spillovers and Strategic Entrepreneurship Revisited” is to uncover the theoretical and empirical research on knowledge spillovers and strategic entrepreneurship in the management context. The chapter follows a review approach to discover and extract the most relevant concepts in knowledge spillovers and strategic entrepreneurship. Knowledge spillovers are important as they accelerate the entrepreneurial potential worldwide. This chapter promotes a discussion that goes beyond the theory of knowledge spillover of entrepreneurship, linking knowledge spillovers to entrepreneurial opportunities and strategic entrepreneurship. While the previous studies were mainly concentrated on the role of knowledge spillovers and entrepreneurship in general terms, this work highlighted the knowledge spillovers’ intended strategic behavior.

## **Preface**

Chapter 8 is review of the literature, in which Albérico Rosário, Filipa Fernandes, Ricardo Raimundo and Rui Cruz explore the main “Determinants of Nascent Entrepreneurship Development” and seek to shed light upon how NE interplays with topics such as the Entrepreneurial Capability, Learning Triggers, Learning Processes and the Contextual environment. Based on a literature review of 64 articles, this chapter shows that different contexts demand distinct entrepreneurial learning, capabilities and entrepreneurial approaches. The contribution of this article lies in describing the interaction across the 64 reviewed papers. Moreover, as a result of the scarce resources of nascent entrepreneurs, their knowledge is the most intangible asset on which their companies can rely.

Perhaps because of its lower impact on economic development, necessity-driven entrepreneurship has not been given much attention from researchers. Nevertheless, it plays a critical role in socio-economic less-favored countries in spite of the many challenges entrepreneurs have to overcome. This important issue is approached by Mufaro Dzingirai in Chapter 9, “Challenges to Necessity-Driven Nascent Entrepreneurship,” who focuses on Zimbabwe. He establishes six challenges that necessity-driven entrepreneurs need to overcome, namely: personal or family problems, lack of entrepreneurial self-confidence, lack of information, lack of entrepreneurial mentorship, legal and regulatory issues, and lack of adequate personal funds. This Chapter also provides a set of recommendations that might help to surmount the current constraints.

Chapter 10 deals with female entrepreneurship in Pakistan. Waseem Hameed, Muhammad Farhan, Jawad Iqbal, Qasim Nisar, Muhammad Meo and Shazma Razzaq, start by highlighting the low level of income among the Pakistani people, most evident among women, as a reason for the low level of entrepreneurial activity in the country and the key role entrepreneurship could play in ensuring the social and economic empowerment of women.

Through a quantitative research, the authors demonstrate the relationship between microfinance institutions (besides credit they provide insurance, training and saving programs), new venture creation, and women empowerment. The authors conclude that microfinance institutions are the solution to foster female entrepreneurship and thus to take women out of poverty.

The purpose of chapter 11 is to identify the critical factors of a successful reward-based crowdfunding campaign. For that Susana Bernardino, Freitas Santos and Sílvia Oliveira analyze the influence of project-related and entrepreneur-related characteristics on projects’ crowdfunding success. The chapter entitled “Financing Nascent Entrepreneurs by Reward-Based Crowdfunding: Lessons From Indiegogo Campaigns” uses multiple regression analysis (OLS) to identify the crowdfunding campaign’s critical factors of success from data collected from projects posted in the Indiegogo platform. The results point to two major factors that explain the success attained on reward based crowdfunding campaigns: the characteristics of the project – namely, depth of the description, updates and type – and the profile of the entrepreneur – own presentation, number of backers, team involved and previous experience. As empirical studies are still limited in this field of research, this chapter can open new windows of opportunities for supporting nascent entrepreneurs to design better reward-based CF campaigns outside the banking system.

The chapter entitled “Awareness of Government Entrepreneurial Support Programs: A Survey of Women Entrepreneurs in South Africa” explores the nexus between women entrepreneurship and awareness of government entrepreneurial support programs that sought to stimulate the growth and sustainability of women-owned businesses. Based on a mixed-method research approach, whose empirical data was gathered from fifty women entrepreneurs and six experts from Pietermaritzburg, South Africa, Evelyn Derera reveals that the majority of women entrepreneurs were not aware of the existing government



support programs that are targeting them. As a result, the majority of these women entrepreneurs were not benefiting from the programs. One of the main implications of this research is the review of the mechanisms that are used to disseminate information on current government entrepreneurial support initiatives. Chapter 12 also contributes to a much-needed scarcity of literature on indigenous women's economic activities in Africa. It also sets a foundation for future debates on how women could benefit from the available government entrepreneurship support programs in South Africa.

In "Social Entrepreneurship and Related Concepts: The Path of Opportunity to Foster New Ventures" (Chapter 13), Cristina López-Cózar-Navarro and Tiziana Priede-Bergamini, exploit social entrepreneurship as a path to ensure social inclusion, cohesion, and well-being.

Although very centered on the concept of social entrepreneurship, the authors establish the boundaries with some close concepts (e.g., social economy, solidarity economy, economy for the common good, and new paradigms such as collaborative economy and circular economy) and, then, focus on the issue of funding social entrepreneurship.

Admitting that social entrepreneurs do have not many collaterals to offer to financing institutions, and profit is not their *leitmotiv*, they do not typically have much to share with their backers. Thus, besides the entrepreneur own resources, the researchers approach the traditional 3 Fs (family, friends and fools) as the more adequate source, the venture capital (where is included business angels) who mostly look for profit (unless being social venture capital institutions) and crowdfunding, particularly when donation-based or reward-based, which just implies a symbolic compensation. Thus, overcoming the funding need is one of the major impediments preventing social entrepreneurship.

"Advancing a Framework for Entrepreneurship Development in a Bioeconomy" is the title of Chapter 14. Authored by Oluwaseun Oguntuase, this chapter defends bioeconomy as a pathway to sustainable development, and entrepreneurship as the bedrock of bioeconomy. The chapter is composed of three main objectives, which are dealt with in three sections. Firstly, the chapter addresses the importance of innovation and entrepreneurship in a bioeconomy. In the following section, the chapter identifies the main production determinants and transformative game changers so that innovative entrepreneurial activities can be addressed in the bioeconomy. Thirdly, the chapter presents a conceptual framework for entrepreneurship development in a bioeconomy. As a result, the chapter asserts that there are several entrepreneurial opportunities spanning the production determinants, the development of transformative game changers in distinct innovations like substitute products, new bio-based products and new bio-based processes.

In "Academic Entrepreneurship in Portugal: Case Study of Academic Spin-Off Companies," Oscarina Conceição and Vanessa Rodrigues address the dynamics of academic entrepreneurship in both the crisis and post-crisis periods in Portugal, and the likelihood that there is some connection with the performance of regular entrepreneurship in Portugal. Thus, they collected information from five of the largest Portuguese universities through their technology transfer offices in order to know how many academic spin-offs were created there between 2005 and 2015, their establishment year, sector of activity, and location. Additionally, the authors inquired the spinoffs' promoters to find out the main factors that influence the success of the spin-off entrepreneurial process.

According to the results, over the period of analysis 165 spinoffs were formed within the five universities, in particular in the software and biotechnology sectors, mostly aimed at the development and commercialization of a product or service, and were located in the university's district. These ventures had benefited from parent university's technology transfer and access to infrastructure and the promoters keep a tight link with the university of origin. The rhythm of spinoffs creation is in line with the Portuguese Total Early-Stage Entrepreneurial Activity rate although their mortality rates were lower than other star-up companies.

## Preface

A case study is explored in chapter 16 by Marisa Ferreira, Beatriz Nunes, Juciely Pimentel, Joana Malheiro and João Proença. The Chapter, entitled “Life in a Bag: Sustainability, Green Economy, and Business Strategy,” discusses the strategic dimension of family-based company and its relationship with the market. The company started with a couple growing a vegetable garden at home in 2013, which transformed their lives. Through a strong entrepreneurial spirit, this couple decided to embrace more sustainable lifestyles and created biological products to serve the green economy seeking to satisfy the growing demand for healthier products with more sustainable options that promote a healthier lifestyle. Moreover, they managed to encourage others to grow their own food, even in confined spaces. The authors apply Porter’s five forces model, Bowman’s strategy clock and diversification analyses to depict the innovative and distinctive characteristics of this case study. Based on a qualitative method, this chapter answers the following four main questions: (1) how *Life in a Bag*’s industry sector is characterized; (2) how the opportunity to enter the market arose; (3) how the implementation and development strategy of the company is defined in a green market context and as a startup; and finally, (4) how the business model helped *Life in a Bag* to define its strategic position in an increasingly competitive market, as well as its brand’s growth strategy.

Chapter 17 analyzes “The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship” where Cat-My Dang investigates the interaction between legitimacy and nascent ethnic entrepreneurship among nascent second-generation Vietnamese ethnic entrepreneurs in Germany. The study relies on institutional theory to demonstrate that host institutions and ethnic institutions play different roles in the early stages of second-generation ethnic entrepreneurship. Based on the differences between the first-generation and second generation Vietnamese immigrants, in which the former were necessity-driven entrepreneurs and the latter predominantly opportunity-driven entrepreneurs with academic backgrounds, the chapter relies on qualitative data from Snowball sampling method to demonstrate that second-generation ethnic entrepreneurs are firmly embedded in the mainstream community and, therefore, earn proper legitimacy in various industries in the mainstream market. Two main conclusions can be drawn from this study. Firstly, the prevailing connections between entrepreneurs and their ethnic communities provide second-generation ethnic entrepreneurs with legitimacy to contribute to society. Secondly, ethnic society legitimates the entrepreneurial activities of second-generation ethnic entrepreneurs because of their contributions. Moreover, the results of this study illustrate that second-generation ethnic entrepreneurs influence the legitimacy of new ventures, which end up supporting the ethnic legitimation of the nascent entrepreneurs.

Finally, Chapter 18, “Entrepreneurship and Happiness: Which Is the Link?” authored by Helena Saraiva, Vítor Gabriel, Jose Sánchez-García, Brizeida Hernández-Sánchez and Giuseppina Cardella, analyzes the existence of links between entrepreneurship and happiness. Using available data on entrepreneurship and happiness indexes, this chapter concludes that the values assumed by the indexes of happiness and entrepreneurship present a strong correlation and it seems that the level of entrepreneurship of a country contributes to its level of happiness in a direct way. This result presents the potential contribution of entrepreneurship to happiness. As such, one can expect that entrepreneurship could play an important role, in the coming years, in the quest for improving the level of happiness, or at least its non-decrease, by all worldwide governments.

Based on the topics covered by this book, it is targeted to a broad audience including graduate and post-graduate students, lecturers and all those who seek to address the challenging world of nascent entrepreneurship. It is hoped that this book is of added value to them all.

**ACKNOWLEDGMENT:** This project is financed by National Funds of the FCT – Portuguese Foundation for Science and Technology within the project «UIDB/04928/2020».

*António Carrizo Moreira*  
*José Guilherme Leitão Dantas*

# Chapter 1

## Is Entrepreneurship a Bio– Social Phenomenon? The Role of Non–Cognitive Skills and Education

**José Guilherme Leitão Dantas**

 <https://orcid.org/0000-0002-6651-4376>

*CARME, School of Technology and Management, Polytechnic of Leiria, Portugal*

**Fernando Manuel Valente**

*CINEA, ESTS, Polytechnic Institute of Setúbal, Portugal*

**Isabel Simões Dias**

*Life Quality Research Centre, School of Education and Social Sciences, Instituto Politécnico de Leiria, Portugal*

### ABSTRACT

*The entrepreneur is regarded as a driver of economic development encouraging researchers to delve into the causes that lead some people to choose the entrepreneurial activity. The response has followed two approaches: biological and sociological. The former privileges non-cognitive skills while the sociological favors factors are associated with learning and contextual conditions. Thus, the question arises: Is behavior determined by non-cognitive skills or can it be ‘shaped’ throughout an individual’s lifetime? Using an exploratory approach supported by a literature review and contacts with the Portuguese (context under analysis) educational system, the authors aim to understand which skills are critical, the way they are acquired and developed, and the role the educational system plays in their development, concluding that entrepreneurial activity implies cognitive and non-cognitive skills which the system must deliver provided the teachers’ training in advance.*

DOI: 10.4018/978-1-7998-4826-4.ch001

## INTRODUCTION

The academic interest for entrepreneurship is not new. In fact, to find the roots of entrepreneurship we have to go back, at least, to the 18<sup>th</sup> century, more specifically to Richard Cantillon (e.g. Chell, Haworth, & Brearley, 1991; Hébert & Link, 1989). The practice of the entrepreneurial activity, in turn, has been a fairly normal occurrence throughout the history of humanity (Dantas, Moreira, & Valente, 2015).

Following Schumpeter (1934) who stated that entrepreneurs are the engine of growth, particularly through innovation, Lazear (2005) claims that “the entrepreneur is the single most important player in a modern economy” (p. 649). Actually, entrepreneurship, particularly when it is motivated by opportunity<sup>1</sup> (Acs, 2006), has a huge potential in terms of economic growth, job creation, and regional and national competitiveness’s, i.e. it contributes to improve human wellbeing (Audretsch, 2007; European Commission, 2013). It is therefore no wonder that the research on entrepreneurship “has virtually exploded in recent years”, as pointed out by Rauch, Wiklund, Lumpkin and Frese (2009, p. 778).

The factors that may influence the entrepreneurial behavior have been widely researched over the years. The debate has largely centered on the dichotomy between personality characteristics (e.g. Caliendo, Fossen, & Kritikos, 2011; McClelland, 1961; Nicolaou, Shane, Cherkas, Hunkin, & Spector, 2008), on the one hand, and the influence of the experiences and the context that involve the potential entrepreneurs (Autio, Kenney, Mustar, Siegel, & Wright, 2014; Ganotakis, 2012; Gartner, 1988) on the other. There is an old struggle between nature’s dominance and the supremacy of the environment. To put it in extreme terms, one might say that for those in the former category our future has already been mapped out at conception while those in the latter would claim we are born mainly as a blank slate that the environment will gradually fill in. However, the issue is not as straightforward as it seems.

Actually, even if genes are responsible for the transmission of personality traits between generations (White, Thornhill, & Hampson, 2006), they can only be considered as a propensity to act in a particular way (McCrae & Costa, 1990), that is, “our nature, our evolved psychology predisposes an individual to think and act in particular ways. But those endogenous predispositions are affected by a host of exogenous factors” (White et al., 2007, p. 453). Consequently, we can say that it is easy to understand that one’s genetic endowment can help to embark on entrepreneurial activities, but that it has to be supplemented with a favorable environment, particularly through education.

Our chapter has an exploratory character (Malhotra, 2001) and our goals are: 1) to understand the critical skills for the entrepreneurial activity; 2) to understand the way those critical skills are acquired and developed; and 3) to reflect on the Portuguese education system and its role in those critical skills development.

Therefore, the chapter will provide a review of the literature on the aforementioned questions and will incorporate the results of many contacts with agents from the Portuguese education system.

The chapter is divided into 6 sections: 1. introduction; 2. entrepreneurship: the entrepreneurs and their contexts; 3. the entrepreneurial spirit: a bio-social phenomenon; 4. the entrepreneurial potential and skills promotion; 5. the entrepreneurship education (life skills programs and Portuguese experiences); and 6. conclusions.

In the introduction the aims and the structure of the chapter are explained. Section 2 highlights the main reasons for the enormous economic and social importance of entrepreneurship, underlines the multidisciplinary character of entrepreneurship, and presents different approaches to the phenomenon of entrepreneurship. The chapter goes on (section 3) arguing that personality matters for the entrepreneurial activity. Using two different approaches – The Five-Factor model (McCrae, 1992) and specific

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

personality characteristics that are related with the entrepreneurial activity (Rauch & Frese, 2007) – we attempt to show that non-cognitive skills or life skills do influence the entrepreneurial process. Section 4 is dedicated to the entrepreneurial potential and the skills promotion with particular focus on the non-cognitive skills. These are essentially inborn (McCrae et al., 2000) and stable over the lifetime but can be changed by intervention (Heckman, 2012). The purpose of section 5 is to reflect on life skills programs and the Portuguese education system and its connections to the entrepreneurial learning process. Finally, section 6 provides some practical implications of the chapter and a summary of our findings.

## **ENTREPRENEURSHIP: THE ENTREPRENEURS AND THEIR CONTEXTS**

The acceleration of globalization and the associated competitive rivalry, as well as the increasing complexity, uncertainty, and markets turbulence, characterized by the current change of customer demands and the intensity and radical character of technological advances, among other factors, created an environment in which the maintenance of a competitive advantage over a long period of time is difficult to achieve. Currently, the shortening of product life-cycles makes competitive advantages transitional (McGrath, 2013).

At the same time, this disruptive competitive environment is likely to create several emerging opportunities for the companies involved as well as for new entrepreneurs.

One of the most profound changes registered in the last three decades was the exponential development of the possibilities associated with computational capacity. This has been applied to all business management subsystems. The internet's ability to facilitate the flow of information and knowledge at a global scale fosters the conditions for a new ecosystem that is not only richer and more open, but also much more complex (Glavas & Mathews, 2014).

This technological rupture and social transformation have gone hand in hand in the last decades, leading to radical changes in the viability of businesses, due, to a large extent, to the emergence of new companies with new strategies and new business models, often developed in favorable contexts to entrepreneurship, and led by new entrepreneurs with differentiated skills (Ngoasong, 2018).

Following this unprecedented pace of change, and taking into account all the dynamics it causes in current economies, it may be relevant to reflect on the past and present of entrepreneurship and the associated skills.

First of all, it must be reaffirmed that entrepreneurship is far from being a new concept. Though Arthur and Hisrich (2011) and Dornelas (2014), for example, consider Marco Polo as an early example of entrepreneurship and why couldn't we go still back and classify as an entrepreneurial activity the discovery of how to make and control fire (a basic but of utmost importance activity for the humanity survival and development, with large thousands of years)?

The coinage of the word "entrepreneur" is usually attributed to Cantillon in the 18<sup>th</sup> century (Arthur & Hisrich, 2011; Hébert & Link, 1989). For Cantillon (1931) the entrepreneur was someone (merchant, farmer, craftsman) that took risks in searching for profit as he buys at certain prices and sells at uncertain prices; he was a speculator, in the words of Gartner and Shane (1995).

For over two centuries and due to its interdisciplinary nature, entrepreneurship has been occupying a prominent place on the research agendas of academics from different disciplines such as anthropology, economics, management, psychology and sociology. Several researchers have made their way across this

multifaceted field: Casson (2005), Kirzner (1973), Knight (1921), McClelland (1961), Mises (1951), Rotter (1966), Say (1816), Schultz (1980) and Schumpeter (1934).

Psychologists are particularly concerned with the origins of entrepreneurship. They consider that as entrepreneurs have specific personality traits it is important to measure them. For Brockhaus (1982), for instance, entrepreneurs present three distinctive attributes: need for achievement (pointed out by McClelland, 1961), internal locus of control, and risk taking. On the other hand, Cromie (2000) associates seven characteristics with entrepreneurial behavior (entrepreneurs and business owners) that distinguish them from non-entrepreneurs: creativity, tolerance for ambiguity, self-confidence and autonomy in addition to the three Brockhaus' (1982) attributes.

Economists, in their turn, have been more interested in the consequences of entrepreneurship, i.e. its effect on economic wellbeing. In fact, it is usually accepted that entrepreneurship contributes to: economic growth, job creation, economic efficiency improvement and regional disparities reduction.

However, because entrepreneurial activity was mainly translated into small and medium-sized enterprises (SMEs), entrepreneurship was relatively marginalized by economic models and, consequently, by the public authorities of the most developed countries until the seventies/eighties of the last century. These favored large companies for three main reasons (Kanter et al., 1998; Dantas, 2013): they were considered more efficient since they were able to take advantage of economies of scale; they were considered more innovative, at least by analyzing traditional indicators (investment in R&D and patents) and were more relevant regarding job creation.

Since the eighties, several studies have shown an increasingly relevant role of SMEs in the economy, both in the United States of America and in several European countries, with regard to net job creation (Birch, 1981; Acs and Audretsch, 1990, 1993; Konings, 1995; European Commission, 1997), in terms of survival and growth (Mata, 1994; Geroski, 1995; Audretsch, Santarelli and Vivarelli, 1999) and even in terms of innovation, particularly if we do not exclusively look at the traditional indicators (inputs and patents) that are far from capturing the innovation effort of SMEs (Freeman, 1975; Rothwell and Zegveld, 1983; Dantas, 1999), leading most countries to pay increasing attention to the promotion and development of entrepreneurship.

This interest has been common to politicians, academics, business owners and citizens, with different approaches, both from its concept and application. While governments seek to generate political dividends from some job creation from the creation of new companies, researchers try to understand the phenomenon in its multiple aspects from different perspectives, taking a prominent place in the research agendas of academics from different subjects, as mentioned above.

Although entrepreneurship is proved to boost and recreate economies, there is little consensus on what business activity is based on (Busenitz, West III, Sheperd, Nelson, Chandler, & Zacharakis, 2003; Sarkar, 2010). Davidsson (2016, p. 1) states in his study “Researching Entrepreneurship is fun, fascinating and frustrating – and important, if you ask me. One of the fascinations is the richness of the phenomenon, which leads to one of the greatest frustrations, namely, the lack of a common understanding of what is precisely entrepreneurship is”.

Facing the broad diversity of definitions, in this article, in general terms, we adopt the definition proposed by Dantas, Moreira e Valente (2018) for whom entrepreneurship is the process of evaluating, committing to and achieving, under contextual constraints, the creation of new value from new knowledge or different combinations of existent knowledge for the benefit of all stakeholders involved. However, in this very specific context, we might agree that entrepreneurship is also “(...) a culture, a way of thinking, a way of acting, a concept of life and freedom to innovate and to assume risks (...)”,

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

as stated by Marques and Albuquerque (2012, p. 56), and therefore the entrepreneur is someone whose potential might be stimulated.

## **THE ENTREPRENEURIAL SPIRIT: A BIO-SOCIAL PHENOMENON**

The entrepreneur is often considered as the driver of the economy and thus a crucial agent for economic development (Schumpeter, 1934; Wennekers, van Stel, Carree, & Thurik, 2009). It is therefore natural that the causes which lead some people (and not others) to choose the entrepreneurial activity has been appealing for many researchers (e.g. Gartner, 1988; Baron, 2004; Henry, Hill, & Leitch, 2005; Lindquist, Sol, & Van Praag, 2012; Dantas & Valente, 2014, to mention just a few). In order to respond to that question researchers have been following two major approaches: biological (individual differences) and sociological (contextual factors).

Taking into account that behavior is influenced by individual's personality, individuals with certain personality traits may find entrepreneurial activities more attractive and fulfilling than others who do not possess those traits. Thus, an extensive body of research on personality has been taking place since the 1960s (Omorede, Thorgren, & Wincent, 2015).

Among the psychological field, many personality traits have been researched regarding their impact on the entrepreneurial process such as need for achievement (nAch) (e.g. Begley & Boyd, 1987; McClelland, 1961), internal locus of control (e.g. Caird, 1991; Cromie & Johns, 1983), creativity (e.g. Koh, 1996), moderated risk taking<sup>2</sup> (e.g. Stewart & Roth, 2001; Timmons, 1989), and need for autonomy (e.g. Brandstätter, 1997; Kuratko & Hodgetts, 1995).

In spite of the positive results of the mentioned researches and their usefulness in explaining why individuals become (or not) entrepreneurs this approach was subject to serious criticism throughout the 1990s (e.g. Aldrich, 1999; Bull & Willard, 1993). As stated by Hatten (2012) "the conclusion of more than 30 years of research is that successful entrepreneurs cannot be predicted" (p. 32).

The mentioned criticisms didn't lead to the abandonment of this stream of research because, *ceteris paribus*, personality traits can create the predisposition to some kind of behavior (Caprana & Cervone, 2000) and they can be considered as predictors of the entrepreneurial activity (Rauch & Frese, 2000), as we will discuss in the next section. Despite this, they contributed to the increasing acceptance of the idea that entrepreneurs are mostly "made", that is, entrepreneurship is learned, and implicitly to the rejection of the genetic endowment making many scholars to prioritize the role of environmental conditions to explain the tendency of people to become entrepreneurs, focusing less on the role of individual differences (Thornton & Flynn, 2003).

This context (not being born as entrepreneur) combined with the need for jobs and wealth creation might help to understand the proliferation of entrepreneurship courses, promoted by both public and (profit and non-profit) private entities as well as a wide number of international reports advocating the need for entrepreneurship education (e.g. European Commission, 2010, 2013; Martínez, Levie, Kelley, Sæmundsson, & Schøtt, 2010; World Economic Forum, 2009).

From our point of view, however, those initiatives are incomplete given that they do not consider the influence of biology on individual behavior and, specifically, its explanatory power concerning a greater or lesser propensity for entrepreneurship. Actually, "genes are the biological mechanism by which physiological characteristics are passed from generation to generation" (White et al., 2006, p. 22) and



although they do not determine our behavior they express themselves in our physiology which enables (or not) certain behaviors (White et al., 2006).

In their research White and colleagues start with the following question: “Are business-related behaviors learned, or can they, at least in part, be explained by our biology?” (White et al., 2006, p. 21). Following this question and after highlighting that several studies have concluded the relation between testosterone (T) levels (which is over 80% heritable) with occupational choice, they focused on the possible influence of T levels on creating new business ventures.

Although the authors note that T influences many characteristics relevant in the entrepreneurial context (such as persistence, assertiveness, engagement, independence, action-orientation) they focused their research on a characteristic that is consensual both in T and in entrepreneurship literature: risk taking propensity.

The research under analysis, based on a sample of 110 full-time MBA students (all males) from the Richard Ivey School of Business (University of Western Ontario, Canada), aimed at testing 2 hypotheses: (H1) T level is positively associated with risk propensity, and (H2) Risk propensity is positively associated with the likelihood of entrepreneurial behavior. Therefore, they intended to confirm that risk propensity was a mediator between testosterone and entrepreneurial behavior.

For this purpose, they: (1) asked each participant to report his background regarding entrepreneurial activity, in order to qualify (assessment made independently by each author) as entrepreneurs, possible entrepreneurs or non-entrepreneurs; (2) made the collection of 2 samples of saliva from each participant to measure their level of T; and (3) asked the participants to fill the Jackson personality inventory scale risk taking scale to assess their propensity to risk.

The results proved that entrepreneurs have higher T levels than non-entrepreneurs and the former scored higher on risk-taking than the latter, that is, both hypothesis have been supported which means that risk propensity mediates the relationship between testosterone and entrepreneurship.

Taking into account that the research links a heritable biological characteristic (T level) with entrepreneurial behavior the authors conclude that “entrepreneurs may not be born; but what one is born with affects the likelihood of that person engaging in entrepreneurial activities” (White et al., 2006, p. 30).

In a second publication, based on the previous sample, White et al. (2007) contest the somewhat popular reasoning that at birth human beings are nothing but a blank slate that the context (family, education, culture, experience) will fill in, that is, the idea that “nurture dominates over nature” (White et al., 2007, p. 451). After invoking previous literature that point to a genetic basis for behavior differences and their own aforementioned research, the authors focus on family context for explaining variations in human behavior.

Taking into account the extant literature relating family background with the propensity to start a new venture and the mentioned relationship they established between T levels and the entrepreneurial activity, the authors aim to confirm if new ventures are more likely created by individuals who have a higher basal T level and, cumulatively, a family business background. Besides the methodology already mentioned (saliva collection and entrepreneurial behavior) the authors just added a new single question: “Did your parent(s) have a family business?” (White et al., 2007, p. 458).

While the association of T levels with entrepreneurial behavior was already evidenced, the authors confirmed that family business background is associated with entrepreneurial behavior – an already well established relationship (e.g. Lindquist et al., 2012; Sorenson, 2007) –, and although with a less strong effect that individuals with both higher T level and a family business background are more likely to be involved with new venture creation.

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

Based on the latter finding (the interactive effect of T level and family background) White et al. (2007) concluded that “biology provides certain behavioral predispositions or propensities but socialization and other learning processes develop and channel these predispositions” (p. 454), so nature and nurture should be taken together to better understand entrepreneurial behavior, i.e. they propose a biosocial theory of entrepreneurship behavior, a point of view also shared by Nicolaou et al. (2008) as follows.

By the same token, although with a different approach – research on twins – Nicolaou et al. (2008) investigated the influence of genetic factors on the propensity of people to engage in the entrepreneurial activity. Using a sample of 3,454 twins<sup>3</sup>, 870 pairs of which were monozygotic<sup>4</sup> twins and the others 857 were pairs of same-sex dizygotic twins they aimed to confirm whether “Genetic factors have a statistically significant and substantive effect on the propensity of people to engage in entrepreneurship” (Nicolaou et al., 2008, p. 169).

The authors used various approaches of the entrepreneurship concept and adjusted the model for potential confounders (gender, age, income, education, marital status, race, and immigrant status) which showed little impact on the results. They concluded that 48% of the variance in the propensity to become self-employed is explained by genetic factors and the remainder 52% can be attributed to no shared environmental factors.

In view of the above, we should admit that the biological component influences the entrepreneurial behavior<sup>5</sup>. However, as claimed by Timmons and Spinelli (2007), the behavior is not exclusively determined by personality traits. It can be developed throughout the life of individuals, as through training, experience, networks, and contexts experiences. Thus, the analysis of entrepreneurial behavior will always have to break the strict boundaries of psychological entrepreneur’s vision and expand to aspects linked to other dimensions.

In fact, there are multiple aspects related to the individual which may modulate their behavior, particularly related to human capital as the level of knowledge (Block & Sandner, 2009), qualifications (Amazon, Shrader, & Tompson, 2006) and previous experience (Colombo & Grilli, 2010; Ganotakis, 2012).

In addition to the situational circumstances, it has been widely recognized that the propensity to engage in entrepreneurship depends not only on the will and motivation, but are also strongly influenced by contextual conditions in which they operate (Acs, Audretsch, & Lehmann, 2013). In other words, the entrepreneurial process is part of a context that may encourage or inhibit the entrepreneurial activity. Similarly, the entrepreneurial dynamics are strongly framed, both temporally and geographically (van de Ven, 1993).

Regarding entrepreneurship literature, as mentioned by Autio and Acs (2010), there has been an excessive focus on the individual, the team and the result of the entrepreneurial action, relegating to second place the role of the context and how it can regulate behavior, choices and business performance. However, this is not a minor issue, since it is widely accepted that all human action takes place in different contexts: the context regulates what individuals detect as opportunities, the choices that they make and the results of their actions. For this reason, it should play an important role in our understanding of the origins, forms, operation and performance of business activities.

As stated by Zahra et al., (2014), although the contextual factors have deserved some attention, few studies have analyzed entrepreneurship from a truly systemic and interdisciplinary perspective, as mentioned by Acs, Autio and Szerb (2014) and Qian, Acs, and Stough (2013).

Criticisms have been arising regarding the lack of a holistic approach to entrepreneurship that focuses on interrelated aspects of the entrepreneurial process. These claim new lines and greater research centered on the interaction between the different elements of the entrepreneurial ecosystem (Acs, Autio

and Szerb, 2014; Qian, Acs, and Stough, 2013). This does not mean that the link between networks and entrepreneurship has not been investigated over the past few years, as demonstrated, for example, by the works of Hoang and Antoncic (2003), O'Donnell, Gilmore, Cummins and Carson (2001) and Thornton and Flynn (2003). However, it is commonly agreed that the study of the systemic nature of entrepreneurial activity is still in an underdeveloped phase (Acs et al., 2014; Gustafsson & Autio, 2011; Qian et al., 2013).

We intend to highlight, therefore, that most of the previous works have underestimated the role of the context, not considering, for example, the place where the enterprise is born and where an exogenous variable develops when its influence on all aspects of the entrepreneurial process is recognized. Thus, to fully understand this process, it is required a thorough analysis of how the cultural, social, political and economic structures and processes associated with a certain place influence it.

Within this perspective, several researchers have pointed out the need to shift the focus from the characteristics and behaviors of individuals or companies created (Shane, 2003; Shane & Venkataraman, 2000) to entrepreneurial realities in broader contexts, such as their regional, temporal and social configurations (Autio et al., 2014; Van de Ven, 1993; Zahra & Wright, 2011; Zahra et al. 2014).

It means that recognizing the central role of the entrepreneur in fostering economic growth it should, therefore, be promoted with well-developed and coordinated entrepreneurial ecosystems (Isenberg, 2010).

To sum up, bearing in mind what has been discussed, it seems that behavior and, particularly, the greater or lesser individual predisposition to entrepreneurial activity should be understood as a bio-social phenomenon, as suggested by White et al. (2007), whereas the influence of the context is unambiguous, but it is not legitimate to ignore the importance of heredity, that is, “nature predisposes and environment disposes ” (p. 454).

## **THE ENTREPRENEURIAL POTENTIAL AND SKILLS PROMOTION**

The idea that the entrepreneurial activity is a bio-social phenomenon and that skills which integrate mind and body can be taught sustains the presupposition that “all human beings are inherently entrepreneurial, that is, entrepreneurial potential is in all of us” (World Economic Forum, 2009, p. 25).

According to Cunha, Heckman, Lochner and Masterov (2006), “skill formation is a life cycle process. It starts in the womb and goes on throughout life” (p. 1). The entrepreneurial behavior is influenced by a set of cognitive and non-cognitive skills besides other well-known factors, such as education, family experience, and credit constraints (e.g. Fairlie & Holleran, 2012) and others environmental conditions<sup>6</sup>. Understanding how the skills develop since childhood is critical if we want to know how to promote individual success (Cunha et al., 2010) and, specifically, the entrepreneurial activity.

Regarding formal education, we have found a low investment in entrepreneurship education at elementary and secondary levels, as we will see below, but also a strong growth in tertiary education. Actually, according to Redford (2006), quoted by Santos, Pimpão, Costa and Caetano (2013), in the 2004/2005 academic year, there just were 27 courses in entrepreneurship (specialization and degree courses). However, six years later (2010/2011), there already were 338 courses in Portuguese higher education (Santos et al., 2013), which proves that the entrepreneurial education has taken off in Portugal although with a significant delay, if we take into account that “the real emergence of entrepreneurship education [in USA] took place in the 1980s” (Kuratko, 2005, p. 582).

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

The skills acquired at the higher education level are mainly of a cognitive kind, that is, education for enterprise (Jamieson, 1984), whose goal is training potential entrepreneurs to set up and run their own businesses and, therefore, too focused on business skills (e.g. business plan development, marketing, intellectual property, management of financial or human resources).

Those topics can easily be taught (Haase & Lautenschläger, 2011) and are useful tools for individuals who bear in mind to start a new venture. In fact, as mentioned by Fairlie and Holleran (2012), “although many individuals possess a strong desire for entrepreneurship, they ultimately do not start successful businesses because of a lack of entrepreneurial skills and knowledge of business opportunities” (p. 376). In addition, this kind of learnings might be helpful in the knowledge transfer process and even for encouraging future intrapreneurs (people<sup>7</sup> operating within established organizations) who are so necessary to revitalize our business fabric.

Moreover, they might be counter-productive<sup>8</sup> and avoid the entrepreneurial activity because they make “students’ expectations about entrepreneurship more realistic” (Oosterbeek, van Praag & Ijsselstein, 2010, p. 450), leading them to lose their enthusiasm.

The successful entrepreneur should be equipped with various skills such as “need for achievement, innovativeness, proactive personality, generalized self-efficacy, stress tolerance, need for autonomy, internal locus of control, and risk taking” (Rauch & Frese, 2007, p. 358), that is, entrepreneurs should hold a broad range of non-cognitive skills.

The concept of “non-cognitive skills” was introduced by sociologists Bowles and Gintis (1976), according to Gutman and Schoon (2013), to focus on factors other than those measured by cognitive test scores. It is not a consensual term and we can find other designations expressing the same concept, such as “character skills”, “personality traits”, “soft skills” and “life skills” (Gutman & Schoon, 2013) among others. Carneiro, Crawford and Goodman (2007), for example, indistinctly use “non-cognitive skills” and “social skills”. Hereafter this kind of skills will be referred to interchangeably as “non-cognitive skills” or “life skills”.

The World Health Organisation (1999) defines life skills as “the ability for adaptive and positive behavior that enables individuals to deal effectively with the demands and challenges of everyday life”.

For UNICEF (2012), “‘Life skills’ are defined as psychosocial abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life”.

Gould and Carson (2008) defined life skills as «those internal personal assets, characteristics and skills such as goal setting, emotional control, self-esteem, and hard work ethic that can be facilitated or developed (...)» (Goudas, 2010, p. 243) in one context and be transferred for others environments. Steve Danish (University of Virginia, USA) defined life skills as “(...) the skills [that] enable individuals to succeed in the environments in which they live” (Danish & Nellen, 1997, p. 102). According to Singh and Gera (2015, p. 760) “(...) life skills are a group of psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build relationships, empathies with others, and cope with and manage their lives in a healthy and productive manner”.

Problem solving skills, critical thinking skills, effective communication skills, decision making, creative thinking, interpersonal relationship skills, self-awareness, empathy and coping with stress and emotions are fundamental non-cognitive skills to raising potential entrepreneurs (Odewale, Rani, Migiroy & Adeyeye, 2019) and, as stated by Dahlstedt and Fejes (2019, p. 467), “through entrepreneurship education, the hope is that a new and different student will emerge, one who can adapt to the changing

present with skills such a willingness to test ideas and solve problems, and who has a sense of responsibility for themselves and others”.

Koh (1996), mainly in line with Brockhaus (1982), considers that entrepreneurs are innovative and self-confident, have a high need for achievement, and display a calculated risk taking, an internal locus of control, and tolerance for ambiguity. Cromie (2000) points out that “entrepreneurs possess characteristic traits that dispose them to act entrepreneurially” (p. 12) and shares the characteristics proposed by Koh (1996) adding need for autonomy, which reflects the entrepreneurs’ aversion to procedures, rules, and norms.

The study of the relationship between non-cognitive skills and entrepreneurial activity has been essentially following two approaches<sup>9</sup>: the Five-Factor Model (or simply Big Five) and specific personality characteristics.

Probably, the most broadly accepted taxonomy of non-cognitive skills, mainly referred to as personality traits in this context (Brunello & Scholotter, 2011) is Big Five, originally proposed by Tupes and Cristal (1961). The Big Five includes, as its name suggests<sup>10</sup>, five factors: Openness to Experience (Culture, in its original proposal), Conscientiousness, Extraversion, Agreeableness, and Neuroticism (or emotional stability in its positive specification), OCEAN for short.

Each of the constituents of the Big Five is considered a high order or broad factor (Caliendo et al., 2011; Leutner, Ahmetoglu, Akhtar, & Chamorro-Premuzic, 2014) as they include several personality characteristics, as shown synthetically in Table 1, by opposition to low-order or narrow traits (Caliendo et al., 2011; Leutner et al., 2014) - the specific personality characteristics - which are more matched with typical entrepreneurial behaviors.

According to Caliendo et al. (2011), “the explanatory power of the Big Five is comparable to one of the most prominent determinants of entrepreneurship – education – and three times larger than parental self-employment” (p. 2). Based on a large sample from the German Socio-Economic Panel these au-

*Table 1. The Big Five: Factors’ concept and illustrative facets*

Factor	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
<b>Conceptual definition</b>	Implies an energetic approach toward the social and material world and includes traits such as sociability, activity, assertiveness, and positive emotionality.	Contrasts a prosocial and communal orientation toward others with antagonism and includes traits such as altruism, tender-mindedness, trust, and modesty.	Describes socially prescribed impulse control that facilitates task- and goal-directed behavior, such as thinking before acting, delaying gratification, following norms and rules, and planning, organizing, and prioritizing tasks.	Contrasts emotional stability and even-temperedness with negative emotionality, such as feeling anxious, nervous, sad, and tense.	Describes the breadth, depth, originality, and complexity of an individual’s mental and experiential life.
<b>NEO-PI-R facets (Costa &amp; McCrae, 1992)</b>	Gregariousness; assertiveness; activity; excitement-seeking; positive emotions; and warmth.	Modesty; trust; tender-mindedness; compliance; and straightforwardness.	Order; achievement striving; dutifulness; self-discipline; competence; and deliberation.	Anxiety; angry hostility; depression; self-consciousness; vulnerability; and impulsiveness.	Ideas; aesthetics; fantasy; actions; feelings; and values.

Source: Adapted from John et al. (2008)

## *Is Entrepreneurship a Bio-Social Phenomenon?*

thors aimed at examining the extent to which the Big Five traits (and other personality characteristics, which are outside our scope for now) influence the entrepreneurial process and specifically entry into self-employment.

Caliendo et al. (2011) concluded that “the self-employed have higher average scores in openness and extraversion, and lower scores in agreeableness and neuroticism, than the full sample” (p. 15), confirming the findings of Zhao and Seibert<sup>11</sup> (2006). In the same vein and based on five meta-analyses, Brandstätter (2011) reported that Big Five are important predictors of entrepreneurial intention and of entrepreneurs’ performance (in both cases scoring higher at openness, conscientiousness and extraversion and lower at neuroticism).

Without prejudice of the relevance of the Big Five construct and its dominance over the last decades regarding research on personality of entrepreneurs, the approach is not immune to criticism. Actually, its aggregating approach may lead to the inclusion in the same factor of contradicting effects regarding entrepreneurship, that is, personality characteristics or sub-factors that are positive for entrepreneurship and others that can hinder the entrepreneurial activity.

If we consider conscientiousness, we will find among other sub-factors need for achievement and dutifulness, for instance. However, while the former is consensually related with entrepreneurship, we can hardly find someone arguing that being dutiful is critical for the entrepreneur. It is therefore no wonder that various scholars (e.g. Leutner et al., 2014; Vinchur, Schippmann, Switzer, & Roth, 1998; Zhao & Seibert, 2006) advocate the supremacy of specific personality characteristics as predictors of entrepreneurial behavior. As Barrick and Mount (2005) point out “narrow traits rely on explicit description of entrepreneurial activities that may be situated in time, place and role,” (p. 367) and so specific personality characteristics are more useful in predicting entrepreneurial performance than the Big Five approach what justifies a succinct presentation of Rauch and Frese (2007) work’s.

The meta-analyses of Rauch and Frese (2007) included 116 independent samples from 104 papers and the authors wished to show that: (1) “There is a positive relationship between business owners’ personality traits and entrepreneurial behaviour (business creation and business success)”; and (2) “Personality traits that are matched to the task of entrepreneurship (need for achievement, innovativeness, proactive personality, self-efficacy, stress tolerance, need for autonomy, internal locus of control, and risk taking) predict entrepreneurial behaviour (business creation, and business success) more strongly than traits that are not matched to entrepreneurship” (Rauch & Frese, 2007, p. 360).

The authors confirmed both hypotheses: the business owners’ personality traits were positively related to business creation and business success and that traits matched to entrepreneurship are better predictors of the entrepreneurial behavior than traits which are not matched to entrepreneurship although observing the existence of some moderators in both cases.

As noted by Brandstätter (2011), “there can be little doubt any more that personality traits contribute substantially to the way entrepreneurs think, what they aim for, what they do, and what they actually achieve” (p. 229). So it would seem unfair not to agree with Rauch and Frese (2007) final remark: “entrepreneurship research cannot develop a consistent theory about entrepreneurship if it does not take personality variables into account as well” (p. 375), viewpoint also shared by Zhao and Siebert (2006).

Assumed the relationship between non-cognitive skills and the entrepreneurial behavior it is time to analyze whether those skills are mainly inborn or can be developed.

McCrae et al. (2000) note that “FFT [five-factor theory] deliberately asserts that personality traits are endogenous dispositions, influenced not at all by the environment” (p. 175). However, the authors later recognize that the previous statement represents an oversimplification as environmental influences

“define the conditions under which human personality evolved; they shape a vast array of skills, values, attitudes, and identities; they provide the concrete forms in which personality traits are expressed; and they supply the trait indicators from which personality traits are inferred and trait levels are assessed” (McCrae et al., 2000, p. 175).

Cunha and Heckman (2007) consider that the dichotomy nature/nurture (inborn skills versus acquired skills) is obsolete. Based on Turkheimer, Haley, Waldron, D’Onofrio and Gottesman (2003) work, those authors argue that the skills are mainly acquired and that the genes expression’s is influenced by environmental conditions. Therefore, as Shonkoff and Phillips (2000) point out, “it is time to reconceptualize nature and nurture in a way that emphasizes their inseparability and complementarity, not their distinctiveness: it is not nature versus nurture, it is rather nature through nurture” (p. 41), a position also shared by Ridley (2011).

As claimed by White et al. (2006), “biology only creates a predisposition or potential for certain behaviors; it does not fully determine complex behaviors. Social behaviors are also affected by how and what an individual learns through formal education or less formal socialization processes” (p. 22), and that non-cognitive skills are more malleable<sup>12</sup> than cognitive skills. Nevertheless, there seems to be a greater scope for education policy to affect non-cognitive skills (Carneiro et al., 2007), that is, educational interventions targeted at non-cognitive skills are promising (Heckman, 2012), what clearly justifies the name of life skills as they might be acquired/improved throughout one’s lifetime (Dahlstedt & Fejes, 2019).

However, even taking into account the malleability of non-cognitive skills and the likelihood of higher economic returns of their development during adolescence and secondary school (e.g. Knudsen, Heckman, Cameron, & Shonkoff, 2006; Carneiro & Heckman, 2003), we should be aware that early investments in education have a crucial role. Its results persist over time and are essential to acquire future competences (Cunha & Heckman, 2007), as “there is a strong interaction between cognitive and social [non-cognitive] skills in the production of educational attainment [...] [they] reinforce each other” (Carneiro et al., 2007, p. 12).

Entrepreneurship education provides knowledge on cognitive and non-cognitive skills by formal and informal courses. It is important to address non-cognitive skills since the start of the schooling path because they are determinants both for entrepreneurship (Frank, Lueger, & Korunka, 2007; Zhao, Seibert, & Lumpkin, 2010) and for active citizenship.

Actually, entrepreneurship is much more than the creation of a new firm. It is also about converting potential passive and indifferent people into proactive individuals, people who are able to dream and to fight for their dreams (Dantas & Valente, 2015), that is, the development of our society depends to a large extent on individuals with an entrepreneurial mindset and “schools and educational programs contribute to instill the personality traits that are deemed to be useful in modern knowledge-based societies” (Brunello & Schlotter, 2011, p. 12).

## **ENTREPRENEURSHIP EDUCATION: LIFE SKILLS PROGRAMS**

The European Union (EU) has identified entrepreneurship as a key factor and a basic skill (Jones & Iredale, 2014) which should be promoted in educational context. Actually, facilitating life skills learning is possible and desirable and its training (intentional, systematic and rigorously planned interventions) might be designed to optimize personal and social skills.

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

Generally speaking, these life skills programs are focused on the needs of a particular group. They are structured over a certain period of time and present suggestions for experience assessment. Participation, stakeholders' involvement and meaningful activities are important requirements. Recently, these programs have been replacing curative or remedial programs (focused on reducing individual problems). They have taken a preventive (avoiding or restraining the arrival of a certain problem) and developmental (learning to use personal and social skills in a adjusted and appropriate way to the context) approach by appealing to subjects' participation and eventually involving the community (Matos & Tomé, 2012).

Whether preventive, developmental or remedial programs, these intervention proposals aim to work behaviors, to promote positive self-concept and to prevent misbehavior. They seek participants to be competent, socially adjusted, able to recognize feelings, generate alternative solutions to problems and anticipate consequences of possible behaviors. "Entrepreneurs education seeks to prepare people to be responsible entreprising individuals who have the knowledge, skills and attitude necessary to achieve the goals they set for themselves to live the fulfilled life" (European Comission, 2012, p. 44). In this sense, entrepreneurial skills are tied to life in general (Dahlstedt & Fejes, 2019).

Teaching flexibility and adaptability, initiative and self-direction, social and cross-cultural skills, productivity and accountability, as well as leadership and responsibility (Kivunja, 2015) can be operationalized through experiential learning, through learning outside the class and through real context approaches (Marques & Albuquerque, 2012). Entrepreneurship learning processes are facilitated by the using of participatory learning methods and are based on a social learning process (Singh & Gera, 2015). Life skills training is facilitated by understanding skill meaning, observation and modelling, practice (in a supportive learning environment), and thought reflection in action and reflection on action with the guidance of a facilitator (focused on the individual's needs and characteristics) "(...) to help and guide the reflective process and to facilitate critical reflection" (Jones & Parker, 2014, p. 27).

In adulthood, two common forms of implementing life skills programs are in the workplace or via internet. For example, Promoting Adult Resilience (PAR) is a strength-based resilience program that "(...) is implemented in the workplace and is designed to draw on everyday examples of workplace situations and work-life balance issues (...)" (Forneris, Halsall, Bean & Danish, 2014, p. 85). This program is typically implemented in small groups (8 to 14 people) with a program manual and workbooks to present the activities. The sessions aim to work personal strengths and resilience, stress management, self-talk, problem solving, and conflict prevention and management. In Portugal, The School of Life Skills has a leadership training program organized in 4 workshop cycles: 1. Enhancing leadership ideas; 2. Enhancing leadership styles, 3. Enhancing team leadership, 4. Enhancing leadership success (University of Minho - School of Psychology) for people who perform leadership and mentoring roles or for people who are interested in understanding this topic.

"One example of the use of the internet for enhancing well-being in adulthood is the interventions conducted by Selugman, Stee, Park, and Peterson (2005) (...) In this one-week intervention, participants were randomly assigned to one of five happiness intervention exercises or a placebo control group" (Forneris, Halsall, Bean & Danish, 2014, p. 86). The exercises aim to work the gratitude, to identify goods things in life, to reflect about good performances (time were the participant was at his/her best) and to work on the personal strengths.

Regarding entrepreneurship education, we have adopted the broad definition proposed by Martínez et al. (2010) according which it is "the building of knowledge and skills "about" or "for the purpose of" entrepreneurship generally, as part of recognized education programs at primary, secondary or tertiary-level educational" (p. 11).



Apart from few exceptions (Graevenitz, Harhoff, & Weber, 2010 and Oosterbeek, Van Praag and Ijsselstein, 2010), our literature review points out to a positive relationship between entrepreneurship education and entrepreneurial activity, that is, people exposed to specific entrepreneurial programs are more likely to become entrepreneurs (Mwasalwiba, 2010).

However, the majority of those studies are focused on higher education (e.g. Florin, Karri, & Rossiter, 2007; Galloway, Anderson, Brown, & Wilson, 2005) or even at later dates (Kolvereid & Moen, 1997; Olomi & Sinyamule, 2009). Nevertheless, we would better to prepare the journey in advance because investing in entrepreneurship education only in higher education might be too late (Huber, Sloof, & Van Praag, 2012), what leads us to undertake a brief analysis about what is going on at primary and secondary level of education in Portugal.

## **Portuguese Entrepreneurship Education**

### **a) Primary education**

According to Cunha and Heckman (2007) any skills shortage should be overcome acting in the early days what implies parental education on the one hand and, on the other, primary education.

If we take into account the education attainment levels of Portuguese adults (yes, parents education matter (Fairlie, 2005) in what concerns entrepreneurship), the Portuguese culture which does not encourage entrepreneurship (Dantas & Valente, 2015), and even a certain complacency of the home environment which increasingly delegates to school their educational role (Donatelli, 2004), we should conclude that primary schools have a paramount role to play in what concerns our children's attitudes, values, and skills, as appendix 1 illustrates.

In addition, it is important to keep in mind that the goal is much more ambitious than training people to become potential entrepreneurs (Filion, 1994), or for the job market. What is at stake is to prepare creative and autonomous people able to mobilize resources to achieve their goals, to prepare "societies, organizations and individual citizens to improve their capacity to cope with an increasingly competitive, uncertain and complex world involving higher rates of innovation and change" (Gibbs, 2007, p. 2).

The only recent research we know concerning entrepreneurship education at the primary school was carried out by Heilbrunn (2010), in Israel. It took place at Misgav elementary school and aimed at assessing the impact of their entrepreneurial learning program on entrepreneurial drive<sup>13</sup>, using the instrument proposed by Florin et al. (2007).

A questionnaire was administered to 176 students from 6<sup>th</sup> grade (average age 11) being 90 students from Misgav school (exposed to the program) and 86 from a different school (located in Haifa) who formed the control group. The findings revealed that Misgav students rated significantly higher on proactive disposition, preference for innovation, and achievement motivation.

Although not suitable for generalization because it is a single and local case study, Heilbrunn (2010) findings are in line with our point of view: the likelihood of influencing the non-cognitive skills which can be changed/reinforced by educators, and the need to focus on entrepreneurship education since the early years (Eurydice Network, 2012).

Regarding entrepreneurship education in Portugal, we question how might Portuguese primary teachers approach entrepreneurship education if they do not receive any kind of training on entrepreneurship<sup>14</sup>?

The introduction of a module on entrepreneurship in Higher Schools of Education curricula should be the starting point if we do want to foster entrepreneurship in our coming generations. In any event, the

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

approach cannot be purely theoretical at the risk of being in danger of being counterproductive (Jiménez & Muñoz, 2012). Therefore, the teachers' training must combine the pedagogical nature with business aspects (World Economic Forum, 2009), as their goal should be to gradually change "hearts and minds" (Sánchez, 2013).

In 2007 the Portuguese Ministry of Education through the Direção-Geral de Desenvolvimento Escolar<sup>15</sup> (DGIDC) launched an optional instrument which could have been revolutionary concerning entrepreneurship education: the National Project for Entrepreneurship Education (PNEE). This initiative was preceded by a pilot phase in the 2006/2007 school year which involved 23 schools from International Standard Classification of Education (ISCED) 2 and 3.

At the time, Marçal Grilo (former Education Minister) stated that "entrepreneurship education achieves greater relevance if we take into account that we are not necessarily born with an entrepreneurial mindset, but we can acquire knowledge, skills, and attitudes that encourage and provide the development of ideas, initiatives, and projects that aim at the creation, innovation, and changes in ones field of work" (DGIDC, 2007, p. 8).

Unfortunately, as the saying goes, "the mountain labored and brought forth a mouse", that is, the initial enthusiasm quickly faded away. According to the Services Department of Curricular Development (DSDC) in 2007/2008 school year 99 schools (its maximum) joined the program but it quickly "extinguished" in the 2 subsequent years.

In 2012, the Decree-Law 139/2012 reinforces the cross-curricular character of the subject "education for citizenship" promoting its approach in every area of the curriculum. However, formally, education for citizenship is only included in a "complimentary offer" which is limited to one hour per week. Within this complimentary offer we can find 15 different subjects one of them being entrepreneurship education which lead us to think that not a lot can be expected regarding entrepreneurship training.

From our contact with DSDC we could conclude that some guidelines are being prepared that will be followed by the development of teaching material and teachers training. Once again, given the optional character of entrepreneurship training and the wide range of targets to reach, we can hardly expect significant progress as far as entrepreneurship education at the elementary school in Portugal is concerned.

Besides some cases as "Youth Start - Entrepreneurial Challenges"<sup>16</sup> (best suited for secondary education), there are always several entrepreneurship contests running, targeted at all levels of education.

Alternatively, schools may request assistance from external entities to address entrepreneurship education. In such case, depending on their budget or their ability to raise financing (from municipalities, for example) they mainly have 2 options: Junior Achievement Portugal<sup>17</sup>, which provides free training on entrepreneurship as it is a non-profit organization or profit-making organizations as is the case of GesEntrepreneur ([www.gesentrepreneur.com](http://www.gesentrepreneur.com)) and Betweien (<http://www.betweien.com>), for example.

As is widely recognized, "doing the same thing and expecting different results" is not considered to be a demonstration of intelligence. If we do want our children to have an entrepreneurial mindset there is no way forward other than make every school offer entrepreneurship education. From our point of view the path to get there implies: (1) the introduction of a compulsory subject into teachers graduation course; and (2) the promotion of compulsory training in entrepreneurship for all current teachers. Obviously, our proposal applies to both primary and secondary levels of education because the absence of training in entrepreneurship is similar, as we will see in the next section.

Despite this somewhat dark picture regarding entrepreneurship education, new projects are also emerging, as is the case of the "Escolas d'Óbidos", which we present in Appendix 2.

## b) Secondary education

Entrepreneurship education at secondary level should show students that entrepreneurship is a possible, viable, and a challenging career choice and that entrepreneurial activity is socially desirable. The goals to be achieved are obvious: in the first case to lead the youth to consider setting up a business as an alternative for their professional future perhaps close as many will drop out of school, and contribute to make them active and successful citizens in any context; in the second case, the purpose is to enhance the entrepreneurship image in the society as “more positive social attitudes towards entrepreneurship are a stepping stone for the creation of a more business-friendly environment which may positively influence the decision of young people to opt for self-employment” (Eurofund, 2015, p. 22).

Actually, cultural and social norms can hinder or foster the entrepreneurial activity (Amorós & Bosma, 2014; Filion, 1999) and are seen as one of the less favorable structural conditions for entrepreneurship in Portugal (e.g. ISCTE-IUL & SPI Ventures, 2013). The education system must, therefore, contribute to overcome this drawback. Furthermore, the educational system should reinforce the non-cognitive skills (e.g. creativity, autonomy, self-confidence) particularly because at this stage the economic return of the investment is higher (Carneiro & Heckman, 2003; Sánchez, 2013), as aforementioned, and they are critical for personal and professional success.

To convert passive or reactive people into proactive people able to have demanding dreams and to fight for its achievement is a crucial goal for our educational system and for the society as a whole. As mentioned by the World Economic Forum (2009, p. 40), quoting Drucker (2001), “what we need is an entrepreneurial society in which innovation and entrepreneurship are normal, steady, and continual”. However, secondary teachers do not have training about entrepreneurship. Therefore, with the exception of the subject “education for citizenship” referred to above, entrepreneurship is not addressed within a more specific context in our secondary schools.

In fact, it is theoretically possible for each school to create a separate and compulsory subject on entrepreneurship, provided it does not jeopardize the strict and demanding curricular targets. The situation is somewhat different in what concerns vocational education. In this case students have to develop a “project of professional competence” which implies a greater involvement by the teachers to support its realization, but the skills involved are mostly cognitive.

All in all, and besides any individual school initiative mentioned above, each teacher may (or may not) address entrepreneurship education, organize companies’ visits or even invite a local entrepreneur to intervene in the classroom. Thus, while the cross-curricular approach of entrepreneurship education is highly recommended, the practice relies on the teachers’ sole discretion and motivation but they do not have any kind of training and awareness on this issue. As aforementioned, it appears to be absolutely essential to introduce a compulsory subject in the graduation course of future teachers, and to promote compulsory teachers’ training in entrepreneurship for current teachers, as the only way to ensure that they are able to promote the appropriate cognitive and non-cognitive skills of their students (Sánchez, 2013).

Moreover, schools should be encouraged to strengthen their links with local businesses and to challenge local entrepreneurs to share their experiences with the students due to their high influence as role-models (Eurofound, 2015; Frank, et al., 2007; Wilson, Kickul & Marlino, 2007).

Finally, schools should take advantage of the external entities which work on entrepreneurship education as aforementioned. It is worth highlighting that, according to World Economic Forum (2009), in 2008 “20% of all secondary school graduates in Norway have participated in JA programmes [...]

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

the level of entrepreneurial activity among students who have participated in the programme is at least double the norm for their peers” (p. 40).

## **CONCLUSION**

Although recognizing the relevance of the entrepreneurial activity in general, we have particularly highlighted the entrepreneurship by opportunity considering its major impact on economic development (Acs, 2006; European Commission, 2013). However, the entrepreneurial activity does not happen by itself despite the biological influence. It requires cognitive and non-cognitive skills which the educational system should provide the opportunity to acquire/flourish/develop.

Regarding the primary and secondary education, the commitment of the Portuguese educational system to foster entrepreneurship still remains too weak. The cross-curricular approach of this subject makes an effective follow-up difficult, and the overburdened curricula lead to the underestimation of entrepreneurship education, which is exacerbated by the lack of teachers’ training in entrepreneurship. It is therefore only logical that the teachers’ commitment to promote/strengthen the non-cognitive/life skills desirables for the entrepreneurial activity falls far short of what our society needs.

It is true that the greater or lesser importance of non-cognitive skills is variable depending on each stage of the entrepreneurial process (Frank et al., 2007; Rauch & Frese, 2007). However, we can hardly assist to the setting up of new and successful projects if we have no people with strength and enthusiasm to launch them, so “it is necessary to take measures to promote personality characteristics in schools [primary and secondary education] and universities” (Frank et al., 2007, p. 227).

We have seen a stronger commitment of higher education on entrepreneurship education. However, as mentioned by Pfeiffer and Reuß (2007) “to maximize the sum of the additional human capital formed by limited additional resources for investments in education, the best strategy is to invest in early childhood” (p. 18). Thus, the involvement of primary and secondary teachers in entrepreneurship education is critical, as later investments in human capital are less efficient and effective (Carneiro & Heckman, 2003).

We recognize the huge importance of performing in-depth research into the impact of entrepreneurship education at the primary and secondary level, which can be a challenge for other researchers, because up to now and to our knowledge the majority of national education systems do not reflect enough the need to approach entrepreneurship education since the early years.

We concede that “Escolas d’Óbidos” project (Appendix 2), besides increasing the visibility of the municipality and being an added value for the local population, might, if successful, “contaminate” other municipalities which joined the pilot project and, gradually, spread over the whole country<sup>18</sup>.

During our contacts with DSDC the intention to make entrepreneurship education available for all students was made clear as well as the development of initiatives that could promote its implementation. Nevertheless, we are convinced that the first step should be to provide teachers with the needed “tools”, i.e. while generalized entrepreneurship training is not considered an imperative for teachers this subject will remain at the discretion of teachers and schools which does not allow us to expect bright prospects regarding the entrepreneurial activity in the coming future.

## ACKNOWLEDGMENT

This project is financed by National Funds of the FCT – Portuguese Foundation for Science and Technology within the project «UIDB/04928/2020».

## REFERENCES

- Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations*, 1(1), 97–107. doi:10.1162/itgg.2006.1.1.97
- Acs, Z., & Audretsch, D. (1990). *Innovation and Small Firms*. The MIT Press. doi:10.1007/978-94-015-7854-7
- Acs, Z., Audretsch, D., & Lehmann, E. (2013). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 32(1), 15–30. doi:10.1007/11187-008-9157-3
- Acs, Z., Autio, E., & Szerb, L. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, 43(3), 476–494. doi:10.1016/j.respol.2013.08.016
- Aldrich, H. (1999). *Organizations evolving*. Sage.
- Amason, A., Shrader, R., & Tompson, G. (2006). Newness and novelty: Relating top management team composition to new venture performance. *Journal of Business Venturing*, 21(1), 125–148. doi:10.1016/j.jbusvent.2005.04.008
- Amorós, J., & Bosma, N. (2014). *Global entrepreneurship monitor. 2013 Global report*. Santiago de Chile: GERA. Retrieved September 11, 2015, from <http://www.gemconsortium.org/docs/download/3106>
- Arthur, S., & Hisrich, R. (2011). Entrepreneurship through the ages: Lessons learned. *Journal of Enterprising Culture*, 19(1), 1–40. doi:10.1142/S0218495811000696
- Audretsch, D. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63–78. doi:10.1093/oxrep/grm001
- Autio, E., & Acs, Z. (2010). Intellectual property protection and the formation of entrepreneurial growth aspirations. *Strategic Entrepreneurship Journal*, 4(3), 234–251. doi:10.1002/ej.93
- Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43(7), 1097–1108. doi:10.1016/j.respol.2014.01.015
- Baron, R. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship’s basic “why” questions. *Journal of Business Venturing*, 19(2), 221–239. doi:10.1016/S0883-9026(03)00008-9
- Baron, R., & Shane, S. (2008). *Entrepreneurship: A Process Perspective* (2nd ed.). Mason: Thomson South-Western.
- Barrick, M., & Mount, M. (2005). Yes, personality matters: Moving on to more important matters. *Human Performance*, 18(4), 359–372. doi:10.120715327043hup1804\_3

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

Begley, T., & Boyd, D. (1987). A comparison of entrepreneurs and managers of small business firms. *Journal of Management*, 13(1), 99–108. doi:10.1177/014920638701300108

Birch, D. (1987). *Job creation in America*. Macmillan.

Block, J., & Sandner, P. (2009). Necessity and opportunity entrepreneurs and their duration in self-employment: Evidence from German micro data. *Journal of Industry, Competition and Trade*, 9(2), 117–137. doi:10.1007/10842-007-0029-3

Bowles, S., & Gintis, H. (1976). *Schooling in capitalist America* (Vol. 75). Basic Books.

Brandstätter, H. (1997). Becoming an entrepreneur - A question of personality structure? *Journal of Economic Psychology*, 18(2-3), 157–177. doi:10.1016/S0167-4870(97)00003-2

Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222–230. doi:10.1016/j.paid.2010.07.007

Brockhaus, R. (1982). The psychology of an entrepreneur. In C. Kent, D. Sexton, & K. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 39–56). Prentice Hall.

Brunello, G., & Schlotter, M. (2011). *Non cognitive skills and personality traits: Labour market relevance and their development in education & training systems*. IZA Discussion Paper N°. 5743. Retrieved July 15, 2015 from <http://ftp.iza.org/dp5743.pdf>

Bull, I., & Willard, G. (1993). Towards a theory of entrepreneurship. *Journal of Business Venturing*, 8(3), 183–195. doi:10.1016/0883-9026(93)90026-2

Busenitz, L., West, G. III, Sheperd, D., Nelson, T., Chandler, G., & Zacharakis, A. (2003). Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*, 26(3), 285–308. doi:10.1016/S0149-2063(03)00013-8

Caird, S. (1991). The enterprising tendency of occupational groups. *International Small Business Journal*, 9(4), 75–81. doi:10.1177/026624269100900405

Caliendo, M., Fossen, F., & Kritikos, A. (2010). The impact of risk attitudes on entrepreneurial survival. *Journal of Economic Behavior & Organization*, 76(1), 45–63. doi:10.1016/j.jebo.2010.02.012

Caliendo, M., Fossen, F., & Kritikos, A. (2011). *Personality characteristics and the decision to become and stay self-employed*. IZA Discussion Paper N°. 5566. Retrieved June 18, 2016, from <http://ftp.iza.org/dp5566.pdf>

Caliendo, M., & Kritikos, A. (2007). *Is entrepreneurial success predictable? An ex-ante analysis of the character-based approach*. IZA Discussion Paper No. 2687. Retrieved May 8, 2016, from <http://ftp.iza.org/dp2687.pdf>

Cantillon, R. (1931). *Essai sur la nature du commerce en general* (H. Higgs, Ed. & Trans.). Macmillan.

Caprana, G., & Cervone, C. (2000). *Personality: Determinants, dynamics, and potentials*. Cambridge University Press. doi:10.1017/CBO9780511812767

- Carneiro, P., Crawford, C., & Goodman, A. (2007). The impact of early cognitive and non-cognitive skills on later outcomes. *Centre for the Economics of Education, London School of Economics*. Retrieved July 16, 2016, from <https://discovery.ucl.ac.uk/16164/1/16164.pdf>
- Carneiro, P., & Heckman, J. (2003). *Human capital policy*. National Bureau of Economic Research, Working Paper No. 9495. Retrieved October 14, 2015, from <https://www.nber.org/papers/w9495>
- Casson, M. (2005). Entrepreneurship and the theory of the firm. *Journal of Economic Behavior & Organization*, 58(2), 327–348. doi:10.1016/j.jebo.2004.05.007
- Chell, E., Haworth, J., & Brearley, S. (1991). *The entrepreneurial personality: Concepts, cases, and categories*. Thomson Learning.
- Colombo, M., & Grilli, L. (2010). On growth drivers of high-tech start-ups: Exploring the role of founders' human capital and venture capital. *Journal of Business Venturing*, 25(6), 610–626. doi:10.1016/j.jbusvent.2009.01.005
- Costa, P. Jr, & McCrae, R. (1992). *NEO PI-R professional manual*. Psychological Assessment Resources.
- Cromie, S. (2000). Assessing entrepreneurial inclinations: Some approaches and empirical evidence. *European Journal of Work and Organizational Psychology*, 9(1), 7–30. doi:10.1080/135943200398030
- Cromie, S., & Johns, S. (1983). Irish entrepreneurs: Some personal characteristics. *Journal of Organizational Behavior*, 4, 317–324.
- Cunha, F., & Heckman, J. (2007). *The technology of skill formation*. National Bureau of Economic Research, Working Paper n° 12840, Retrieved June 02, 2016, from <http://www.nber.org/papers/w12840.pdf>
- Cunha, F., Heckman, J., Lochner, L., & Masterov, D. (2006). Interpreting the evidence on life cycle skill formation. In *Handbook of the economics of Education* (pp. 697-812). Retrieved August 02, 2016, from [http://jenni.uchicago.edu/papers/Cunha\\_Heckman\\_etal\\_2006\\_HEE\\_v1\\_ch12.pdf](http://jenni.uchicago.edu/papers/Cunha_Heckman_etal_2006_HEE_v1_ch12.pdf)
- Cunha, F., Heckman, J., & Schennach, S. (2010). Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3), 883–931. doi:10.3982/ECTA6551 PMID:20563300
- Dahlstedt, M., & Fejes, A. (2019). Shaping entrepreneurial citizens: A genealogy of entrepreneurship education in Sweden. *Critical Studies in Education*, 60(4), 462–476. doi:10.1080/17508487.2017.1303525
- Danish, S., & Nellen, V. C. (1997). New roles for sport psychologists: Teaching life skills through sport to at-risk youth. *Quest*, 49(1), 100–113. doi:10.1080/00336297.1997.10484226
- Danish, S., Taylor, T., Hodge, K., & Heke, I. (2004). Enhancing youth development through sport. *World Leisure Journal*, 46(3), 38–49. doi:10.1080/04419057.2004.9674365
- Dantas, J. (1999). *Gestão da Inovação*. Vida Económica.
- Dantas, J., Moreira, A., & Valente, F. (2015). Entrepreneurship and national culture. How cultural differences among countries explain entrepreneurial activity. In L. Carvalho (Ed.), *Internationalization of entrepreneurial innovation in the global economy* (pp. 1–30). IGI Global.

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

Dantas, J., Moreira, A., & Valente, F. (2018). National Culture, Societal Values, and Type of Economy: Are They Relevant to Explain Entrepreneurial Activity? In L. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Ecosystems and Social Dynamics in a Globalized World* (pp. 75–103). IGI Global. doi:10.4018/978-1-5225-3525-6.ch004

Dantas, J., & Silva, L. (2014). Empreendedorismo e empreendedores. O papel da educação. *Sensos* 8, 4(2), 175-191.

Dantas, J., & Valente, F. (2014). Empreendedorismo, cultura nacional e o papel da administração local. Estudo de caso. In *Proceedings of XXIV Jornadas Luso-Espanholas de Gestão Científica*. Instituto Politécnico de Leiria.

Dantas, J., & Valente, F. (2015). Empreendedorismo, sim. Mas quando e onde se desenvolvem as competências? In *Ensino do Empreendedorismo em Portugal - Teoria & Prática. Reflexão das I Jornadas do Ensino do Empreendedorismo em Portugal* (pp. 55-82). Coimbra: Edição Instituto Pedro Nunes.

Davidsson, P. (2016). *Researching Entrepreneurship - Conceptualization and Design* (2nd ed.). International Studies in Entrepreneurship. Springer International Publishing.

DGIDC. (2007). *Guião promoção do empreendedorismo na escola*. Editorial do Ministério da Educação. Retrieved Sep 18, 2015, from [https://juventude.gov.pt/Emprego/InovaJovens\\_Criativos/Documents/Guiao\\_Promocao\\_Empreendedorismo\\_escola\\_DGE.pdf](https://juventude.gov.pt/Emprego/InovaJovens_Criativos/Documents/Guiao_Promocao_Empreendedorismo_escola_DGE.pdf)

Donatelli, D. (2004). *Quem me educa: a família e a escola perante a (in)disciplina*. Editora ARX.

Dornelas, J. (2014). *Empreendedorismo*. Livros Técnicos e Científicos Editora.

Drucker, P. (1985). *Innovation and entrepreneurship*. Harper & Row.

Drucker, P. (2001). *The Coming of entrepreneurial society. Reprinted in the essential Drucker*. Harper Collins.

Eurofound. (2015). *Youth entrepreneurship in Europe: Values, attitudes, policies*. Luxembourg: Publications Office of the European Union.

European Commission. (2010). *Entrepreneurship in the EU and beyond*. The Galloup Organization, Flash Eurobarometer 283. Retrieved November 03, 2015, from [http://ec.europa.eu/public\\_opinion/flash/fl\\_283\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_283_en.pdf)

European Commission. (2012). *Entrepreneurship education at school in Europe - National strategies, curricula and learning outcomes*. Retrieved September 12, 2016, from [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/135EN.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf)

European Commission. (2012). *Effects and impact of entrepreneurship programmes in higher education*. Directorate-General for Enterprise and Industry.

European Commission. (2013). *Entrepreneurship 2020 action plan: Reigniting the entrepreneurial spirit in Europe*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.



- Eurydice Network. (2012). *Entrepreneurship education at school in Europe*. Education, audiovisual and culture executive agency. Retrieved Mars, 16, 2016, from <http://eacea.ec.europa.eu/education/Eurydice>
- Fairlie, R. (2005). Entrepreneurship and earnings among young adults from disadvantaged families. *Small Business Economics*, 25(3), 223–236. doi:10.1007/11187-003-6457-5
- Fairlie, R., & Holleran, W. (2012). Entrepreneurship training, risk aversion and other personality traits: Evidence from a random experiment. *Journal of Economic Psychology*, 33(2), 366–378. doi:10.1016/j.joep.2011.02.001
- Filion, L. (1994). Ten steps to entrepreneurial teaching. *Journal of Small Business and Entrepreneurship*, 11(3), 68–78. doi:10.1080/08276331.1994.10600466
- Filion, L. (1999). Empreendedorismo: Empreendedoros e proprietários-gerentes de pequenos negócios. *Revista ADM*, 34(2), 5–28.
- Florin, J., Karri, R., & Rossiter, N. (2007). Fostering entrepreneurial drive in business education: An attitudinal approach. *Journal of Management Education*, 31(1), 17–42. doi:10.1177/1052562905282023
- Forneris, T., Halsall, T., Bean, C., & Danish, S. (2014). Human development programming: fostering well-being through adulthood. In A. R. Gomes, R. Resende & A. Albuquerque (Eds.), *Positive Human Functioning from a multidimensional perspective – volume 2. Promoting Healthy Lifestyles* (pp. 79- 94). New York: Nova Science Publishers, Inc.
- Frank, H., Lueger, M., & Korunka, C. (2007). The significance of personality in business start-up intentions, start-up realization and business success. *Entrepreneurship and Regional Development*, 19(3), 227–251. doi:10.1080/08985620701218387
- Galloway, L., Anderson, M., Brown, W., & Wilson, L. (2005). Enterprise skills for the economy. *Education + Training*, 47(1), 7–17. doi:10.1108/00400910510580593
- Ganotakis, P. (2012). Founders' human capital and the performance of UK new technology-based firms. *Small Business Economics*, 39(2), 495–515. doi:10.1007/11187-010-9309-0
- Gartner, W. (1988). Who is an entrepreneur? Is the wrong question. *American Journal of Small Business*, 12(4), 11–32. doi:10.1177/104225878801200401
- Gartner, W., & Shane, C. (1995). Measuring entrepreneurship over time. *Journal of Business Venturing*, 10(4), 283–301. doi:10.1016/0883-9026(94)00037-U
- Geroski, P. (1995). What do we know about entry. *International Journal of Industrial Organization*, 13(4), 421–440. doi:10.1016/0167-7187(95)00498-X
- Gibb, A. (2007). Enterprise in education, educating tomorrow's entrepreneurs. *Pentti Mankinen*, 1-19. Retrieved July, 25, 2016, from <http://www.enorssi.fi/opetus-ja-materiaalit/yrittajjyyskasvatus/pdf/Gibb.pdf>
- Glavas, C., & Mathews, S. (2014). How international entrepreneurship characteristics influence Internet capabilities for the international business processes of the firm. *International Business Review*, 23(1), 228–245. doi:10.1016/j.ibusrev.2013.04.001

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

- Goldberg, L. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 2, pp. 141–165). Sage.
- Goudas, M. (2010). Prologue: A review of life skills teaching in sport and physical education. *Hellenic Journal of Psychology*, 7, 241–258.
- Graevenitz, G., Harhoff, D., & Weber, R. (2010). The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), 90–112. doi:10.1016/j.jebo.2010.02.015
- Griliches, Z. (1960). Hybrid Corn and the Economics of Innovation. *Science. New Series*, 132(3422), 275–280. PMID:17756993
- Gustafsson, R., & Autio, E. (2011). A failure trichotomy in knowledge exploration and exploitation. *Research Policy*, 40(6), 819–831. doi:10.1016/j.respol.2011.03.007
- Gutman, L., & Schoon, I. (2013). *The impact of non-cognitive skills on outcomes for young people: Literature review*. Institute of Education, University of London.
- Haase, H., & Lautenschläger, A. (2011). The “Teachability Dilemma” of entrepreneurship. *The International Entrepreneurship and Management Journal*, 7(2), 145–162. doi:10.1007/11365-010-0150-3
- Hatten, T. (2012). *Small Business: Entrepreneurship and Beyond* (5<sup>th</sup> ed.). Mason: South-Western Cengage Learning. Retrieved July, 29, 2016, from [https://wiki.zirve.edu.tr/sandbox/groups/economic\\_sandadministrativesciences/wiki/a7111/attachments/eeb4c/the%20book.pdf?sessionID=cb5e8fbb6733b16789a0ffb6bbc66d7c647ec52c](https://wiki.zirve.edu.tr/sandbox/groups/economic_sandadministrativesciences/wiki/a7111/attachments/eeb4c/the%20book.pdf?sessionID=cb5e8fbb6733b16789a0ffb6bbc66d7c647ec52c)
- Hébert, R., & Link, A. (1989). In search of the meaning of entrepreneurship. *Small Business Economics*, 1, 39–49. doi:10.1007/BF00389915
- Heckman, J. (2012). Hard evidence on soft skills. *Focus*, 29(2), 3-8. Retrieved February, 23, 2016, from <https://www.irl.wisc.edu/publications/focus/pdfs/foc292b.pdf>
- Heilbrunn, S. (2010). Advancing entrepreneurship in an elementary school: A case study. *International Education Studies*, 3(2), 174–184. doi:10.5539/ies.v3n2p174
- Henry, C., Hill, F., & Leitch, C. (2005). Entrepreneurship education and training: Can entrepreneurship be taught? Part II. *Education + Training*, 47(3), 158–169. doi:10.1108/00400910510592211
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165–187. doi:10.1016/S0883-9026(02)00081-2
- Huber, L., Sloof, R., & Van Praag, M. (2012). *The effect of early entrepreneurship education: Evidence from a randomized field experiment*. Tinbergen Institute Discussion Paper n° TI 2012-041/3. Retrieved September, 17, 2016, from <https://papers.tinbergen.nl/12041.pdf>
- ISCTE-IUL & SPI Ventures. (2013). *GEM Portugal 2012 - Estudo sobre o Empreendedorismo*. Retrieved January 13, 2016, from <https://www.gemconsortium.org/docs/download/3120>
- Isenberg, D. (2014). What an entrepreneurship ecosystem actually is. *Harvard Business Review Blog*.

- Jamieson, I. (1984). Schools and Enterprise. In A. Watts & P. Moran (Eds.), *Education for Enterprise, Careers Research and Advisory Centre* (pp. 19–27). Ballinger.
- Jiménez, L., & Muñoz, M. (2012). Educar en creatividad: Un programa formativo para maestros de Educación Infantil basado en el juego libre. *Electronic Journal In Education Psychology*, 10(3), 1099–1122.
- John, O., Naumann, L., & Soto, C. (2008). Paradigm shift to the integrative big-five trait taxonomy: History, measurement, and conceptual issues. In *Handbook of personality: Theory and research* (pp. 114–158). New York, NY: Guilford Press. Retrieved April, 16, 2016, from [http://www.colby.edu/psych/wp-content/uploads/sites/50/2013/08/John\\_et\\_al\\_2008.pdf](http://www.colby.edu/psych/wp-content/uploads/sites/50/2013/08/John_et_al_2008.pdf)
- Jones, B., & Iredale, N. (2014). Enterprise and entrepreneurship education: towards a comparative analysis. *Journal of Enterprising Communities: People and Places in the Global Economy*, 8(1), 34–50. doi:10.1108/JEC-08-2012-0042
- Jones, M., & Parker, J. (2014). Life skills programs: what makes them work? In A. R. Gomes, R. Resende & A. Albuquerque (Eds.), *Positive Human Functioning from a multidimensional perspective – volume 2. Promoting Healthy Lifestyles* (pp. 15–36). New York: Nova Science Publishers, Inc.
- Kanter, R. (1983). *The change masters: Innovations for productivity in the American corporation*. Simon & Schuster.
- Kirzner, I. (1973). *Competition and Entrepreneurship*. The University of Chicago Press.
- Kivunja, C. (2015). Teaching Students to Learn and to Work Well with 21st Century Skills: Unpacking the Career and Life Skills Domain of the New Learning Paradigm. *International Journal of Higher Education*, 4(1), 1–11.
- Knight, F. (1921). *Risk, Uncertainty, and Profit*. Augustus Kelly.
- Knudsen, E., Heckman, J., Cameron, J., & Shonkoff, J. (2006). *Economic, neurobiological and behavioral perspectives on building America's future workforce*. NBER Working Paper 12298. Retrieved February, 12, 2016, from <https://www.pnas.org/content/103/27/10155.full.pdf+html>
- Koh, H. (1996). Testing hypotheses of entrepreneurial characteristics. *Journal of Managerial Psychology*, 11(3), 12–25. doi:10.1108/02683949610113566
- Kolvereid, L., & Moen, O. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference? *Journal of European Industrial Training*, 21(4/5), 154–160. doi:10.1108/03090599710171404
- Konings, J. (1995). Gross jobs flows and the evolution of size in UK establishments. *Small Business Economics*, 7(3), 213–221. doi:10.1007/BF01135366
- Kuratko, D. (2005). The emergence of entrepreneurship education: Development, trends and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577–598. doi:10.1111/j.1540-6520.2005.00099.x
- Kuratko, D., & Hodgetts, R. (1995). *Entrepreneurship*. Dryden Press.
- Lazear, E. (2005). Entrepreneurship. *Journal of Labor Economics*, 23(4), 649–800. doi:10.1086/491605

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

- Leutner, F., Ahmetoglu, G., Akhtar, R., & Chamorro-Premuzic, T. (2014). The relationship between the entrepreneurial personality and the Big Five personality traits. *Personality and Individual Differences*, 63, 58–63. doi:10.1016/j.paid.2014.01.042
- Levie, J., Autio, E., Acs, Z., & Hart, M. (2014). Global entrepreneurship and institutions: An introduction. *Small Business Economics*, 42(3), 437–444. doi:10.1007/11187-013-9516-6
- Lindquist, M., Sol, J., & Van Praag, M. (2012). *Why do entrepreneurial parents have entrepreneurial children?* IZA Discussion Paper N°. 6740. Retrieved April, 23, 2016, from <http://ftp.iza.org/dp6740.pdf>
- Malhotra, N. (2001). *Pesquisa de marketing: uma orientação aplicada*. Bookman.
- Marques, L., & Albuquerque, C. (2012). Entrepreneurship education and the development of young people life competencies and skills. *ACRN Journal of Entrepreneurship Perspectives*, 1(2), 55–68.
- Martínez, A., Levie, J., Kelley, D., Sæmundsson, R., & Schøtt, T. (2010). *A global perspective on entrepreneurship education and training - Global entrepreneurship monitor special report*. Retrieved November 19, 2015, from <https://www.gemconsortium.org/docs/download/275>
- Mata, J. (1994). Firm growth during infancy. *Small Business Economics*, 6(1), 27–39. doi:10.1007/BF01066110
- Matos, M., & Tomé, G. (Eds.). (2012). *Aventura Social: promoção de competências e do capital social para o empreendedorismo com saúde na escola e na comunidade*. Lisboa: Editora Placebo.
- McClelland, D. (1961). *The achieving society*. Free Press. doi:10.1037/14359-000
- McCrae, R., & Costa, P. (1990). *Personality in adulthood*. Guilford Press.
- McCrae, R., Costa, P., Ostendorf, F., Angleitner, A., Hrebickova, M., Avia, M., Sanz, J., Sánchez-Bernardos, M. L., Kusdil, M. E., Woodfield, R., Saunders, P. R., & Smith, P. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology*, 78(1), 173–186. doi:10.1037/0022-3514.78.1.173 PMID:10653513
- McGrath, R. (2013). Transient Advantage. *Harvard Business Review*, 91(6), 62–70.
- Mises, L. (1951). *Profit and loss*. Consumers-Producers Economic Service.
- Moberg, K., Vestergaard, L., Redford, D., Cooney, T., Singer, S., Sailer, ... Fayolle, A. (2014). *How to assess and evaluate the influence of entrepreneurship education: A report of the ASTEE project with a user guide to the tools*. The ASTEE project – Assessment Tools and Indicators for Entrepreneurship Education.
- Mwasalwiba, E. (2010). Entrepreneurship education: A review of its objectives, teaching methods, and impact indicators. *Education + Training*, 52(1), 20–47. doi:10.1108/00400911011017663
- Ngoasong, M. (2018). Digital entrepreneurship in a resource-scarce context: A focus on entrepreneurial digital competencies. *Journal of Small Business and Enterprise Development*, 25(3), 483–500. doi:10.1108/JSBED-01-2017-0014

- Nicolaou, N., Shane, S., Cherkas, L., Hunkin, J., & Spector, T. (2008). Is the tendency to engage in entrepreneurship genetic? *Management Science*, *54*(1), 167–179. doi:10.1287/mnsc.1070.0761
- O'Donnell, A., Gilmore, A., Cummins, D., & Carson, D. (2001). The network construct in entrepreneurship research: A review and critique. *Management Decision*, *39*(9), 749–760. doi:10.1108/EUM0000000006220
- Odewale, G., Rani, S., Migiro, S., & Adeyeye, O. (2019). Does communication skills matter to a nascent entrepreneur? *Journal of Contemporary Management*, *16*(1), 209–225. doi:10.35683/jcm18038.0011
- Olomi, D., & Sinyamule, R. (2009). Entrepreneurial inclinations of vocational education students: A comparative study of male and female trainees in Iringa region, Tanzania. *Journal of Enterprising Culture*, *17*(1), 103–125. doi:10.1142/S0218495809000242
- Omoredede, A., Thorgren, S., & Wincent, J. (2015, December). (21015). Entrepreneurship psychology: A review. *The International Entrepreneurship and Management Journal*, *11*(4), 743–768. doi:10.1007/11365-014-0307-6
- Oosterbeek, H., Van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, *54*(3), 442–454. doi:10.1016/j.euroecorev.2009.08.002
- Pfeiffer, F., & Reuß, K. (2007). *Age-dependent skill formation and returns to education: simulation based evidence*. IZA Discussion Paper N°. 2882. Retrieved August, 30, 2016, from <http://ftp.iza.org/dp2882.pdf>
- Pierce, S., Gould, D., & Camiré, M. (2017). Definition and model of life skills transfer. *International Review of Sport and Exercise Psychology*, *10*(1), 186–211. doi:10.1080/1750984X.2016.1199727
- Portugal, J. A. (2015). *Relatório anual 2014/2015. Inspiring young mind's*. Retrieved June, 21, 2016, from [http://japortugal.org/index.php?option=com\\_attachments&task=download&id=99](http://japortugal.org/index.php?option=com_attachments&task=download&id=99)
- Pujol, J., Vendrell, P., Junque, C., Martf-Vilalta, J., & Capdevila, A. (1993). When does human brain development end? Evidence of corpus callosum growth up to adulthood. *Annals of Neurology*, *34*(1), 71–75. doi:10.1002/ana.410340113 PMID:8517683
- Qian, H., Acs, Z., & Stough, R. (2013). Regional systems of entrepreneurship: The nexus of human capital, knowledge and new firm formation. *Journal of Economic Geography*, *13*(4), 559–587. doi:10.1093/jeg/lbs009
- Rauch, A., & Frese, M. (2000). Psychological approaches to entrepreneurial success: A general model and an overview of findings. In C. Cooper & I. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 101–142). Wiley.
- Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, *16*(4), 353–385. doi:10.1080/13594320701595438
- Rauch, A., Wiklund, J., Lumpkin, G., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, *33*(3), 761–787. doi:10.1111/j.1540-6520.2009.00308.x

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

- Redford, D. (2006). Entrepreneurship education in Portugal: 2004/2005 national survey. *Comportamento Organizacional e Gestão*, 12(1), 19–41.
- Ridley, M. (2011). *Nature via Nurture – Genes, Experience and what Makes us Human*. Fourth Estate.
- Rothwell, R., & Zegveld, W. (1982). *Innovation and the Small and Medium Sized Firm*. Frances Pinter.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1), 1–27. doi:10.1037/h0092976 PMID:5340840
- Sánchez, J. (2013). The Impact of an Entrepreneurship Education Program on Entrepreneurial Competencies and Intention. *Journal of Small Business Management*, 51(3), 447–465. doi:10.1111/jsbm.12025
- Sánchez, J., Carballo, T., & Gutiérrez, A. (2011). The entrepreneur from a cognitive approach. *Psicothema*, 23(3), 433–438. PMID:21774897
- Santos, S., Pimpão, A., Costa, S., & Caetano, A. (2013). A formação em empreendedorismo: Análise comparativa no ensino superior português. In D. Redford (Ed.), *Handbook de Educação em Empreendedorismo no Contexto Português* (2nd ed., pp. 219–242). Universidade Católica Editora.
- Sarkar, S. (2014). *Empreendedorismo e Inovação* (3rd ed.). Escolar Editora.
- Say, J. (1816). *A treatise on political economy*. Neely and Jones.
- Schultz, T. (1980). Investment in entrepreneurial ability. *The Scandinavian Journal of Economics*, 82(4), 437–448. doi:10.2307/3439676
- Schumpeter, J. (1934). *The Theory of Economic Development*. Harvard University Press.
- Shane, S. (2003). *A general theory of entrepreneurship*. Edward Elgar. doi:10.4337/9781781007990
- Shane, S., Nicolaou, N., Cherkas, L., & Spector, T. (2010). Genetics, the big five, and the tendency to be self-employed. *The Journal of Applied Psychology*, 95(6), 1154–1162. doi:10.1037/a0020294 PMID:20718525
- Shane, S., & Venkataramann, S. (2000). The promise of Entrepreneurship as a field research. *Academy of Management Review*, 25(1), 217–226. doi:10.5465/amr.2000.2791611
- Shonkoff, J., & Phillips, D. (Eds.). (2000). *From neurons to neighborhoods: the science of early child development*. National Academy Press.
- Singh, H., & Gera, M. (2015). Strategies for Development of Life Skills and Global Competencies. *IJSR - International Journal of Scientific Research (Ahmedabad, India)*, 4(6), 760–763.
- Sorenson, J. (2007). Closure versus exposure: Mechanisms in the intergenerational transition of self-employment. In M. Ruef & M. Lounsbury (Eds.), *Research in the Sociology of Organizations* (pp. 83–124). Elsevier.
- Stewart, W., & Roth, P. (2001). Risk taking propensity differences between entrepreneurs and managers: A meta-analytic review. *The Journal of Applied Psychology*, 86(1), 145–153. doi:10.1037/0021-9010.86.1.145 PMID:11302226

- ter Weel, B. (2008). The noncognitive determinants of labor market and behavioral outcomes. *The Journal of Human Resources*, 43(4), 729–737. doi:10.1353/jhr.2008.0014
- Thornton, P., & Flynn, K. (2003). Entrepreneurship, networks and geographies. In Z. Acs & D. Audretsch (Eds.), *Handbook of Entrepreneurship Research* (pp. 401–436). Kluwer.
- Tidd, J., & Bessant, J. (2011). *Managing innovation: Integrating technological, market and organizational change* (3rd ed.). Wiley.
- Timmons, J. (1989). *The entrepreneurial mind*. Brick House Publishing Co.
- Timmons, J., & Spinelli, S. (2007). *New venture creation-entrepreneurship for the 21<sup>st</sup> century* (7th ed.). McGraw-Hill.
- Tupes, E., & Christal, R. (1961). *Recurrent personality factors based on trait ratings* (USAF ASD Technical Report No. 61-97). Lackland Air Force Base, TX: U.S. Air Force. Retrieved July, 30, 2016, from <http://www.dtic.mil/dtic/tr/fulltext/u2/267778.pdf>
- Turkheimer, E., Haley, A., Waldron, M., D’Onofrio, B., & Gottesman, I. (2003). Socioeconomic status modifies heritability of IQ in young children. *Psychological Science*, 14(6), 623–628. doi:10.1046/j.0956-7976.2003.psci\_1475.x PMID:14629696
- United Nations Children’s Fund (UNICEF). (2012). *Life Skills (Online life skills education [LSE] fact sheet)*. Retrieved September, 28, 2016, from [https://www.unicef.org/lifeskills/index\\_4105.html](https://www.unicef.org/lifeskills/index_4105.html)
- van de Ven, A. (1993). The development of an infrastructure for entrepreneurship. In P. Westhead & M. Wright (Eds.), *Advances in Entrepreneurship* (pp. 377–398). Edward Elgar. doi:10.1016/0883-9026(93)90028-4
- Vinchur, A., Schippmann, J., Switzer, F., & Roth, P. (1998). A meta-analytic review of predictors of job performance for sales people. *The Journal of Applied Psychology*, 83(4), 586–597. doi:10.1037/0021-9010.83.4.586
- Wennekers, S., van Stel, A., Carree, M., & Thurik, R. (2009). The relationship between entrepreneurship and economic development: Is it U-shaped? *Foundations and Trends in Entrepreneurship*, 6(3), 167–237. doi:10.1561/03000000023
- White, R., Thornhill, S., & Hampson, E. (2006). Entrepreneurs and evolutionary biology: The relationship between testosterone and new venture creation. *Organizational Behavior and Human Decision Processes*, 100(1), 21–34. doi:10.1016/j.obhdp.2005.11.001
- White, R., Thornhill, S., & Hampson, E. (2007). A biosocial model of entrepreneurship: The combined effects of nurture and nature. *Journal of Organizational Behavior*, 28(4), 451–466. doi:10.1002/job.432
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387–406. doi:10.1111/j.1540-6520.2007.00179.x

## ***Is Entrepreneurship a Bio-Social Phenomenon?***

World Economic Forum. (2009). *Educating the Next Wave of Entrepreneurs: Unlocking Entrepreneurial Capabilities to Meet the Global Challenges of the 21<sup>st</sup> Century: A Report of the Global Education Initiative*. World Economic Forum.

World Health Organisation. (1999). *Partners in life skill education*. World Health Organisation, Department of Mental Health.

Zahra, S., & Wright, M. (2011). Entrepreneurship's next act. *The Academy of Management Perspectives*, 25(4), 67–83. doi:10.5465/amp.2010.0149

Zahra, S., Wright, M., & Abdelgawad, S. (2014). Contextualization and the advancement of entrepreneurship research. *International Small Business Journal*, 32(5), 479–500. doi:10.1177/0266242613519807

Zhao, H., & Seibert, S. (2006). The Big Five personality dimensions and entrepreneurial status: A meta-analytical review. *The Journal of Applied Psychology*, 91(2), 259–271. doi:10.1037/0021-9010.91.2.259 PMID:16551182

Zhao, H., Seibert, S., & Lumpkin, G. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404. doi:10.1177/0149206309335187

## **KEY TERMS AND DEFINITIONS**

**Contextual Conditions:** They are the political, social, economic, cultural, technological, and demographic dimensions which characterize a country or a region. They provide the framework for any event, situation or decision and influence its outcomes.

**Educational System:** It is a complex and multifaceted system which includes teachers, students, contents, schools, educational policies, and other subsystems which contribute to the acquisition of knowledge, skills, values and habits.

**Entrepreneurial Activity:** It is the human action aimed at generating added value through creativity, innovation and identification of opportunities. It implies the exploitation of new ideas as well as to plan and to manage projects in order to create value and to achieve the desired goals.

**Entrepreneurial Behavior:** It is a multidimensional construct which refers to individual's ability to turn ideas into action. It includes permanent search for opportunities and the ability to mobilize the necessary resources for the setting-up and implementation of new projects.

**Entrepreneurial Mindset:** It refers to a specific state of mind which predisposes human conduct towards entrepreneurial activities and outcomes. It includes attributes such as open-mindedness, creativity, innovation, and availability for taking calculated risk.

**Genetic Endowment:** Is the set of attributes transmitted by genes (inherited) which creates the predisposition for certain behaviors and affect health status.

**Life Skills:** Human potentialities that enable individuals to have success at the environment in which they live (whether at home, work, or community).

**Non-Cognitive Skills:** Endogenous predispositions which are reflected in people's characteristics, patterns of thoughts, feelings, and behaviors.



**Skill Formation:** The process by which individuals achieve and develop innate or acquired skills to cope with everyday life challenges. Besides heredity, it includes formal and informal training activities and life experience.

## ENDNOTES

- <sup>1</sup> We have focused on entrepreneurship by opportunity because we have in mind the more developed economies. However, we have no doubts about the relevance of the entrepreneurship by necessity particularly in what concerns less developed economies due to its critical role in what concerns poverty reduction and to ensure marginalized and excluded groups the right to own their future.
- <sup>2</sup> Actually, according to Caliendo, Fossen and Kritikos (2010), mentioned by Caliendo, Fossen and Kritikos (2011), “there should be an inverse U-shaped relation between risk attitudes and entrepreneurial survival as riskier investments should also lead to an increasing probability of high losses with the consequence of bankruptcy and entrepreneurial failure or closure” (p. 8).
- <sup>3</sup> Because the sample is largely made up of females the results cannot be directly generalized to male population.
- <sup>4</sup> Monozygotic twins result from the fertilization of a single egg by a single sperm and therefore share 100% of their genetic make-up while dizygotic twins are created when two separate eggs are fertilized by two separate sperm and, as the other siblings from the same parents share, on average, 50% of their segregating genes (Nicolaou et al., 2008; White et al., 2007).
- <sup>5</sup> The existence of an entrepreneurship-specific gene is not discussed but, as mentioned by Shane, Nicolaou, Cherkas and Spector (2010) that “genes probably influence entrepreneurship through mediating mechanisms, such as personality” (p. 1154).
- <sup>6</sup> The Global Entrepreneurship Monitor, for example, present 9 structural conditions that influence the entrepreneurial activity (ISCTE-IUL & SPI Ventures, 2013).
- <sup>7</sup> It is worth underlining that entrepreneurship should not be a top function but be practiced all over the organization.
- <sup>8</sup> Actually, an informed and reasoned decision in not becoming an entrepreneur might be positive in social and economic terms as it avoids the “inefficient allocation of private and public money, not to speak of the psychological costs of failure for the persons themselves” (Caliendo & Kritikos, 2007, p. 2).
- <sup>9</sup> Around the beginning of this century we assisted to the emergence of a third stream of research whose intent consists of explaining the entrepreneurial behavior through cognitions. The cognitive approach analyses topics such as counterfactual thinking, heuristics, planning fallacy, scripts and self-efficacy (see, for example, Sánchez, Carballo, & Gutiérrez, 2011).
- <sup>10</sup> According to John, Naumann, and Soto (2008) the approach’s name has been chosen by Goldberg (1981) “not to reflect their intrinsic greatness but to emphasize that each of these factors is extremely broad. Thus, the Big Five structure does not imply that personality differences can be reduced to only five traits. Rather, these five dimensions represent personality at a very broad level of abstraction; each dimension summarizes a large number of distinct, more specific personality characteristics” (p. 119).

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

- <sup>11</sup> These authors compared entrepreneurs with managers concluding that the former score significantly higher on conscientiousness and openness and lower on neuroticism and agreeableness than the latter.
- <sup>12</sup> According to Cunha, Heckman, Lochner and Masterov (2006), “while factors affecting IQ [cognitive skills] deficits need to be addressed at very early ages for interventions to be effective, there is evidence that later interventions in the adolescent years can affect noncognitive skills” (p. 801).
- <sup>13</sup> Florin et al. (2007) define entrepreneurial drive as “an individual’s perception of the desirability and feasibility to proactively pursue opportunities and creatively respond to challenges, tasks, needs, and obstacles in innovative ways. Individuals with high levels of entrepreneurial drive are generally high achievers, possess high self-efficacy, question the status quo, and have a preference for innovative solutions.” (p. 26).
- <sup>14</sup> A research conducted by Dantas and Silva (2014) concluded that only one (Portalegre College of Education) among the numerous Portuguese Higher Schools of Education integrated a module (which was optional) in the area of entrepreneurship education.
- <sup>15</sup> The government structure responsible for improving/ developing the curriculum content.
- <sup>16</sup> Aiming at fostering core competencies in young people in order to improve their chances in the labor market and expanding their outlook on life, Youth Start – Entrepreneurial Challenges project (2015-2018) was implemented in Austria, Luxembourg, Portugal, and Slovenia, and involved around 30,000 students from the primary and secondary levels (<http://youthstartproject.eu/>).
- <sup>17</sup> Junior Achievement Worldwide is a century-old North American NGO whose current mission is “to inspire and prepare young people to succeed in a global economy” and is present in over 100 countries (<https://www.jaworldwide.org/aboutja>). It operates in Portugal through the Junior Achievement Portugal (<http://www.japortugal.org>), since 2005, and has programs for all levels of education. In the 2017/2018 school year, the organization reached about 30,000 students, mostly in primary (90%) and secondary education (18%).
- <sup>18</sup> It is somewhat the rationale of the “epidemic” or “social contagion” model of diffusion as initially proposed by Griliches (1960).

## **APPENDIX 1**

### **How Might we (or Might we not) Contribute to the “Blossoming” of Creativity?**

This year is the 500th anniversary of the death of Leonardo da Vinci, an unequivocal genius, and we risk a philosopher in the ancient conception, so many areas of knowledge he dominated. This event makes us think that in all the areas of human activity (e.g., Oscar Niemeyer or Siza Vieira, in architecture; Federer or Usain Bolt, in sports; Beethoven or Elvis Presley, in music; Renoir or Picasso, in painting; Mahatma Gandhi or Nelson Mandela, in politics) we can find people who leave their mark on our lives.

This introduction deals with the approach to creativity and the attempt to assume the complementarity between nurture and nature (Ridley, 2011). We will use two examples of children’s literature (Dantas, (2013): *The Little Prince*, by Saint-Exupéry (initially published in 1943), and *The Dot*, published in 2003, by Peter Reynolds.

In the first case, older and certainly more widely recognized, the protagonist gave rise to his creative vein by drawing a boa constrictor which had swallowed an elephant. To his surprise, the grown-ups to whom he showed his work thought it was a hat. However, the child did not give up (in addition to creativity, persistence is another critical characteristic in entrepreneurship) and made a new drawing, now showing the inside of the boa constrictor in the hope that adults would understand. The grown-ups’ reaction was not delayed: they advised him to dedicate himself to geography, history, calculus and grammar. And so, the protagonist complained, I abandoned a magnificent career as a painter at the age of six.

The second example is led by Vashti, a little girl, who felt unable to draw. At the end of a class and in front of a still blank sheet of paper, the teacher insisted: go ahead, make a mark there and then sign it. The child stuck the pencil in the sheet of paper where one dot was left and signed it.

Vashti was astonished when the very next week she saw her drawing framed over the teacher’s desk. She became enthusiastic and worked hard to expand the “point concept” in terms of both shape and color, and her drawings were a huge success at the school’s next exhibition.

The authors are persuaded that there are still adults (teachers or not) who will fit into each of the examples. Regarding the impact of each approach on creativity, we would rather have the readers draw conclusions.

## **APPENDIX 2**

### **The “Escolas d’Óbidos” Project**

Although it has recently gained more visibility, namely through the publication of Decree-law number 30/2015, from February 12th 2015, the ‘Escolas d’Óbidos’ project was already a part of the Educational Charter ratified in 2006.

The project does not follow any specific educational model, but it draws inspiration from several sources (the “Creativity Factory”, for example, is the result of a former partnership with the Reggio Emilia model; and the ‘My Machine’ program, one of its flagship programs, was created in Belgium), benefits from different partnerships (e.g. Catholic University; Polytechnic Institute of Leiria) and uses already existing resources, such as the local Technological Park.

### ***Is Entrepreneurship a Bio-Social Phenomenon?***

This excerpt of an interview we conducted with Óbidos town councilor Celeste Afonso illustrates the project's overall philosophy: "we should let children be children; we should let them be creative and use their imagination, not just for the sake of it, but so that they develop it and we can use it to help the child grow. [...] students should be allowed to dream, to express themselves, to create, and our role as an institution is to broaden their horizons, to provide them with reference points that allow them to want more, to want to go further".


Space constraints don't leave us room to go very far but, for the school year 2014/2015, the educational offer for elementary school children entails, besides the national curriculum, a multidisciplinary inclusivity team, 'creativity factory', yoga, dance, horticulture, 'learning to think' (philosophy for children), 'my idea, my solution' (programming classes) and 'growing up better'.

Naturally, unlike what was predicted in the aforementioned Decree-Law number 30/2015, which focused on reducing expenses, Óbidos chose to see the additional costs generated by this program as an investment in the education of its future citizens. Currently, there is still no investigation analyzing the impact of these projects in terms of the development of non-cognitive skills, a task which we hope to undertake. But, as the saying goes, one should "bend the willow while it is young" - and this includes, we would say, starting to create a predisposition for entrepreneurship from early childhood on or, as stated by (Eurydice Network, 2012: 5), "education is key to shaping young people's attitudes, skills and culture".

## Chapter 2

# The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs: Psychological Characteristics and Socio-Cultural Background

**José Carlos Sánchez-García**


 <https://orcid.org/0000-0002-2264-0696>

*Universidad de Salamanca, Spain*

**Brizeida Raquel Hernández-Sánchez**

*Universidad de Salamanca, Spain*

**Giuseppina Maria Cardella**

 <https://orcid.org/0000-0002-8422-6466>

*Universidad de Salamanca, Spain*

### ABSTRACT

*Research confirms that entrepreneurial intention plays an important role in the decision to start a new firm. For this reason, it has received a lot of attention from researchers who have studied it from different perspectives, using different variables. The goal of this chapter is to investigate the reasons why some individuals tend more to entrepreneurship than others. By utilizing Schwartz's theory of cultural values as the explaining model, this paper analyzes cultural values in relation to three bipolar dimensions: conservation vs. autonomy, hierarchy vs. egalitarianism, and mastery vs. harmony. The authors applied the EOQ scale to a sample of 600 nascent entrepreneurs aged between 25 and 35, belonging to several autonomous communities in Spain. The results show significant differences in the variables of personal, contextual, and entrepreneurial intention regarding the gender, occupation, or professions of the parents and the autonomous community.*

DOI: 10.4018/978-1-7998-4826-4.ch002

## INTRODUCTION

Entrepreneurship plays a crucial role in the development of a country, since its considered a critical factor in promoting innovation, creating employment opportunities and generating social welfare and development (Doran, McCarthy, & O'Conner, 2018), maintaining sustainable development (Youssef, Boubaker, & Omri, 2018). Such is its impact that some authors have labelled entrepreneurs as the “engines of economic growth” in the development of a given country (Baron & Shane, 2008). More specifically, job creation has been considered as one of the principal contributions of entrepreneurs.

In recent years, the crisis generated high levels of unemployment, especially among youth (Tomić, 2018; Pal'ová, Vejačka, & Kakalejčík, 2020). Recent Global Entrepreneurship Monitor (GEM) data (2018–2019) indicate that in innovation-driven economies, more than 50% of entrepreneurs are expecting to generate medium to high job-creation opportunities in the next five years.

Researchers also agree that entrepreneurs are made and not born and that entrepreneurs can be trained (Sánchez, 2013; Shah, Amjed, & Jaboob, 2020; López-Núñez, Rubio-Valdehita, Aparicio-García, & Díaz-Ramiro, 2020). Thus, the importance of considering the factors that make someone an entrepreneur, as well as the topics related to the forming of entrepreneurs (Boldureanu et al., 2020).

Jena (2020) analyzed the impact of students' attitude towards entrepreneurship education. The results of the study showed a positive and significant impact of attitudes towards education and, as a consequence, a significant influence, also, on entrepreneurial intention.

In other words, people do not suddenly turn into entrepreneurs without certain triggering factors, and more importantly, without having the intention to be an entrepreneur. It is therefore critical for us to understand what factors influence self-employment intention; hence investigating the determinants of such an intention is a crucial step for identifying ways in which to train competitive entrepreneurs.

Entrepreneurial intention has been widely studied (Carr & Sequeira, 2007; Usman, 2019; Vamvaka, Stoforos, Palaskas, & Botsaris, 2020). Nonetheless, the results of studies into the determinants of entrepreneurial intention vary in relation to different countries and cultures (Bogatyreva et al., 2019). More studies are thus needed in local contexts to increase the relevance and validity of previous results. Furthermore, although many studies use the theory of planned behaviour (TPB) to predict entrepreneurial intention, certain limitations can be identified in this type of approach. Some recent studies (do Paço, Ferreira, Raposo, Rodrigues, & Dinis, 2011; Vamvaka, Stoforos, Palaskas, & Botsaris, 2020) do not consider any other variables in their TPB model for predicting this intention. Although Sommer and Haug (2011), Fini, Grimaldi, Marzocchi, and Sobrero (2012), and, more recently, Gieure, Benavides-Espinosa, & Roig-Dobón (2020), have extended the model, certain variables were not considered in their studies either, such as the participants personality traits or beliefs regarding entrepreneurship. These limitations mean that the determinants of entrepreneurial intention still need to be clarified.

Other studies have shown that personality traits influence venture creation (Kerr, Kerr, & Xu, 2017; Ndfirepi, 2020). It can even be said that the influence of personality traits is the strongest determinant in the intention to start a business (Voda & Florea, 2019; Nidhi & Kumari, 2018). Individuals with personality traits such as risk taking propensity and internal locus of control tend to be more entrepreneurial and committed to entrepreneurial activities such as starting up a new business (Munir, Jianfeng, & Ramzan, 2019; Scafarto, Poggesi, & Mari, 2019). Nevertheless, these personality traits only partially explain business start-ups and the entrepreneurial process. Studies that defend the influence of these personality traits have not taken into account the individuals' entrepreneurial beliefs. This gap in the field of entrepreneurial research is surprising, given that beliefs have been identified as influential factors in an

individual's entrepreneurial behavior. Thus, some studies have clearly demonstrated that entrepreneurial behaviour is strongly influenced by people's values and beliefs (Krueger & Brazeal, 1994; Gasse, & Tremblay, 2011; Kakouris, 2016; Bousmpou, Kakouris, & Samathrakis, 2019).

This combination of psychological traits with individuals' values and beliefs is what makes some people more likely to attempt to start a business (Fragoso, Rocha-Junior, & Xavier, 2019; Pérez-Fernández, Delgado-García, Martín-Cruz, & Rodríguez-Escudero, 2020). Individuals' psychological traits and socio-cultural background act as a stimulant and/or motivator of their entrepreneurial behaviour (Shirokova, Osiyevskyy, & Bogatyreva, 2016; Baluku & Otto, 2019).

However, although there is already an established literature on entrepreneurial intention, much of this literature has used students as participants in the study samples. In contrast, little research has been done by applying models of entrepreneurial intentions to samples of nascent entrepreneurs. That is, although the literature widely acknowledges the importance of intention as the first step towards a behaviour, there is no direct relationship established between intention and action. Ajzen (1987) showed that intentions explain only about 30% of the variance in behaviour. This result was confirmed by a meta-analytic review of 185 studies by Armitage and Conner (2001), which found that, on average, 27% of the variance in behaviour is explained by behavioural intentions. In the business context, Schlaegel and Koenig (2014) reached similar conclusions since they found that 37% of business behaviour can be explained by business intentions. All these results show that the relationship between intention and behaviour is not systematic, as many authors (Sheeran & Silverman, 2003; Wiedemann et al., 2009) highlight. In line with Mahmood et al., (2019), who argue that intention and attitude towards entrepreneurship, subjective norms, and perceived behavioural control are significant predictors of subsequent behaviour, this chapter focuses on the relationship between intentions and behaviour/action (nascent entrepreneurs). Our goal is to theoretically determine what can explain the progression between these stages, using a psychosocial approach. In the business world, some authors have tried to close the gap, like Alam, Kousar, & Rehman (2019), who argue the moderating role of entrepreneurial motivation between intention and behaviour. However, no model has been proposed so far.

This chapter will attempt to overcome these limitations by researching entrepreneurial intention, considering personality traits and beliefs. More specifically, in this study we first analyse the influence of different traits on participants' intentions for starting a business; secondly, we study the influence of the participants' beliefs on entrepreneurial intention, and thirdly we consider whether these beliefs are a moderating factor between entrepreneurial traits and intentions.

## **BACKGROUND**

Recently, national governments have shown great interest in the development of an entrepreneurial culture, which is considered crucial not only for the country's economic growth, but also for innovation, new job opportunities and a better quality of life (Acs & Armington, 2006; Audretsch, 2007; Shane, 2008; Andersson, 2011).

Particularly, Nascent Entrepreneurship is an important phenomenon that has received significant attention in the last decade due to the contributions of new venture creation to the global, national and regional economies (Davidsson, 2006).

Nascent entrepreneurship has been explored in a variety of different contexts and through a multitude of different theoretical stand points (Parker & Belghitar, 2006).

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

The term “nascent entrepreneurship” is complex, in Global Entrepreneurship Monitor (GEM) regards one of the first steps of the entrepreneurial process capturing individuals who are currently in the process of starting a new business.

However, there is no clear definition in the literature (Oviatt & McDougall, 2004; Thompson, 2009). Probably this difficulty derives from the fact that it is a relatively recent study object in the scientific panorama and compared to which there is still little empirical evidence on the subject (Newbert & Tornikoski, 2013).

The literature shows that demographics and economic characteristics influence the nascent entrepreneurial rate in a given geographical context.

Indeed, several factors characterize the profile of nascent entrepreneurs, including the best career opportunities; gender differences; age; financial, social and human capital; entrepreneurial intentions and previous experiences. Many scholars have shown that among the factors that determine the decision to become or not a nascent entrepreneur, gender and age are among the most investigated variables in empirical studies (Reynolds et al. 2004).

It has been widely shown that women are less likely to choose an entrepreneurial career than men (Bosma & Levie, 2010). According to Wagner (2007), this difference is mainly due to their attitude towards the willingness to take risks.

For example, using GEM data from 28 countries, Arenius and Minniti (2005) stressed that although perceptual variables are important for distinguishing between entrepreneurs and non-entrepreneurs, there are negligible differences between entrepreneurs compared to the sex variable.

Furthermore, as regards age, empirical studies have come to the same conclusions: age has a negative effect on the probability of becoming a nascent entrepreneur. With increasing age the probability for an entrepreneurial career choice decreases, with a maximum peak in the age group between 25 and 34 years (Delmar, Davidsson & Gartner, 2003; Bosma & Levie, 2010).

Furthermore, Davidsson and Honig (2003) and Davidsson (2006) stressed that the desire to become a nascent entrepreneur is also related to educational levels. Low levels of education are linked to a lower propensity to become nascent entrepreneurs (Reynolds, 2008). Other studies (Verheul & Van Stel, 2007) show that education and skills together can increase the likelihood of engaging in start-up activities and improve business survival.

Income disparities can also stimulate entrepreneurship, underlining the motivational aspect (necessity-based vs. opportunity-based venturing) that characterizes nascent entrepreneurs. Indeed, a strong level of income inequality can be both a driving force and an attraction for low-income groups to enter self-employment, as well as the existence of work experience in young and small businesses increases the propensity to start a company (Dunn & HoltzEakin, 2000; Davidsson & Honig, 2003).

In addition to these attributes, other complex factors such as perception of opportunity, perception of one’s ability to act in an entrepreneurial way, fear of failure and entrepreneurial intentions, come into play.

In fact, entrepreneurship is not a monolithic concept, but a dynamic process in which different interdependent dimensions must be taken into consideration. Therefore, in order to have a holistic understanding of the phenomenon, cultural, social and individual specificities must also be taken into account.

Recent literature identifies some factors that hinder entrepreneurship. One of the most common fears among nascent entrepreneurs is the so-called fear of failure (Bosma et al., 2007). Several studies define the fear of failure in terms of risk aversion. For example, some authors describe the fear of failure as a risky attitude (Minniti & Nardone, 2007; Langowitz & Minniti, 2007). While others suggest that fear of failure is an indicator of a high degree of risk aversion (Wagner & Stenberg, 2004), for Ray (1994) the fear



of failure reflects two specific aspects of risk appetite: potential loss of image of self and self - respect. However, Grilo and Irigoyen (2006) show that fear of failure could be mitigated on an educational level.

In line with what has just been said, in our study we considered the influence of personal factors - personal effectiveness, internal control locus and proactiveness - and socio-cultural factors - attitude, perceived control, subjective norm and feasibility - on the entrepreneurial intentions of 600 nascent entrepreneurs.

## **RECENT EMPIRICAL DEVELOPMENTS**

Human beings are enterprising and innovative by nature. The evolutionary milestones that have allowed humanity to progress from a prehistorical way of life to today's world can be traced back to this fact; that is, from the invention of the wheel to the sophisticated technological innovations being celebrated today. Nonetheless, the scientific study of the figure of the entrepreneur is a relatively recent concern. One of the aspects most considered in these scientific studies is that entrepreneurship is the result of entrepreneurial intention.

Entrepreneurial intention has been widely investigated as a psychological process from different perspectives, for example, Wang, Wang, & Chen (2018), Marques, Valente, & Lages (2018), Bartha, Gubik, & Bereczk (2019), Albashrawi, & Alashoor (2020). However, although most of these studies base their methodology on the Ajzen's (1991) Theory of Planned Behaviour (Moriano, Palací, & Morales, 2006; Gorgievski, Stephan, Laguna, & Moriano, 2018; Adeyonu, Balogun, & Obaniyi, 2019; Valencia-Arias & Restrepo, 2020), not all of them consider the same variables; these mostly suggest entrepreneurial intention is primarily a result of cognitive processes (Bazzy, Smith, & Harrison, 2019). Some studies have extended the model with certain variables that were not used in previous studies, such as personality traits or socio-cultural and regional influences on entrepreneurial intention (Sousa, Wilks, & Cruz, 2018; Munir, Jianfeng, & Ramzan, 2019; Ward, Hernández-Sánchez, & Sánchez-García, 2019; Hueso, Jaén, Liñán, & Basuki, 2020) and in this sense different models have been proposed, such as the Entrepreneurial Event model by Shapero and Shokol (1982), the Entrepreneurial Potential model (Krueger & Brazeal, 1994), the Entrepreneurship Attitude Orientation model (Robinson, Stimpson, Huefner, & Hunt, 1991), the Determinants of Entrepreneurial Intention model (Davidsson, 1995), and the Entrepreneurial Intention model, among others. All of these models attempt to seek or explain the reasons why some individuals are more inclined to entrepreneurship, and therefore the elements that lead individuals to tend towards entrepreneurial behaviour should be identified (Kerr, Kerr, & Xu, 2017).

Broadly speaking, we can affirm that the configuration process of entrepreneurial intention is determined by many influential factors, such as personality, social support, economic system, culture, values, and so on (Molino, Dolce, Cortese & Ghislieri, 2018; Farrukh, Lee, & Sajid, 2019). This idea is proposed in the wider sense by Bird (1988), who states that personal aspects and the social context interact specifically with rational or intuitive thought during the configuration of entrepreneurial intention.

Different studies have shown that personal characteristics behave as predictor variables in entrepreneurial intention and also explain a considerable amount of its variance (Sesen & Ekemen, 2020). Individuals with a certain degree of self-efficacy, internal locus of control, and proactiveness are more likely to be entrepreneurial and are more committed to the entrepreneurial activities they carry out (Bell, 2019; Udayanan, 2019; Vetrivel & Krishnamoorthy, 2019; Ahmed, Islam, & Usman, 2020).

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

Entrepreneurial intention roots down from its precursor, Entrepreneurial Orientation (EO). Pivotal on exploring the psychological face of enterprising, essentially, it brings it down to a behavioral level. In other words, how an entrepreneur acts becomes center stage. Since research has shown that entrepreneurial firms generally outperform other conservative means of managing business, EO has taken a substantial amount of attention since its proposal (Musthofa, Wahyudi, Farida, & Ngatno, 2017; Per-anginangin & Bakar, 2020).

The first approach to conceive EO was substantiated by Covin and Slevin (1986; 1989; 1991), defined as a three-dimensional construct related to the decision-making practices, managerial philosophies and strategic behavior that an entrepreneur possesses: Innovativeness, Risk-Taking, and Proactiveness (Anderson, Covin, & Slevin, 2009). Using these three core behaviors, Covin and Slevin (1986, 1989) developed what is still the most commonly researched self-report scale for Entrepreneurial Orientation. Lumpkin and Dess (1996) define Innovativeness as the tendency to engage in and support new ideas, novelty experimentation, and creative processes that may result in new products, services, or technological processes. Brockhaus (1980), Miller, (1983), and Lyon, Lumpkin, and Dess (2000), call Risk-Taking to act boldly and spontaneous in less calculated fashion, while borrowing heavily and committing resources into unknown environments and uncertain outcomes in a fearless manner. Lastly, Proactiveness involves the engaging in anticipative, opportunity-seeking, forward-looking behaviors that allow for the creation and exploitation of environmental opportunities (Lumpkin & Dess, 1996; Sandberg, 2002).

Researchers have also explored personality differences between entrepreneurs and non-entrepreneurs based on the idea that certain psychological characteristics are requisite preconditions for entrepreneurship (Kazmi, Khan, & Nabradi, 2017; Anwar & Saleem, 2019). An individual with certain personality traits can feel more attracted than others towards entrepreneurship. Yusof, Sandhu and Jain (2007) defend the idea that young people today are more inclined towards entrepreneurship because they show psychological characteristics typical of entrepreneurs, such as high self-efficacy, a tendency to act, and a high internal locus of control. Recently, the same results have also come, Sharma & Madan, 2015; Sowole, Hogue, & Adeyeye, 2018.

Based on the review works and meta-analyses by different authors (Zhao, Seibert, & Lumpkin, 2010; Miao, Qian, & Ma, 2017; Kerr, Kerr, & Xu, 2018; Murnieks, Klotz, & Shepherd, 2019), here we propose the following personality characteristics for analysis: self-efficacy, internal locus of control (ILC) and proactiveness.

With respect to the social context, it is thought that an entrepreneurial personality is created by society, that is, it is the result of the influence of cultural factors on individuals, such that social norms would shape the person. Thus, culture is understood as the creator of an enterprising spirit.

A society's predisposition towards entrepreneurship is linked to the role of culture, and vice-versa, we can say that the national culture, that is, the specific culture of each country, affects the characteristics of entrepreneurs.

According to Schwartz's Theory of Cultural Values (1992), which we invoke here, there is a series of basic problems that societies must face in order to regulate human activity. These problems are: the nature of the relations between individuals and the group, guaranteeing responsible behaviour among citizens that will help to preserve the society, and maintaining humanity's relation to nature and the social world (Kluckhohn, 1951). These basic problems are reflected in the cultural dimensions of values. To find the solution to these problems, Schwartz distinguished a series of cultural values structured into three dimensions of polar opposites that demonstrate the cultural incompatibilities among different types of values.

These are as follows:

1. **Conservatism Versus Autonomy:** This dimension analyses the differences among the cultural solutions that have been given to the conflictive relation between individuals and the group.
2. **Hierarchy Versus Egalitarianism:** This dimension reflects the forms in which cultures socialize individuals so that they take into consideration the welfare of others and manage social interdependencies.
3. **Mastery Versus Harmony:** This dimension reflects the cultural solutions to the problem of humanity's relation to nature.

Schwartz (1992) criticises the dichotomous position with respect to collectivist-individualist values, positing that some values can serve both categories. He proposes a two-dimensional structure of values, in which individuals can have a mixed profile, giving priority to both individualistic and collectivist values. The ten types of values proposed by Schwartz are grouped within the dimensions of individualism and collectivism. The Individualism dimension comprises the values of power, achievement, hedonism, stimulation and self-direction; the Collectivist dimension prioritizes values such as benevolence, tradition and conformity; and the Mixed Values would be universalism and security.

Cultures that favour entrepreneurship are those in which the prevailing values are linked to autonomy, individualism and competition, as opposed to those that promote conservatism, maintaining the status quo and acceptance of the way things are.

A culture is considered to foster autonomy and individualism when it emphasizes the development of ideas, individual thought, curiosity, creativity, open-mindedness, and in general, considers the individual as difference. By the same token, a culture is considered to favour competition, understood as the emphasis on getting ahead, when it promotes self-affirmation, active participation in changing the world, and the taking on of risk when seeking success.

Inglehart's Theory of Cultural Values (1991) establishes a social dichotomy between the cultures that endorse materialistic values (associated with the maintaining of order and economic stability) as opposed to those that promote post-materialistic values, in which ideas count more than money and a less impersonal society is promoted in which people participate more in work. Thus, the societies in which these latter values prevail are more likely to develop entrepreneurship initiatives. This theory, applied to entrepreneurship, considers that societies in which materialist values prevail are less inclined to entrepreneurship, in contrast with societies in which post-materialistic values are well-established, which promote entrepreneurship.

Several researchers support the argument that national culture explains the differences among different countries, and these differences are also linked to entrepreneurship (Lortie, Barreto, & Cox, 2019; Watson, Dada, Wright, & Perrigot, 2019; Dos Santos et al., 2020; Woodside, Megehee, Isaksson, & Ferguson, 2020). Hofstede (1980) proposed the following dimensions to define the culture of a country in relation to business: the distance to power, the avoidance of uncertainty, individualism vs. collectivism and masculinity. Note that Hofstede (1980) also includes the "individualism" factor like Schwartz (1992), thus appealing to values linked to independence and individual decision-making, and thereby ratifying the argument that states that the higher the level of individualism in a society, the more favourable it is to entrepreneurship. Again, according to Hofstede (1980), high individualism is associated with emphasis on initiative and individual achievement, whereas low individualism would be associated with a belief in group decisions over individual decisions.

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

There is evidence that some cultural values, such as individualism and low avoidance of uncertainty, are associated with traits such as internal locus of control, risk-taking and innovation, which in turn are associated with entrepreneurial development (Farrukh, Lee, Sajid, & Waheed, 2019). Thus, an entrepreneurial attitude would be favoured by cultures with a high degree of individualism, low avoidance of uncertainty, short distance to power, and high masculinity, which can be compared with Schwartz (1992). Albertos (2002) states that culture influences several aspects of the economy, among which is economic effectiveness; that is, cultural values can drive (or not) more effective decision-making, rapid innovation, and better adaptations to a changing environment, as well as the economic goals themselves, that is, the wishes of the population in relation to the economy.

Another series of factors should also be taken into account. These are, on one hand, a result of the national culture, but on the other, the action or effect of these factors has repercussions on the entrepreneurship culture itself. Among them we would highlight the role of institutions, employment policies, and social networks, as well as motivation for or hindering of entrepreneurship in that society. The institutions involved in the social and cultural aspects of a society play a very important role in regard to an entrepreneurial orientation and the creation and promotion of an entrepreneurial profile.

Another ongoing concern on entrepreneurship is also its gender gap. Research has shown that entrepreneurship, as business, is typically associated with masculine characteristics (Dileo & Pereiro, 2019; Moudrý, & Thaichon, 2020), and that entrepreneurs themselves also seem to carry this burden (Ahl 2006; Lewis 2006). In societies where people pursue tasks positively associated with gender but avoid those which are not (Heilman, 1983; Miller & Budd, 1999), it could become influential on women's intention to pursue entrepreneurship (Fagenson & Marcus, 1991; Gupta, Turban, Wasti, & Sikdar, 2005), adversely affecting their involvement and development on the domain (Marlow & Patton, 2005). Effectively, women possess a higher chance than men of diminishing her potential on entrepreneurial endeavors because of the lack of confidence on their skills to fulfill the job (Chen, Greene, & Crick, 1998), and have lower expectations of success than men on a wide range of other occupations (Eccles, 1994). Specifically, research has proven women to have lower entrepreneurial intentions (Chen et al., 1998; Chowdhury & Endres, 2005; Gatewood, Shaver, Powers, & Gartner, 2002; Kourilsky & Walstad, 1998).

## **MAIN FOCUS OF THE CHAPTER**

In this study we analysed the values proposed by Schwartz (1992), using the Entrepreneurship Orientation Questionnaire (EOQ, acronym in Spanish: COE) (Sánchez, 2010), in which these values are one of its core components, to approach these dimensions. By the same token, the motives, resources and barriers perceived by our subjects in relation to entrepreneurship were evaluated and examined in relation to their entrepreneurial intention, which we treat as a construct, and is also included among the measuring scales of the EOQ questionnaire. Another cultural aspect that helps us to establish differential patterns of influence and around which our analysis will revolve is the region of Spain which each participant comes from. This will shed light on the virtues and defects of entrepreneurial culture throughout the country, and enable us to elucidate aspects that can help us to promote an enterprising spirit, which at this point in time is key to our economic recovery. In short, our research study was aimed at analysing the influence of culture on entrepreneurship by examining cultural values and the role of other factors that can influence culture. The study operated on the assumption that, in a national-wise scope, culture

values and standards will transpose into the regional level. As such, it is interpreted as a given the overall values of a nation (Spain) will influence on its different Autonomous Communities.

In our understanding, then, the nascent entrepreneur is the result of the relation between a series of internal personal factors –self-efficacy, internal locus of control and pro-activeness- and his or her socio-cultural back ground –attitude, perceived control, subjective norm and feasibility. These personal factors were selected in accordance to its predictive values on entrepreneurial intention from previous studies (Sanchez, Lanero, & Yurrebaso, 2005; Sanchez & Licciardello, 2012; Sánchez & Hernández-Sánchez, 2014). In the absence of studies positing a model to justify this idea, and in order to bring these perspectives together and offer a broad and relational explanation of these aspects, we present the following study.

## **THE RESEARCH STUDY**

A sample of 600 nascent entrepreneurs (with businesses less than three years old) was asked to complete the EOQ, which contains the variables we wished to study. The sample comprised 450 men and 150 women, aged between 25 and 35, and hailing from different Autonomous Communities (regions) in Spain. Potential participants for the study were recruited through the use of Chamber of Commerce directories in Spain, in order to identify business owners who had started their own business in the last three years. Participants were contacted via telephone and e-mail and asked to complete a questionnaire, which was directly administered by a member of the research team.

Data were collected in the same organizations that gave their authorization for participating in the research and with the managers who signed the consent protocol. Participants were informed of the objectives of the research and were guaranteed anonymity and confidentiality in regard to the information they were about to give. They also received instructions as to the response mechanics of the questionnaire and were encouraged to offer sincere answers and not to leave anything blank. Any questions they had were addressed individually and in a personalized way during the data collection. In all cases, together with the note seeking authorization from the participating companies, it was given an express written commitment to provide information about the results once the study had finished.

The data collected from these entrepreneurs addressed the following aspects: personal profile of the entrepreneurs, including personality traits and competences, as well as attitude, feasibility, social norm and social value afforded to entrepreneurs (social appreciation). A second block of data included the context variables that the literature has shown to have an effect on entrepreneurial intention. Finally, cultural values were assessed.

The data collected from the EOQ were analysed with SPSS version 19.0 for Windows. First, we carried out correlation and reliability analyses among the variables in question. Subsequently, analysis of variance (ANOVA) was run to verify the differences between the study variables as a function of the participants' gender, their parents' occupations, and the Autonomous Community to which they belonged. Regression analyses were then carried out to observe to what extent entrepreneurial intention was explained by the variables considered. Finally, moderation analyses were run to check the moderation effect that feasibility, attitude, and the social appreciation of entrepreneurs can have on the relation between personal, contextual and cultural values and entrepreneurial intention. Items that could potentiate social desirability bias had their values inverted at the moment of analysis.

Table 1, found in the appendix, shows the reliability values of the scales as well as the coordination between them. Analysis of variance showed differences between men and women in self-efficacy,

### ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

pro-activeness, attitude towards entrepreneurship, perceived control, feasibility and intention. In all of these aspects, the men scored significantly higher than the women. In regard to the motives for creating a business, women valued personal success significantly more than men, and the men valued routine work and freedom at work significantly more than women. No significant gender differences were found in the rest of the motives (power-prestige, pleasure, novelty, independence, personal fulfilment, job security and “as a last resort”).

In relation to the resources they considered important for enterprise creation, there were significant gender differences in “Education”, “Work experience”, “Own financial resources”, “Being creative”, “Seizing opportunities”, “Effort capacity”, “Self-confidence” and “Risk-taking”. These resources were considered significantly more important by women. Among the barriers considered as obstacles for entrepreneurship, the only one that turned out to be significantly different between men and women was the lack of work experience, considered more of a barrier by women. Finally, gender differences were also found regarding the importance that certain aspects can have for entrepreneurship: “Risking loss of income”, “Social appreciation of self-employment” and “Access to source of information”. These aspects were all considered significantly more important by women.

The occupations of the participants’ parents were divided into: self-employed, private sector, public sector, and does not work. In regard to personal characteristics, there were only differences between the groups according to the father’s occupational category in the case of the job intention variable. Thus, individuals whose parents were self-employed were significantly more orientated towards entrepreneurship than those whose parents worked in the public sector. In regard to personal characteristics, only the job intention variable produces differences among the groups depending on the maternal job category. Individuals whose mothers were self-employed were significantly more favourably disposed towards entrepreneurship than those whose mothers worked in the public sector. We also found that if the mother belonged to the self-employed category, there seemed to be a positive and significant difference in relation to the rest of the categories: private sector, public sector, and does not work.

The mother’s occupation shows that there are significant differences between nascent entrepreneurs with self-employed mothers and nascent entrepreneurs whose mothers work in the public sector. Although there is no variation in relation to the personal variables, there is indeed a significant difference in the attitude and intention variables, both of which were proposed by Ajzen (1991), and the feasibility variable proposed by Shapero and Sokol (1982), all of them being more favourable in the case of nascent entrepreneurs whose mothers were self-employed. Personal fulfilment is the main differentiating motive for entrepreneurship pointed out by nascent entrepreneurs with mothers who are self-employed or work in the private sector; it seems that learning from models as proposed by Bandura (1997) exerts a large influence.

In the case of the individual regression analyses, the results are as follows: a) the personal variables explained 23% of the variance in entrepreneurship intention, the variables self-efficacy, proactiveness, and entrepreneurship competences being significant; b) the variables attitude, feasibility, norm and perceived control explained 61.5% of the variance, “norm” being the only one that was *not* significant; c) in the case of the contextual variables (motives, resources, obstacles and importance of being an entrepreneur), the percentage of variance explained was 20.2% ( $F_{4;673} = 43.91, p < 0.000$ ), the variable “motives” being the only one of them that was significant; d) when the block of social variables were entered (social and cultural appreciation of entrepreneurs), the percentage of variance explained was 32.20% ( $F_{5;669} = 64.87, p < 0.000$ ) and the “self-transcendence” variable was the only one that was *not* significant.

**The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs**

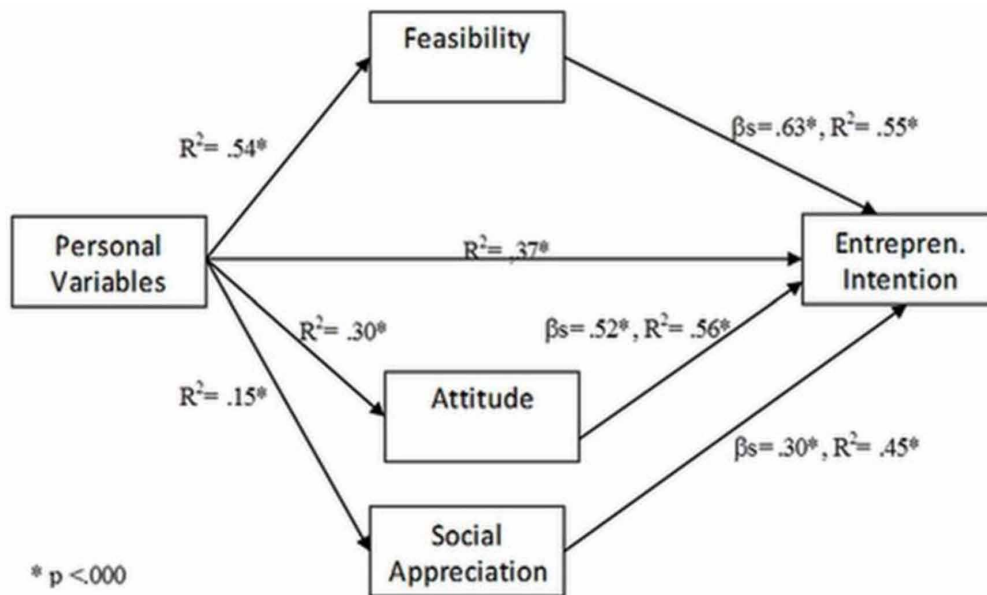
When all the variables were entered into the regression analysis in order to evaluate the contribution of each of them in relation to the criterion variable, entrepreneurial intention, the percentage of variance explained was 64.8% ( $F = 72,780, p < .000$ ); the variables that turned out to be significant were the following: feasibility (53.8%), attitude (7,10%), social appreciation (3.3%), and competences (0.5%).

When analysed by Autonomous Community, the significant variables were as follows. In Castile & Leon, feasibility, attitude, social appreciation and perceived control were significant, explaining 68.7% of the variance; as can be observed, the first three coincide with the pattern obtained for the total sample. In the Basque Country, the significant variables were feasibility, social appreciation, attitude and importance, explaining 50.5% of the variance; as we can see, the first three coincide with the pattern obtained for the total sample, although in a different order. In Asturias, feasibility, attitude and social appreciation explained 46% of the variance; these coincide with the first three we obtained in the total sample. In the Community of Madrid, attitude, internal control and importance explained 73.10% of the variance, but only attitude coincides with the pattern of significant variables in the total sample. In Catalonia, attitude, feasibility, social appreciation and competences explained 63.40% of the variance; this is the Autonomous Community showing most similarities to the pattern of the total sample.

In regard to the results of the mediational analyses:

1. When personality variables are considered the predictor variables. Figure 1 shows the relations among the predictor variable (personal variables), the mediating variables (feasibility, attitude and social appreciation) and the criterion variable, entrepreneurial intention.

*Figure 1. Relation among predictor (personality) variable, mediating variable, and criterion variable*



### ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

2. When the contextual variables are considered predictor variables. Figure 2 depicts the relations among the predictor variable (contextual variables), the mediating variables (feasibility, attitude and social appreciation) and the criterion variable, entrepreneurial intention.
3. When the cultural variables are considered predictor variables. Figure 3 shows the relations among the predictor variable (cultural variables), the mediating variables (feasibility, attitude and social appreciation) and the criterion variable, entrepreneurial intention.

In short, the models found indicate that feasibility, attitude, and social appreciation mediated the effects of the personal variables, the context variables, and the cultural variables on entrepreneurial intention.

## **SOLUTIONS AND RECOMMENDATIONS**

According to results, a main issue is that both genders perceive differently the prospects self-employment, and for such, it is of imperative reason to heed both genders differently when pursuing enterprise opportunities. As discussed earlier, entrepreneurship is a domain predominantly masculine in terms of vocabulary and defining characteristics (Dileo & Pereiro, 2019) in which women are affected by it in a way that hinders their involvement. It is evident that more effort is needed, not only to promote and prioritize equality between men and women, but also to internalize certain values in society that would allow both sexes to feel efficacious and capable, such as those valued highly by women like social appreciation and personal success among others, at the time of shaping the overall entrepreneurial image.

Also, the fact that Spain is comprised of Autonomous Communities implies that, even though it classifies as a single nation, it is diverse enough to operate differently the way entrepreneurship is promoted on each of its regions. Studies like this one hope to shed light on exactly what factors should be prioritized at the time of building and educating entrepreneurship, in a way that appeals individually to each of its Autonomous Communities' interests. For example, it would be more practical to promote entrepreneurship as an autonomous job domain in the Castile & Leon region, as opposed to the Basque country, which would value more the significance of the job at a personal level.

Noteworthy, the study also carries its limitations. To reach more asserting results, the researcher of this study lists possible recommendations. First, the study is geographically confined, but does not extend to all its areas and, while it comprised four different Autonomous Communities of Spain, it is a culturally diverse country which cannot overall correspond to its different regions equally. For a more thorough continuation on this research, its strongly recommended to expand the number of regions of study. Second, the objective of the study was entrepreneurial intention, but intention does not directly imply behavior (Sheeran & Silverman, 2003; Wiedemann et al., 2009). A longitudinal approach is recommended, as it can explore throughout the course of time how the nascent enterprisers evolve in valuing each of the factors studied. Third, a more equilibrated sample between genders is suggested as means of obtaining a more reliable measurement. Lastly, the study limited to only measure factors used on previous studies by the same researcher (Sanchez et al., 2005; Sanchez & Licciardello, 2012; Sánchez & Hernández-Sánchez, 2014), namely: internal locus of control, pro-activeness, attitude, perceived control, subjective norm, feasibility and social appreciation. It is unknown how different results may be by utilizing different factors.



**The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs**

Figure 2. Relation among predictor (contextual) variable, mediating variable, and criterion variable

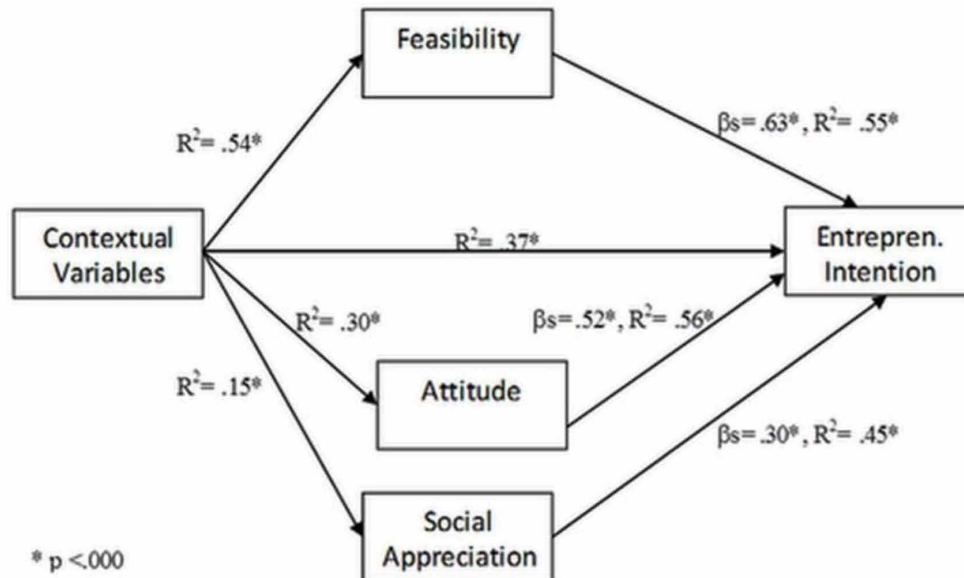
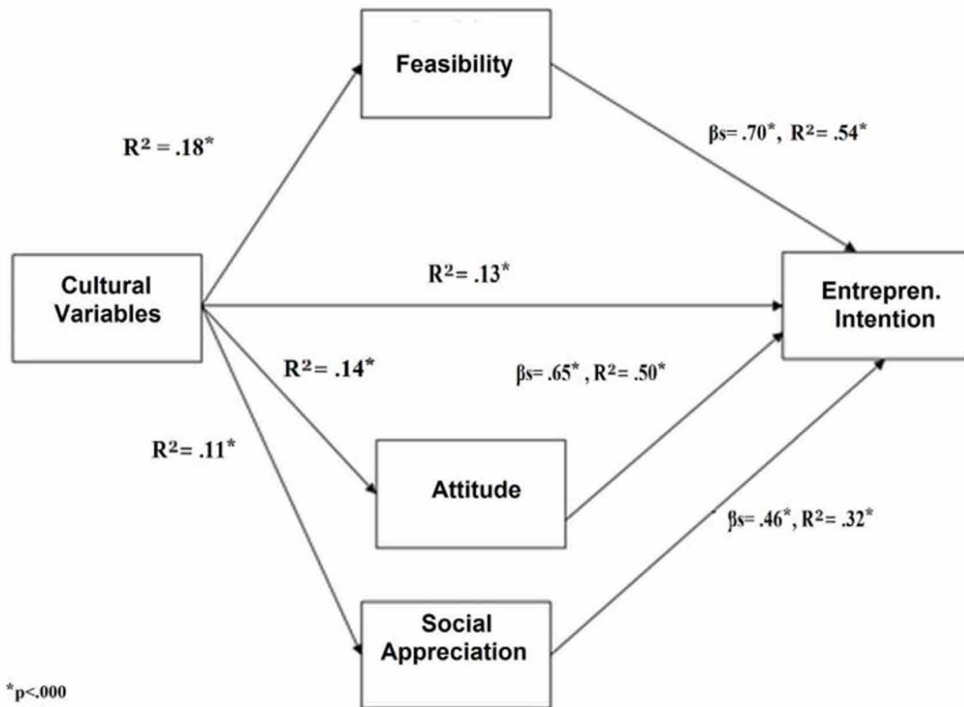


Figure 3. Relation among predictor (cultural) variable, mediating variable, and criterion variable



## **FUTURE RESEARCH DIRECTIONS**

New types of studies like this one, in which personal and geographic variables are analysed jointly, together with the influence that this combination of variables can have, contributes knowledge and new research lines to the study of entrepreneurship. Future studies will be able to answer the questions we have posed here, so that entrepreneurship in Spain can become a referent for the creation of jobs and the economic development of each of its Autonomous Communities.

As for expanding on the research, it would be interesting to learn whether the personal variables which seem to differentiate men and women when it comes to entrepreneurial intention, are valued equally by men and women in families which the mother is self-employed. Finding, for example, that daughters of self-employed women attain scores similar to sons in that family would prove to be important for the fostering and development of entrepreneurship in women.

Regarding the relation between the occupations of nascent entrepreneurs' parents and the variables considered in this study, it would also be interesting to see if there are any gender differences in how the mother's occupation affects entrepreneurship intention in daughters and sons, and thus determine whether the learning that Bandura (1997) speaks of also yields a model that is differentiated by sex.

## **CONCLUSION**

This study demonstrates that there are significant differences in the personal and contextual and entrepreneurial intention variables according to gender, parents' occupations, and Autonomous Community. In regard to gender, men are more inclined to entrepreneurship than women. The personal variable internal locus of control shows a non-significant difference, the same as occurs with norm; however, the personal variables of self-efficacy and proactiveness are favourable to men, as well as the variables proposed by Ajzen (1991): attitude and perceived control, and entrepreneurial intention.

Women afford more importance to the resources needed to begin a venture. The motives that are significantly different in relation to gender are: personal success, avoiding routine work, and freedom at work. Starting an enterprise for reasons of personal success is a motive more highly considered by women, whereas avoiding routine work and having more freedom in relation to work are more important reasons for men. These data, and the fact that women give greater importance to social appreciation, lead us to think that women are more conditioned by social factors, such as personal success, whereas men are more motivated by factors that are directly work-related, such as avoiding routine and having freedom. Gender differences regarding the resources considered important for creating an enterprise were significant for "Education", "Work experience", "Own financial resources", "Being creative", "Seizing opportunities", "Effort capacity", "Self-confidence" and "Risk-taking", all of which are considered more important by women. Differences regarding the importance that certain aspects can have for entrepreneurship are found in: "Risk of losing income", "Social appreciation of self-employment" and "Access to sources of information". These were found to be significantly more important for women. The fundamental difference when determining obstacles for entrepreneurship is that women concede more importance to a lack of work experience. These gender differences found may be behind the data obtained in the GEM 2013 report, which reflects that entrepreneurship in Spain is still an activity mainly dominated by men. In 2013, approximately six out of every ten entrepreneurs were male.

We can thus conclude that women afford more importance to resources and perceive a lack of work experience as the main hindrance to entrepreneurship. These data may suggest that women find more obstacles and feel less secure when considering entrepreneurial intention, since many of the aspects they point out are part of the personal variables, such as self-confidence or effort capacity.

These findings in relation to the differences in the parents' occupations, especially that of the mothers, show how necessary it is to support entrepreneurship in women, which could take the form of policies of equality and greater social awareness of gender roles. We found that the father's occupation was not as differentiating as that of the mother, since we did not find differences in as many variables. We also observed that the group of entrepreneurs in which the mother did not work outside the home granted more importance to financial aid or subsidies and lack of assessment when it came to entrepreneurial intention. Our study also shows that the pattern of predictors of entrepreneurial intention depends on the Autonomous Community in question. The difference in the predictive factors of each Autonomous Community and the mediation of the variables attitude, feasibility and social appreciation mean that entrepreneurial intention is different in each one.

The reality of Spain is highly complex and diverse, meaning that many initiatives can be developed from different areas. Socio-cultural factors are determined by the region to which one belongs, since they behave differently in each Autonomous Community (Liñán, Urbano, & Guerrero, 2011). This diversity in the values of each region in Spain may be a hindrance to the potential and possibilities for work and economic development that may exist in each region, values that Schwartz (1992) associates with the conservative and hierarchical dimensions, and Inglehart (1991) with materialist values. Our study has made it possible to know which variables affect each region so that specific entrepreneurship development programmes can be established to work towards changing the existing culture. Eminently constructive interventions should be addressed to moving towards a culture that values entrepreneurial initiatives and mentality, for example, with the creation of policies at regional level to promote and facilitate the development of entrepreneurship, as well as transposing the entrepreneur principles at a scholar level.

## REFERENCES

- Acs, Z. J., & Armington, C. (2006). *Entrepreneurship, geography and American economic growth*. Cambridge University. doi:10.1017/CBO9780511510816
- Adeyonu, A. G., Balogun, O. L., & Obaniyi, K. S. (2019). Factors influencing entrepreneurial intentions of undergraduate agricultural students in Nigeria. *Yuzuncu Yil University Journal of Agricultural Sciences*, 29(4), 669–676. doi:10.29133/yyutbd.623910
- Ahl, H. (2006). Why research on women entrepreneurs needs new directions. *Entrepreneurship Theory and Practice*, 30(5), 595–621. doi:10.1111/j.1540-6520.2006.00138.x
- Ahmed, I., Islam, T., & Usman, A. (2020). Predicting entrepreneurial intentions through self-efficacy, family support, and regret: A moderated mediation explanation. *Journal of Entrepreneurship in Emerging Economies*. Advance online publication. doi:10.1108/JEEE-07-2019-0093
- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. *Advances in Experimental Social Psychology*, 20, 1–63. doi:10.1016/S0065-2601(08)60411-6

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T
- Alam, M., Kousar, S., & Rehman, C. A. (2019). Role of entrepreneurial motivation on entrepreneurial intentions and behaviour: Theory of planned behaviour extension on engineering students in Pakistan. *Journal of Global Entrepreneurship Research*, 9(50), 50. Advance online publication. doi:10.1186/40497-019-0175-1
- Albashrawi, M., & Alashoor, T. (2020). Individual Intention to Become an Entrepreneur: Technological Perspective. *Lecture Notes in Information Systems and Organisation*, 35, 469–481. doi:10.1007/978-3-030-34269-2\_32
- Albertos, J. M. (2002). Cultura, innovación y desarrollo local. *Boletín de la AGE*, 34, 229–244.
- Anderson, B. S., Covin, J. G., & Slevin, D. P. (2009). Understanding the relationship between entrepreneurial orientation and strategic learning: An empirical investigation. *Strategic Entrepreneurship Journal*, 3(3), 219–241. doi:10.1002/ej.72
- Andersson, S. (2011). International entrepreneurship, born globals and the theory of effectuation. *Journal of Small Business and Enterprise Development*, 18(3), 627–643. doi:10.1108/14626001111155745
- Anwar, I., & Saleem, I. (2019). Exploring entrepreneurial characteristics among university students: An evidence from India. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(3), 282–295. doi:10.1108/APJIE-07-2018-0044
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233–247. doi:10.1007/11187-005-1984-x
- Armitage, C., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499. doi:10.1348/014466601164939 PMID:11795063
- Audretsch, D. B. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63–78. doi:10.1093/oxrep/grm001
- Baluku, M. M., & Otto, K. (2019). Impact of personal cultural orientations and moral potency on self-employment intentions: The moderating role cognitive styles. *International Journal of Entrepreneurship and Small Business*, 37(4), 545–572. doi:10.1504/IJESB.2019.101701
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Academic Press.
- Baron, A., & Shane, S. A. (2008). *Entrepreneurship, a process perspective*. Thomson.
- Bartha, Z., Gubik, A. S., & Bereczk, A. (2019). The social dimension of the entrepreneurial motivation in the central and Eastern European countries. *Entrepreneurial Business and Economics Review*, 7(1), 9–27. doi:10.15678/EBER.2019.070101
- Bazzy, J. D., Smith, A. R., & Harrison, T. (2019). The impact of abstract thinking on entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour & Research*, 25(2), 323–337. doi:10.1108/IJEER-03-2018-0128

### ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

- Bell, R. (2019). Predicting entrepreneurial intention across the university. *Education + Training*, 61(7-8), 815–831. doi:10.1108/ET-05-2018-0117
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, 13(3), 442–453. doi:10.5465/amr.1988.4306970
- Bogatyeva, K., Edelman, L. F., Manolova, T. S., Osiyevskyy, O., & Shirokova, G. (2019). When do entrepreneurial intentions lead to actions? The role of national culture. *Journal of Business Research*, 96, 309–321. doi:10.1016/j.jbusres.2018.11.034
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoriuță, M. V., & Boldureanu, D. (2020). Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions. *Sustainability*, 12(3), 1267. doi:10.3390/s12031267
- Bosma, N., Jones, K., Autio, E., & Levie, J. (2007). *Global Entrepreneurship Monitor: 2007 Executive Report*. London Business School.
- Bosma, N., & Levie, J. (2010). *Global Entrepreneurship Monitor 2009, Executive Report*. Global Entrepreneurship Research Association.
- Bousmpou, D., Kakouris, A., & Samathrakis, V. (2019). Connecting ASKO beliefs and entrepreneurial self-efficacy with entrepreneurial intention. *Proceedings of the 14th European Conference on Innovation and Entrepreneurship (ECIE)*, 2, 1245-1249.
- Brockhaus, S. H. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal*, 23(3), 509–520. doi:10.2307/255515
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of Business Research*, 60(10), 1090–1098. doi:10.1016/j.jbusres.2006.12.016
- Chen, C., Greene, P., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295–316. doi:10.1016/S0883-9026(97)00029-3
- Chowdhury, S., & Endres, M. (2005). *Gender difference and the formation of entrepreneurial self-efficacy*. Presented at the United States Association of Small Business (USASBE) Annual Conference, Indian Wells, CA.
- Covin, J. G., & Slevin, D. P. (1986). The development and testing of an organizational-level entrepreneurship scale. In R. Ronstadt (Ed.), *Frontiers of entrepreneurship research* (pp. 628–639). Babson College Center for Entrepreneurship.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87. doi:10.1002/mj.4250100107
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–25. doi:10.1177/104225879101600102
- Davidsson, P. (1995). *Determinants of Entrepreneurial Intentions*. Paper presented at the RENT IX Conference, Piacenza, Italy.

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

Davidsson, P. (2006). Nascent entrepreneurship: Empirical studies and developments. *Foundations and Trends in Entrepreneurship*, 2(1), 1–76. doi:10.1561/03000000005

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. doi:10.1016/S0883-9026(02)00097-6

Delmar, F., Davidsson, P., & Gartner, W. (2003). Arriving at the High-Growth Firm. *Journal of Business Venturing*, 18(2), 189–216. doi:10.1016/S0883-9026(02)00080-0

Dileo, I., & Pereira, T. G. (2019). Assessing the impact of individual and context factors on the entrepreneurial process. A cross-country multilevel approach. *The International Entrepreneurship and Management Journal*, 15(4), 1393–1441. doi:10.1007/11365-018-0528-1

Doran, J., McCarthy, N., O'Connor, M., & Nsiah, C. (2018). The role of entrepreneurship in stimulating economic growth in developed and developing countries. *Cogent Economics & Finance*, 6(1), 1–14. doi:10.1080/23322039.2018.1442093

Dos Santos, L. L., Pereira, R. M., Borini, F. M., Raziq, M. M., & De Miranda Oliveira, M. (2020). The influence of national culture and support to innovate on openness to innovation. *International Journal of Entrepreneurship and Innovation Management*, 24(2-3), 189–209. doi:10.1504/IJEIM.2020.105782

Dunn, T., & Holtz-Eakin, D. (2000). Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links. *Journal of Labor Economics*, 18(2), 282–305. doi:10.1086/209959

Eccles, J. S. (1994). Understanding women's educational and occupational choices. *Psychology of Women Quarterly*, 18(4), 585–609. doi:10.1111/j.1471-6402.1994.tb01049.x

Fagenson, E. A., & Marcus, E. C. (1991). Perceptions of the sex-role stereotypic characteristics of entrepreneurs: Women's evaluations. *Entrepreneurship Theory and Practice*, 15(4), 33–47. doi:10.1177/104225879101500406

Farrukh, M., Lee, J. W. C., Sajid, M., & Waheed, A. (2019). Entrepreneurial intentions: The role of individualism and collectivism in perspective of theory of planned behaviour. *Education + Training*, 61(7-8), 984–1000. doi:10.1108/ET-09-2018-0194

Fini, R., Grimaldi, R., Marzocchi, G. L., & Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice*, 36(2), 387–414. doi:10.1111/j.1540-6520.2010.00411.x

Fragoso, R., Rocha-Junior, W., & Xavier, A. (2019). Determinant factors of entrepreneurial intention among university students in Brazil and Portugal. *Journal of Small Business and Entrepreneurship*, 1–25. doi:10.1080/08276331.2018.1551459

Gasse, Y., & Tremblay, M. (2011). Entrepreneurial beliefs and intentions: A cross-cultural study of university students in seven countries. *International Journal of Business*, 16(4), 303–314. <https://www.researchgate.net/publication/268435424>

Gatewood, E., Shaver, K., Powers, J., & Gartner, W. (2002). Entrepreneurial expectancy, task, effort and performance. *Entrepreneurship Theory and Practice*, 27(Winter), 187–206. doi:10.1111/1540-8520.00006

Gieure, C., Benavides-Espinosa, M. D. M., & Roig-Dobón, S. (2020). The entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*, *112*, 541–548. doi:10.1016/j.jbusres.2019.11.088

Global Entrepreneurship Monitor. (2019). *GEM Global Entrepreneurship Monitor: 2018-2019 Global Reports*. Available from: <https://www.gemconsortium.org/report/gem-2018-2019-global-report>

Global Entrepreneurship Monitor Consortium. (2013). *GEM Global Entrepreneurship Monitor: Global Reports*. Retrieved from <https://www.gemconsortium.org/report>

Gorgievski, M. J., Stephan, U., Laguna, M., & Moriano, J. A. (2018). Predicting Entrepreneurial Career Intentions: Values and the Theory of Planned Behavior. *Journal of Career Assessment*, *26*(3), 457–475. doi:10.1177/1069072717714541 PMID:30443149

Grilo, I., & Irigoyen, J. M. (2006). Entrepreneurship in the EU: To Wish and Not to Be. *Small Business Economics*, *26*(4), 305–318. doi:10.1007/11187-005-1561-3

Gupta, V. K., Turban, D., Wasti, S. A., & Sikdar, A. (2005). Entrepreneurship and stereotypes: Are entrepreneurs from Mars or from Venus? In K. M. Weaver (Ed.), *Academy of Management Best Paper Proceedings* [CD ROM]. Academy of Management. doi:10.5465/ambpp.2005.18778633

Heilman, M. E. (1983). Sex bias in work settings: The lack of fit model. *Research in Organizational Behavior*, *5*, 269–298.

Hofstede, G. (1980). Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics*, *9*(1), 42–63. doi:10.1016/0090-2616(80)90013-3

Hueso, J.A., Jaén, I., Liñán, F., & Basuki, W. (2020). The influence of collectivistic personal values on the formation of entrepreneurial intentions. *International Small Business Journal: Researching Entrepreneurship*. doi:10.1177/0266242620903007

Inglehart, R. (1991). *El cambio cultural en las sociedades industriales avanzadas*. Centro de Investigaciones Sociológicas / Siglo XXI Editores.

Jena, R. K. (2020). Measuring the impact of business management Student's attitude towards entrepreneurship education on entrepreneurial intention: A case study. *Computers in Human Behavior*, *107*, 106275. doi:10.1016/j.chb.2020.106275

Kakouris, A. (2016). Exploring entrepreneurial conceptions, beliefs and intentions of Greek graduates. *International Journal of Entrepreneurial Behaviour & Research*, *22*(1), 109–132. doi:10.1108/IJEER-07-2014-0137

Kazmi, S. Z., Khan, S., & Nabradi, A. (2017). What Differentiates The Entrepreneurs From Non-Entrepreneurs On Nature And Nurture? *APSTRACT: Applied Studies in Agribusiness and Commerce, AGRIMBA*, *11*(3-4), 45–52. Advance online publication. doi:10.19041/APSTRACT/2017/3-4/7

Kerr, S. P., Kerr, W. R., & Xu, T. (2017). *Personality Traits of Entrepreneurs: A Review of Recent Literature*. Working Paper 18-047. Harvard Business School. Available from: [https://www.hbs.edu/faculty/publication%20files/18-047\\_b0074a64-5428-479b-8c83-16f2a0e97eb6.pdf](https://www.hbs.edu/faculty/publication%20files/18-047_b0074a64-5428-479b-8c83-16f2a0e97eb6.pdf)

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

- Kluckhohn, C. (1951). Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification. In T. Parsons & E. Shils (Eds.), *Toward a General Theory of Action* (pp. 388–433). Harvard University Press., doi:10.4159/harvard.9780674863507.c8
- Kourilsky, M., & Walstad, M. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences and educational practices. *Journal of Business Venturing*, 13(1), 77–88. doi:10.1016/S0883-9026(97)00032-3
- Krueger, N. F. Jr, & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–91. doi:10.1177/104225879401800307
- Langowitz, N., & Minniti, M. (2007). The Entrepreneurial Propensity of Women. *Entrepreneurship Theory and Practice*, 31(3), 341–364. doi:10.1111/j.1540-6520.2007.00177.x
- Lewis, P. (2006). The quest for invisibility: Female entrepreneurs and the masculine norm of entrepreneurship. *Gender, Work and Organization*, 13(5), 453–469. doi:10.1111/j.1468-0432.2006.00317.x
- Liñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship and Regional Development*, 23(3-4), 187–215. doi:10.1080/08985620903233929
- López-Núñez, M. I., Rubio-Valdehita, S., Aparicio-García, M. E., & Díaz-Ramiro, E. M. (2020). Are entrepreneurs born or made? The influence of personality. *Personality and Individual Differences*, 154(1), 109699. doi:10.1016/j.paid.2019.109699
- Lortie, J., Barreto, T., & Cox, K. (2019). The implications of national and regional long-term orientation on entrepreneurial activity. *International Journal of Entrepreneurial Behaviour & Research*, 25(6), 1236–1258. doi:10.1108/IJEER-01-2018-0026
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172. doi:10.5465/amr.1996.9602161568
- Lyon, D., Lumpkin, G., & Dess, G. (2000). Enhancing entrepreneurial orientation research: Operationalizing and measuring a key strategic decision making process. *Journal of Management*, 26(5), 1055–1085. doi:10.1177/014920630002600503
- Mahmood, T. M., Al Mamun, A., Ahmad, G. B., & Ibrahim, M. D. (2019). Predicting Entrepreneurial Intentions and Pre-Start-Up Behaviour among Asnaf Millennials. *Sustainability*, 11(18), 4939. doi:10.3390/s11184939
- Marlow, S., & Patton, D. (2005). All credit to men? Entrepreneurship, finance, and gender. *Entrepreneurship Theory and Practice*, 29(6), 717–735. doi:10.1111/j.1540-6520.2005.00105.x
- Marques, C. S., Valente, S., & Lages, M. (2018). The influence of personal and organisational factors on entrepreneurship intention: An application in the health care sector. *Journal of Nursing Management*, 26(6), 696–706. doi:10.1111/jonm.12604 PMID:29504177
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152. doi:10.5465/amr.2006.19379628



- Miao, C., Qian, S., & Ma, D. (2017). The Relationship between Entrepreneurial Self-Efficacy and Firm Performance: A Meta-Analysis of Main and Moderator Effects. *Journal of Small Business Management*, 55(1), 87–107. doi:10.1111/jsbm.12240
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791. doi:10.1287/mnsc.29.7.770
- Miller, L., & Budd, J. (1999). The development of occupational sex-role stereotypes, occupational preferences and academic subject preferences in children at ages 8, 12, and 16. *Educational Psychology*, 19(1), 17–35. doi:10.1080/0144341990190102
- Minniti, M., & Nardone, C. (2007). Being in Someone Else's Shoes: The Role of Gender in Nascent Entrepreneurship. *Small Business Economics*, 28(2), 223–238. doi:10.1007/11187-006-9017-y
- Molino, M., Dolce, V., Cortese, C. G., & Ghislieri, C. (2018). Personality and social support as determinants of entrepreneurial intention. Gender differences in Italy. *PLoS One*, 13(6), e0199924. doi:10.1371/journal.pone.0199924 PMID:29953517
- Moriano León, J. A., Palací Descals, F. J., & Morales Domínguez, J. F. (2006). El perfil psicosocial del emprendedor universitario. *Revista de Psicología del Trabajo y de las Organizaciones*, 22(1).
- Moudrý, D. V., & Thaichon, P. (2020). Enrichment for retail businesses: How female entrepreneurs and masculine traits enhance business success. *Journal of Retailing and Consumer Services*, 54, 102068. doi:10.1016/j.jretconser.2020.102068
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75. doi:10.1016/S0883-9026(99)00039-7
- Munir, H., Jianfeng, C., & Ramzan, S. (2019). Personality traits and theory of planned behavior comparison of entrepreneurial intentions between an emerging economy and a developing country. *International Journal of Entrepreneurial Behaviour & Research*, 25(3), 554–580. doi:10.1108/IJEBR-05-2018-0336
- Murnieks, C. Y., Klotz, A. C., & Shepherd, D. (2019). Entrepreneurial motivation: A review of the literature and an agenda for future research. *Journal of Organizational Behavior*, 41(2), 115–143. doi:10.1002/job.2374
- Musthofa, W. S., Farida, N., & Ngatno. (2017). Effect of entrepreneurial orientation on business performance. *International Journal of Civil Engineering and Technology*, 8(9), 82-90. Available from: <http://http://www.iaeme.com/ijciyet/issues.asp?JType=IJCIET&VType=8&IType=9>
- Ndofirepi, T. M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(2), 1–20. doi:10.1186/13731-020-0115-x
- Newbert, S. L., & Tornikoski, E. T. (2013). Resource acquisition in the emergence phase: Considering the effects of embeddedness and resource dependence. *Entrepreneurship Theory and Practice*, 37(2), 249–280. doi:10.1111/j.1540-6520.2011.00461.x

## ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

- Nidhi, N., & Kumari, K. (2018). Personality traits as determinants of entrepreneur intention: A study on college students. *International Journal for Research in Engineering Application & Management*, 4(5), 34–39. doi:10.18231/2454-9150.2018.0582
- Oviatt, B. M., & McDougall, P. P. (2004). Toward a theory of international new ventures. *Journal of International Business Studies*, 36(1), 29–41. doi:10.1057/palgrave.jibs.8400128
- Pal'ová, D., Vejačka, M., & Kakalejčík, L. (2020). Project-based learning as a tool of enhancing of entrepreneurial attitude of students. *Advances in Science. Technology and Engineering Systems*, 5(1), 346–354. doi:10.25046/aj050144
- Parker, S. C., & Belghitar, Y. (2006). What happens to nascent Entrepreneurs? An econometric analysis of the PSED. *Small Business Economics*, 27(1), 81–101. doi:10.1007/1187-006-9003-4
- Peranginangin, J., & Bakar, U. A. (2020). Antecedents of developing entrepreneurial orientation among college students in Indonesia. *International Journal of Scientific and Technology Research*, 9(2), 3230–3237.
- Pérez-Fernández, H., Delgado-García, J. B., Martín-Cruz, N., & Rodríguez-Escudero, A. I. (2020). The Role of Affect in the Development of Entrepreneurial Intentions. *Entrepreneurship Research Journal*, 20190124(0). Advance online publication. doi:10.1515/erj-2019-0124
- Ray, D. M. (1994). The role of risk-taking in Singapore. *Journal of Business Venturing*, 9(2), 157–177. doi:10.1016/0883-9026(94)90007-8
- Reynolds, P. (2008). Screening item effects in estimating the prevalence of nascent entrepreneurs. *Small Business Economics*, 33(2), 151–163. doi:10.1007/1187-008-9112-3
- Reynolds, P. D., Carter, N. M., Gartner, W. B., & Greene, P. G. (2004). The prevalence of nascent entrepreneurs in the United States: Evidence from the panel study of entrepreneurial dynamics. *Small Business Economics*, 23(4), 263–284. doi:10.1023/B:SBEJ.0000032046.59790.45
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4), 13–32. doi:10.1177/104225879101500405
- Sánchez, J. C. (2010). Evaluation of Entrepreneurial Personality: Factorial Validity of Entrepreneurial Orientation Questionnaire (COE). *Revista Latinoamericana de Psicología*, 42(1), 75–90.
- Sánchez, J. C., & Hernández-Sánchez, B. (2014). Gender, Personal Traits, and Entrepreneurial Intentions. *Business and Management Research*, 3(1). Available at SSRN: <https://ssrn.com/abstract=2486749>
- Sánchez, J. C., Lanero, A., & Yurrebaso, A. (2005). Variables determinantes de la intención emprendedora en el contexto universitario. *Revista de Psicología Social Aplicada*, 15(1), 37–60.
- Sánchez, J. C., & Licciardello, O. (2012). Gender differences and attitudes in entrepreneurial intentions: The role of career choice. *Journal of Women's Entrepreneurship and Education*, 1-2, 7–27.
- Sandberg, B. (2002). Creating the market for disruptive innovation: Market proactiveness at the launch stage. *Journal of Targeting, Measurement, and Analysis for Marketing*, 11(2), 184–196. doi:10.1057/palgrave.jt.5740076

### ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

Scafarto, F., Poggesi, S., & Mari, M. (2019). Entrepreneurial Intentions, Risk-Taking Propensity and Environmental Support: The Italian Experience. *Contributions to Management Science*, 213-234. doi:10.1007/978-3-030-19685-1\_10

Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. doi:10.1111/etap.12087

Schwartz, S. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.). *Advances in Experimental Social Psychology*. Academic Press. doi:10.1016/S0065-2601(08)60281-6

Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenacker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education + Training*, 51(4), 272–291. doi:10.1108/00400910910964566

Sesen, H., & Ekemen, M. A. (2020). Data on personal and contextual factors of university students on their entrepreneurial intentions in some Turkish universities. *Data in Brief*, 28, 105086. doi:10.1016/j.dib.2019.105086 PMID:31921957

Shah, I. A., Amjed, S., & Jaboob, S. (2020). The moderating role of entrepreneurship education in shaping entrepreneurial intentions. *Journal of Economic Structures*, 9(19), 1–15. doi:10.1186/40008-020-00195-4

Shane, S. (2008). *The illusions of entrepreneurship: The costly myths that entrepreneurs, investors, and policy makers live by*. Yale University Press.

Shapero, A., & Sokol, L. (1982). Social Dimensions of Entrepreneurship. In C. Kent, D. Sexton, & K. Vespers (Eds.), *The Encyclopedia of Entrepreneurship* (pp. 72–90). Prentice-Hall.

Sharma, L., & Madan, P. (2015). Affect of individual factors on youth entrepreneurship – A study of Uttarakhand State, India. *Romanian Economic Business Review*, 8(2), 131–143.

Sheeran, P., & Silverman, M. (2003). Evaluation of three interventions to promote workplace health and safety: Evidence for the utility of implementation intentions. *Social Science & Medicine*, 56(10), 2153–2163. doi:10.1016/S0277-9536(02)00220-4 PMID:12697204

Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the Intention – behaviour Link in Student Entrepreneurship: Moderating Effects of Individual and Environmental Characteristics. *European Management Journal*, 34(4), 386–399. doi:10.1016/j.emj.2015.12.007

Sommer, L., & Haug, M. (2011). Intention as a cognitive antecedent to international entrepreneurship—Understanding the moderating roles of knowledge and experience. *The International Entrepreneurship and Management Journal*, 7(1), 111–142. doi:10.1007/11365-010-0162-z

Sousa, P., Wilks, D. C., & Cruz, J. N. (2018). Entrepreneurial intentions of law students: The moderating role of personality traits on attitude's effects. *Journal of Entrepreneurship Education*, 21(3).

### ***The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs***

Sowole, O. E., Hogue, M. E., & Adeyeye, O. P. (2018). Entrepreneurship: Psychological Factors Influencing Youth's Desire for Self-Sustenance in Mpumalanga. *Academy of Entrepreneurship Journal*, 24(2). <https://www.abacademies.org/articles/Entrepreneurship-Psychological-Factors-Influencing-Youths-Desire-For-Self-1528-2686-24-2-150.pdf>

Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669–694. doi:10.1111/j.1540-6520.2009.00321.x

Tkachev, A., & Kolvereid, L. (1999). Self-employment intentions among Russian students. *Entrepreneurship and Regional Development*, 11(3), 269–280. doi:10.1080/089856299283209

Tomić, I. (2018). What drives youth unemployment in Europe? Economic vs non-economic determinants. *International Labour Review*, 157(3), 379–408. doi:10.1111/ilr.12113

Udayanan, P. (2019). The role of self-efficacy and entrepreneurial self-efficacy on the entrepreneurial intentions of graduate students: A study among omani graduates. *Entrepreneurial Business and Economics Review*, 7(4), 7–20. doi:10.15678/EBER.2019.070401

Usman, B., & Yennita. (2019). Understanding the entrepreneurial intention among international students in Turkey. *Journal of Global Entrepreneurship Research*, 9(10), 10. Advance online publication. doi:10.1186/40497-018-0136-0

Valencia-Arias, A., & Restrepo, L. A. M. (2020). Entrepreneurial intentions among engineering students: Applying a theory of planned behavior perspective. *Periodica Polytechnica Social and Management Sciences*, 28(1), 59–69. doi:10.3311/PPso.12731

Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: Dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, 9(5), 1–26. doi:10.1186/13731-020-0112-0

Verheul, I., & Van Stel, A. J. (2007). *Entrepreneurial diversity and economic growth* (Intern rapport, ERIM Research in Management, no ERS-2007-070- ORG). Rotterdam: ERIM.

Vetrivel, S. C., & Krishnamoorthy, V. (2019). A study on factors stimulate passion among management students to become entrepreneur. *International Journal of Scientific and Technology Research*, 8(11), 832–839. <http://www.ijstr.org/final-print/nov2019/A-Study-On-Factors-Stimulate-Passion-Among-Management-Students-To-Become-Entrepreneur.pdf>

Voda, A. I., & Florea, N. (2019). Impact of Personality Traits and Entrepreneurship Education on Entrepreneurial Intentions of Business and Engineering Students. *Sustainability*, 11(4), 1192. doi:10.3390/s11041192

Wagner, J. (2007). What a Difference a Y makes-Female and Male Nascent Entrepreneurs in Germany. *Small Business Economics*, 28(1), 1–21. doi:10.1007/11187-005-0259-x

Wagner, J., & Sternberg, R. (2004). Start-up activities, individual characteristics, and the regional milieu: Lessons for entrepreneurship support policies from German micro data. *The Annals of Regional Science*, 38(2), 219–240. doi:10.1007/00168-004-0193-x

Wang, D., Wang, L., & Chen, L. (2018). Unlocking the influence of family business exposure on entrepreneurial intentions. *The International Entrepreneurship and Management Journal*, 14(4), 951–974. doi:10.1007/11365-017-0475-2

Ward, A., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2019). Entrepreneurial Potential and Gender Effects: The Role of Personality Traits in University Students' Entrepreneurial Intentions. *Frontiers in Psychology*, 10(4), 2700. doi:10.3389/fpsyg.2019.02700 PMID:31866902

Watson, A., Dada, O., Wright, O., & Perrigot, R. (2019). Entrepreneurial Orientation Rhetoric in Franchise Organizations: The Impact of National Culture. *Entrepreneurship Theory and Practice*, 43(4), 751–772. doi:10.1177/1042258717738519

Wiedemann, A. U., Schüz, B., Sniehotta, F., Scholz, U., & Schwarzer, R. (2009). Disentangling the relation between intentions, planning, and behaviour: A moderated mediation analysis. *Psychology & Health*, 24(1), 67–79. doi:10.1080/08870440801958214 PMID:20186640

Woodside, A. G., Megehee, C. M., Isaksson, L., & Ferguson, G. (2020). Consequences of national cultures and motivations on entrepreneurship, innovation, ethical behavior, and quality-of-life. *Journal of Business and Industrial Marketing*, 35(1), 40–60. doi:10.1108/JBIM-10-2018-0290

Youssef, A. B., Boubaker, S., & Omri, A. (2018). Entrepreneurship and sustainability: The need for innovative and institutional solutions. *Technological Forecasting and Social Change*, 129, 232–241. doi:10.1016/j.techfore.2017.11.003

Yusof, M., Sandhu, M. S., & Jain, K. K. (2007). Relationship between psychological characteristics and entrepreneurial inclination: A case study of students at University Tun Abdul Razak (Unitar). *Journal of Asia Entrepreneurship and Sustainability*, 3(2).

Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, 36(2), 381–404. doi:10.1177/0149206309335187

## KEY TERMS AND DEFINITIONS

**Autonomous Community:** First-level administrative division within the country of Spain, which allows its different regions, in accordance with the Spanish constitution of 1978, limited autonomy, political and administrative rights. The country comprises of 17 autonomous communities within the nation, in which each has its own Executive, Legislative and Judicial Power.

**Culture:** Set of shared attitudes, ideas, customs, and social behavior of a particular society.

**Entrepreneur:** Individual who launches new ventures by identifying new opportunities, obtaining resources, and exploiting it by developing new products or services.

**Entrepreneurial Intention:** The perceived desirability and feasibility of becoming an entrepreneur. Entrepreneurial intention is determined by one's personal attitude toward the behavior, perceived social norms and perceived behavioral control.

## *The Antecedents of Entrepreneurial Intention Among Nascent Entrepreneurs*

**Entrepreneurial Orientation:** Three-dimensional construct related to the decision-making practices, managerial philosophies and strategic behavior that an entrepreneur possesses: Innovativeness, Risk-Taking, and Proactiveness.

**Innovativeness:** The tendency to engage in and support new ideas, novelty experimentation, and creative processes that may result in new products, services, or technological processes.

**Internal Locus of Control:** Generalized expectation held by the individual concerning whether he/she possesses or lacks power over what happens to him/her. For Internal Locus of Control, the individual believes life outcomes are controllable within his reach.

**Proactiveness:** The engaging in anticipative, opportunity-seeking, forward-looking behaviors that allow for the creation and exploitation of environmental opportunities.

**Risk-Taking:** To act boldly and spontaneous in less calculated fashion, while borrowing heavily and committing resources into unknown environments and uncertain outcomes in a fearless manner.

**Self-Efficacy:** Degree to which an individual perceives himself as capable of managing internal and external life experiences.

APPENDIX

Table 1. Correlations among the variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1. SELF-TRANSCEND	.78																	
2. CONSERVATION	.170(**)	.74																
3. OPENNESS CHANGE	.548(**)	.179(**)	.80															
4. SELF-EXALTATION	-.017	.410(**)	.301(**)	.75														
5. INTENTION	.134(**)	.140(**)	.324(**)	.274(**)	.80													
6. INTERNAL CONTROL	.239(**)	.096(*)	.326(**)	.174(**)	.219(**)	.83												
7. SELF EFFICACY	.202(**)	.143(**)	.343(**)	.235(**)	.374(**)	.458(**)	.84											
8. PRO-ACTIVENESS	.276(**)	.220(**)	.469(**)	.315(**)	.390(**)	.491(**)	.545(**)	.80										
9. ATTITUDE	.195(**)	.127(**)	.355(**)	.237(**)	.700(**)	.202(**)	.383(**)	.405(**)	.82									
10. PERCEIVED CONTROL	.072	.169(**)	.271(**)	.274(**)	.586(**)	.269(**)	.531(**)	.478(**)	.517(**)	.91								
11. NORM	.195(**)	.095(*)	.304(**)	.148(**)	.307(**)	.215(**)	.243(**)	.240(**)	.341(**)	.300(**)	.78							
12. FEASIBILITY	.174(**)	.192(**)	.390(**)	.278(**)	.733(**)	.289(**)	.481(**)	.456(**)	.692(**)	.721(**)	.438(**)	.87						
13. MOTIVES	.185(**)	.160(**)	.384(**)	.305(**)	.452(**)	.236(**)	.305(**)	.360(**)	.468(**)	.362(**)	.298(**)	.484(**)	.80					
14. RESOURCES	.283(**)	.229(**)	.329(**)	.140(**)	.198(**)	.214(**)	.184(**)	.236(**)	.236(**)	.152(**)	.239(**)	.224(**)	.376(**)	.73				
15. OBSTACLES	.118(**)	.195(**)	.073	.094(*)	.036	.054	.058	.034	.005	-.060	-.036	-.036	.142(**)	.408(**)	.70			
16. IMPORTANCE	.137(**)	.177(**)	.221(**)	.164(**)	.127(**)	.099(**)	.123(**)	.166(**)	.136(**)	.092(*)	.150(**)	.124(**)	.268(**)	.388(**)	.400(**)	.72		
17. SOCIAL APPRECIATION	-.036	.266(**)	.113(**)	.297(**)	.496(**)	.135(**)	.195(**)	.244(**)	.361(**)	.377(**)	.176(**)	.418(**)	.270(**)	.133(**)	.102(**)	.163(**)	.84	
18. COMPETENCES	.255(**)	.156(**)	.470(**)	.269(**)	.439(**)	.358(**)	.587(**)	.513(**)	.403(**)	.495(**)	.267(**)	.445(**)	.320(**)	.276(**)	.027	.121(**)	.269(**)	.86

Note. \*\*The correlation is significant at the 0.01 level (bilateral). \*The correlation is significant at the 0.05 level (bilateral). At the diagonal mark can be found the scale's reliability.

## Chapter 3

# Much More Than Meets the Eye: Unveiling the Challenges Behind Nascent Entrepreneurship

**Alexandra França**

 <https://orcid.org/0000-0002-1683-1322>

*University of Vigo, Spain*

**Silja Frankenbach**

*University of Aveiro, Portugal*

**Vanda Vereb**

*University of Minho, Portugal*

**Alexandra Vilares**

*University of Minho, Portugal*

**António Carrizo Moreira**

 <https://orcid.org/0000-0002-6613-8796>

*University of Aveiro, Portugal*

### ABSTRACT

*Nascent entrepreneurship plays an important role in the study of entrepreneurship. It has been studied from different angles, especially from the psychological and sociological perspective as nascent entrepreneurs have distinctive traits and competencies. Other important foci of research are the investigation of the environment in which nascent entrepreneurs operate, as well as the way both the identification and exploitation of entrepreneurial opportunities have emerged. The main objective of this chapter is to address (1) the main individual characteristics that entrepreneurs have in common; (2) the environmental factors contributing to new venture creation; and (3) the steps in the creation process. The chapter departs from the fundamental process of nascent entrepreneurship, which is centered on opportunity recognition, evaluation, and exploitation, and is complemented by the way how contextual factors and personal characteristics and competencies influence the new venture creation process.*

DOI: 10.4018/978-1-7998-4826-4.ch003



## INTRODUCTION

Entrepreneurship has been deeply studied over time as a driver of job creation, human wellbeing and economic development (Schumpeter, 1934; Dantas, Moreira, & Valente, 2015; 2017a; 2017b; Moreira, Dantas, & Valente, 2017; Bosma et al., 2020; Hamdana, Almubarak, & Sarea, 2020).

National governments and other authorities and experts are abandoning their traditional approach to measure economic development based on the analysis of the results of large companies with different financial and fiscal inducements; they are relying instead on the macro-economic growth induced by small and medium-sized enterprises (SMEs) and new ventures (Martínez-Rodríguez, Callejas-Albiñana, & Callejas-Albiñana, 2020; Stoica, Roman, & Rusu, 2020). This outcome is the result of entrepreneurship being more recognized throughout the world not only as “a good solution to creating jobs and enhancing per capita income growth” but also as “a key mechanism for enhancing economic development” (Shane, 2005, p. 1), and as primary driver of industrial dynamism and economic growth (Hamdana, Almubarak, & Sarea, 2020).

Entrepreneurship has been traditionally associated to the creation of new ventures (Gartner, 1989; Bosma et al., 2020). Moreover, an entrepreneur was traditionally defined by a set of personality traits and exceptional qualities. However, just as a basketball player is not only something one is, it is something one does (Gartner, 1989), an entrepreneur is an individual who exploits market opportunity through technical and/or organizational innovation leading to the creation of new ventures and/or strategic renewal of an existing organization (Schumpeter, 1934; França, et al., 2017). As such, as supported by Agarwal et al. (2010) and Bosma et al. (2020), one can also support that entrepreneurial activities structure the birth, growth and demise not only of organizations, but also of industries, regions, and economies.

There is no single concept attributed entrepreneurship, although it is related to how individuals manage uncertainty and innovation – namely the creation of new business opportunities, new markets and new economic development – and sense new business opportunities.

There are various factors that have been used to explain entrepreneurial behavior. For example the personality traits have been used to explain why some are more entrepreneurs than others (Nicolaou et al., 2008). Human capital has also been used to explain the positive effect in firms’ survival (Gimeno et al 1997), i. e. the entrepreneur’s human capital influences the capacity in assessing the industry and the proper entry of the firm into the market. Social is also important for entrepreneurship, as entrepreneurs use social ties to materialize business opportunities that eventually otherwise could not be obtained (Mesquita et al., 2007). Innovation is also important because it allows entrepreneurs to differentiate from competition and to create the foundations of a competitive market that goes beyond the typical price-based competition (Schumpeter, 1934).

From an economic point of view, entrepreneurship is seen as an outcome, where countries and regions can be distinguished by new business creation indexes (e.g. Bosma et al., 2020). There is a clear macro perspective where the individual characteristics of entrepreneurs are hidden and are not analyzed, i.e. what matters is economic performance in terms of growth, firm survival, job creation, cultural differences, among others (Dantas et al., 2017a; 2017b).

From a macro perspective, however, we can witness that countries as Nigeria, Ghana, Ecuador or Malawi (Bosma et al., 2020) are among the most entrepreneurial countries. However, some of the most developed ones, as Japan, Italy and France are among the least entrepreneurial ones. Clearly this indicates that we are before two different kinds of entrepreneurship necessity-driven entrepreneurship – motivated by self-employment, with a very low impact on economic growth – as opportunity-driven entrepreneur-

## ***Much More Than Meets the Eye***

ship – motivated by perceived market opportunities, in which new ventures have more room to grow successfully and to create wealth (Dantas et al., 2017a; 2017b). The former type of entrepreneurship is normally associated to less developed economies, whereas the latter is associated to more developed countries (Mohan, Watson, & Strobl, 2018).

There are also clear differences between technology-based entrepreneurship, where breakthrough innovation plays a key role and rural entrepreneurship, in which the lack of human capital is a serious problem in less favored-regions (Moreira & Martins, 2009; Mohan, Watson, & Strobl, 2018). Clearly, the creation of new ventures is neither simple nor smooth, as there are a number of context specific factors that entrepreneurs need to address. Moreover, according to Bosma et al., (2020), the creation of a new venture involves four evolutionary stages: conception, gestation, infancy and adolescence. As soon as potential entrepreneurs start to commit time and resources to founding the new firm, we can call them nascent entrepreneurs. As such, nascent entrepreneurs cover the conception and the gestation stage, as soon as they start to commit time and resources to founding the new venture, which may lead end in the successful creation of a brand new venture or to the abandonment of the new project before it starts.

The study of nascent entrepreneurship involves a new perspective in the analysis of the creation process of new ventures. Johnson et al. (2006) define ‘nascent entrepreneurs’ as someone who is currently (at least in the past 12 months) trying to start a new, independent business and expect to be owner or partner of the new venture. The decision to start a new venture may be influenced by experience and prior knowledge (Mueller, 2006; Wagner, 2004), availability of financial capital or individual wealth (Kim et al., 2007), the legal and institutional support to create the new venture (Zanakis et al., 2012), social networks and contact with other entrepreneurs (Davidsson & Benson, 2003) and as expected profit and success (Mueller, 2006).

Several perspectives have been used to address nascent entrepreneurship. One of the most important has been addressed by psychologists and sociologists who claim that there are distinctive traits and competences that pre-dispose nascent entrepreneurs to act entrepreneurially. A second stream of research is the analysis of the environment in which nascent entrepreneurs operate. These studies have sought to relate entrepreneurial activity to factors such as knowledge spillover, technological change, market structure, necessity and opportunity-driven opportunities, social identity and cultural values of nascent entrepreneurship (Alon et al., 2016; Brändle et al., 2018; Mohan et al., 2018).

Johnson et al. (2006) put forward several questions concerning this field of research: (1) what are the individual characteristics of nascent entrepreneurs?; (2) what are the environmental factors contributing to new venture creation?; and (3) what are the steps in the creation process, involving a series of decisions, rather than a single decision taken at a particular point in time? This chapter seeks to answer these three questions taking into account the recognition, evaluation and exploitation of new opportunities, which are influenced by contextual factors and personal characteristics and competences.

The chapter is divided in six sections. After the introduction, the second section addresses the concept of nascent entrepreneurship and opportunity spotting. The third section addresses the particularities of biological and psychological drivers of creativity. Section four addresses the creativity and how important the psychological approach is important for nascent entrepreneurs. The fifth section characterizes the importance of knowledge when exploiting employee entrepreneurship. Finally, the main conclusions are presented.

## **NASCENT ENTREPRENEURSHIP AND OPPORTUNITY SPOTTING**

In essence, entrepreneurship is a creative human process, where entrepreneurs mobilize resources from one level of productivity to a superior one, which implies the mental ability to identify and exploit high-potential opportunities in complex and hectic environments where chances and pitfalls are dangerously entangled (Martínez-Rodríguez, Callejas-Albiñana, & Callejas-Albiñana, 2020; Stoica, Roman, & Rusu, 2020). This may lead to new products, new processes, new modes of organization and new product-market combinations, but they all start with spotting potential opportunities (Bjørnskov & Foss, 2008).

An essential aspect of bringing new ideas to life is to quickly take advantage of small windows of opportunity and find viable solutions to the challenges faced in business development (Ilonen, Heinonen, & Stenholm, 2018). Indeed, opportunities are at the very heart of entrepreneurship (Hansen, Monllor, & Shrader, 2016).

Entrepreneurship literature explicitly distinguishes between opportunity-driven entrepreneurship (pursuit of business opportunities) and necessity-driven entrepreneurship (forced self-employment due to a lack of alternative employment options) (Dantas et al., 2015). There is a general agreement in the literature that opportunity-driven entrepreneurship is more beneficial because it is growth oriented unlike necessity-driven entrepreneurship that is survival-oriented (Acs, 2006). As such, opportunity-driven entrepreneurship improves economic growth, increases productivity, and enhances creativity and innovation (Carree & Thurik, 2010).

Identifying potential opportunities, and finding the best way to exploit them is the core of successful entrepreneurship, specifically in the idea-generating nascent phase (Ward, 2004). According to Alvarez, Barney, and Young (2010), there are two key elements of nascent entrepreneurial behavior: the ability to recognize an opportunity or even to create it, and the exploitation or commercialization of the opportunity. Audretsch (2012) also argues that entrepreneurial behavior is the combination of opportunity spotting, and exploitation. However, if nascent entrepreneurs do pursue opportunities (Dimov, 2010), what are ‘entrepreneurial opportunities’?

The concept of opportunity has been defined in a wide variety of fields including economics, entrepreneurship, and strategy (Alvarez & Barney, 2007). An entrepreneurial opportunity consists of “a set of ideas, beliefs and actions that enable the creation of future goods and services in the absence of current markets for them” (Sarasvathy, Dew, Velamuri, & Venkataraman, 2010, pp. 142). Thus, opportunity in general terms is a chance to meet market needs through a creative combination of resources, whose value is higher than the existing alternatives (Klofsten, 2005).

There are two approaches for analyzing the emergence of an opportunity: the objective discovery and subjective creation. Early thinking regarded opportunities as objective phenomena available to be discovered (Short, Ketchen, Shook, & Ireland, 2010). Thus, opportunities exist when there are competitive imperfections in factor or product markets (Alvarez & Barney, 2007). Nascent entrepreneurs exploit these competitive imperfections to generate economic profits (Schumpeter, 1934). Therefore, the nascent entrepreneurs’ duty is to act timely, using any viable resources to discover these opportunities (Alvarez & Barney, 2007). Under this theory, an entrepreneur’s goal is to scan the external environment and spot new opportunities in the market earlier than others do (Maine, Soh, & Dos Santos, 2015).

Recently, scholars perceive opportunity as a set of actions that occur during the entrepreneurial process. This perspective posits that opportunities emerge from entrepreneurs’ vision of reality, i.e., opportunities are socially constructed (Short et al., 2010; Goss & Sadler-Smith, 2018; Seyb, Shepherd, & Williams, 2019). Opportunities cannot exist apart from the nascent entrepreneur, emerging from entrepreneurial

### ***Much More Than Meets the Eye***

actions influenced by social processes and structures (Wood & Mckinley, 2010). Despite important differences, these perspectives share a significant commonality: individuals objectify opportunities as an entity itself that must be acted upon (Williams & Wood, 2015).

The key entrepreneurial process of new venture creation follows a similar logic to the planning processes (Alvarez & Welter, 2015). First, nascent entrepreneurs need to recognize different opportunities, and two types of factors are behind this possibility: (1) prior knowledge and necessary information to identify an opportunity, and (2) cognitive properties needed to exploit the information, such as alertness or pattern recognition (Arenius & Minniti, 2005; Baron, 2006; Sahai & Frese, 2019).

After recognizing an opportunity, nascent entrepreneurs need to evaluate and make sense of it. Opportunity evaluation, defined as “assessing the attractiveness (for me or my firm) of introducing new goods, services, or business models to one or more markets”, it is process of ambiguity reduction and a critical bridge between an idea and actions (Williams & Wood, 2015, p.219). At this stage desirability and feasibility assessment can be supported by peers family, friends, colleagues, partners, informal and formal investors, consultants, accountants, customers, suppliers, and employees from whom they receive feedback about the viability of an opportunity or idea (Dimov, 2007; Wood & Mckinley, 2010). Thus, through these interactions, a clear understanding of the recognized opportunity begins to emerge (Dimov, 2007).

As soon as the opportunity is structured, nascent entrepreneurs need to step into the next stage, which is to actively engage into focused actions, designed to explore the possibility of gaining stakeholders support to capitalize the opportunity (Wood & Mckinley, 2010). During the gestation period, nascent entrepreneurs undertake several actions, such as the formation of entrepreneurial teams (Klein, 2008), development and testing the technology, evaluating consumer demand (Choi & Shepherd, 2004), leading the team, developing the decision-making process, developing human resources practices, strategy, finance and marketing, and sustaining competitive advantage (Alvarez & Barney, 2007). During this stage, nascent entrepreneurs need to gather information to reduce uncertainties and build the firm’s resources and capabilities before making the decision to enter the market (Choi & Shepherd, 2004). Hence, designing a formal business plan is advisable since it increases the likelihood of achieving viability. This script must be however synchronized with other gestation activities. A business plan is defined as “a script that outlines the markets to be served, the provision of products/services, the resources required, and the expected growth of the nascent venture” (Hopp & Greene, 2018, p.321).

Finally, the decision to exploit the opportunity comes after the designing stage, where entrepreneurs decide if they will exploit the opportunity by taking the necessary steps to generate revenue. Opportunity exploitation refers to “building efficient, full scale operation for products or services created by, or derived from, a business opportunity” (Choi, Lévesque, & Shepherd, 2008).

A variety of factors influence and affect opportunity-related decisions and preferences: a) heterogeneity in human capital (e.g. individual’s formal education, training, employment experience, background, and skills), emotions, aspirations, attitudes and perception of environmental conditions, including uncertainty and market conditions (Gruber, Kim, & Brinckmann, 2015; Shepherd, Williams, & Patzelt, 2015); b) prior knowledge, information asymmetry, networking, personal traits (Ardichvili, Cardozo, & Ray, 2003); c) previous life experience (Bryant, 2007); d) industry and market knowledge, cognitive ability to recognize changes and trends in the external world (Baron, 2006); e) entrepreneurial experience and early planning (Dimov, 2010); f) learning asymmetries (Corbett, 2007); and g) taxes and regulatory policies (Wood, Bylund, & Bradley, 2016). Additionally, (Dimov, 2007) defends that opportunity de-

velopment is a dynamic learning process, mediated by prior knowledge, the specific situation in which the entrepreneur is found, the industrial context and the available resources.

Opportunities arise from the entrepreneurs' response to emergent environmental contingencies, alongside with their ability to creatively combine accessible resources, flexible organizational arrangements, and to try alternative paths to commercialization within limited resources (Maine et al., 2015). Entrepreneurs explore opportunities within contexts of risk or uncertainty (Jones & Barnir, 2019) and one must keep in mind that the world is unpredictable and uncontrollable; sometimes it favors ingenuity, improvisation and creativity and not so much in traditional and predefined process logic. Chaos creates opportunities for knowledge and ideas and unexpected events can provide fascinating turning points in life (Gabriel, Muhr, & Linstead, 2014). Opportunities emerge unexpectedly as life unfolds.

## **BIOLOGICAL AND PSYCHOLOGICAL DRIVERS OF CREATIVITY**

In the last decades researchers started to ask the question: How and why some people become entrepreneurs and others do not? The business world seems to be eager about this question, since its answer is a promising contribution to the general knowledge about building and leading a firm. Furthermore, entrepreneurial behavior is an important element and driving force behind dynamic changes in modern economies (Schumpeter, 1934). The Irish economist, Richard Cantillon defined entrepreneurship, already in 1732, as the willingness of individuals to carry out forms of arbitrage involving the financial risk of a new venture (Minniti & Levesque, 2008). Therefore, researchers started to look for entrepreneurs' common characteristics, like risk-taking behavior, creativity, identification of entrepreneurial opportunities ability, gender, education, family background and more. Creativity, innovation, and entrepreneurship are acknowledged as decisive to foster an entrepreneurial culture, driving forward socio-economic development (Edwards-Schachter, García-Granero, Sánchez-Barrionuengo, Quesada-Pineda, & Amara, 2015).

In a continuously changing world the predominant role of creativity, is highlighted by scholars and practitioners, as a core competence required for individuals in several areas (Ward, 2004; Gundry, Ofstein, & Kickul, 2014). Contemporary global competitive endeavor establishes creativity as an urgent requirement for interdisciplinary and cross-cultural management (Ko & Butler, 2007). Florida (2002) stated that creativity is undeniably the most important economic resource of the 21<sup>st</sup> century, as it promotes individual task performance, organizational innovation and effectiveness, and it helps to address future challenges (Amabile, 1996). Researchers agree that creativity is linked to entrepreneurship since it promotes the identification of new opportunities and, among the literature research, entrepreneurs are portrayed as creative individuals who search for new solutions, in order to create added value (Gielnik, Frese, Graf, & Kampschulte, 2012). Creativity and knowledge acquisition have indeed a positive effect on the perceived viability of the business idea (Heinonen, Hytti, & Stenholm, 2011). In 1996, creativity was defined as the production of novel and useful ideas (Amabile, 1996). While it is generally accepted that main drivers of creativity are passion and motivation, little is known about the genetics and neurochemistry behind this trait.

Shane and Nicolaou (2015) examine whether creative personality and the tendency to recognize entrepreneurial opportunities have a common genetic source – that is, the same genetic factors influence the predisposition to develop a creative personality and the predisposition to identify entrepreneurial opportunities. They also examine how much of the correlation between creative personality and the tendency to start businesses is accounted for by common genetic factors. By applying bivariate genetics

## ***Much More Than Meets the Eye***

techniques, they examined the cross-characteristic-cross-twin correlations between the creative personality scale and the tendency to recognize opportunities and to start new businesses. They demonstrated that people with creative personalities are more likely to recognize entrepreneurial opportunities and to start new businesses. They also indicate that some people have an innate predisposition to both develop creative personalities and to become entrepreneurs. Moreover, research shows that creativity is influenced by situational, contextual and cognitive factors as well as individual factors related to personality (Gruber, Kim, & Brinckmann, 2015; Baron, 2006). Therefore, the results are complementary to other approaches analyzing the role of creativity in entrepreneurship, including those that show that learning and cognitive structures affect creativity or opportunity recognition (Mumford, 2003; Shalley & Gilson, 2004). Being convinced that there is a clear relationship between genes and the likelihood of becoming an entrepreneur, Scott Shane and Nicos Nicolaou decided to work with twins in order to overcome the heterogeneity among individuals. It enabled the scientists to distinguish the effects between nurture and nature on a high level, with a high number of twin studies. Based on their research in 2015, they stated, that both creative personality and entrepreneurial behavior have a genetic component, as well as the capability to identify entrepreneurial opportunities (Nicolaou, Shane, Cherkas, & Spector, 2009).

According to Shane and Nicolaou (2015), the results do not indicate that either genes or the environment *determine* creative personality and entrepreneurship. They stress the importance of considering the complementary roles that both biology and environment play in explaining entrepreneurial behavior. Their research suggests that one way through which genetic factors influence entrepreneurship is by influencing people's attributes and personality characteristics. As such, the main contribution of the study is showing that part of the genetic influence in entrepreneurship is mediated through an individual attribute not previously looked at: creative personality.

In recent years the interest on understanding the basis of personality grew and more and more effort is done to combine creative personality and entrepreneurship and neuroscience. According to Bridges and Schendan (2019), creativity is based on personal traits as sensitivity. Evans and Rothbart (2007) and Pluess (2015) define sensitivity as a biologically-based personality/temperament dimension which is a result of the 'Big-Five traits' (openness, conscientiousness, extraversion, agreeableness and neuroticism). Pointing out that there is a difference between personality and temperament they identify the lack of research on temperament as a major critical gap in creativity research. While personality integrates cultural factors as beliefs and values, temperament is based on intrinsic reactions to the environment (Bridges & Schendan 2019). Even not being investigated directly it was addressed in several independent studies, as the role of hormones in the creation of new venture. One of the best studied hormone is the sex hormone testosterone. White, Thornhill and Hampson (2006) suggest that people with start-up experience present higher levels of testosterone than people with no start-up experience after they analyzed the testosterone levels of male MBA students trying to see if there was a correlation between the testosterone level and risk-propensity, which itself would have an effect on entrepreneurial behavior. Although they found a positive correlation, the study design did not allow a general conclusion. Zhang et al. (2009) developed and tested a new model that focused on the mismatch of testosterone and status in a group as well as the collective group efficacy. They found a correlation as well, but again the methodology was not convenient for a broader conclusion. Sapienza, Zingales, and Maestripietri (2009) found that testosterone affects financial risk aversion and career choice differently in men and women, and that there is not a linear relationship between testosterone and risk aversion. Nevertheless, individuals with high testosterone seemed to be more likely to choose risky carriers. The following years were dominated by studies trying to improve the test designs. Stenstrom et al. (2011) added the 2D:4D ratio,

(digit length ratio) which is accepted to be a marker of prenatal testosterone exposure, as well as “rel2” which describes the relative length of the index finger to all four fingers ( $2D / [2D + 3D + 4D + 5D]$ ) and is anti-proportional to the androgen level. Maestriperi et al. (2010) made one step back and analyzed the inter and intraspecific sex variation of hormonal response to stress, an important but missing information up to that point. They, however, included the relation status in the samples. They concluded that single males seem to have a higher testosterone concentration than males in a stable romantic relation.

Greene et al. (2013) as well as Metha and Josephs (2010) were again able to show a clear positive correlation between testosterone and self-employment and risk taking. Yet, van der Loos, Haring, Ritveld, Baumeister, Groenen and Hofman (2013) clearly rejected this hypothesis arguing that the main problems among the previous mentioned studies are the following ones: the sample size was too low, the studies were not repeated, and that the testosterone measurements were not properly done (i.e. using serum instead of saliva, plus additional parameters).

That testosterone does play a role in new venture creation might explain with the clear dominance of men in the economic world, as women have by nature a lower testosterone level than men since the testicles are the main source of this hormone. At this point, it feels necessary to point out that all this studies do investigate the correlation of testosterone and firm creation but they do not include the valuable information if those entrepreneurs are successful or not. In fact, a too high level of risk-taking behavior might cause a high number of new firms; however, it is likely that a high-level of risk-taking behavior may lead to a low success rate. In fact, Miller (2015) raises the question if there might be a counter side to these entrepreneurial behaviors and how likely it is that they turn into aggressiveness, narcissism, ruthlessness, and irresponsibility.

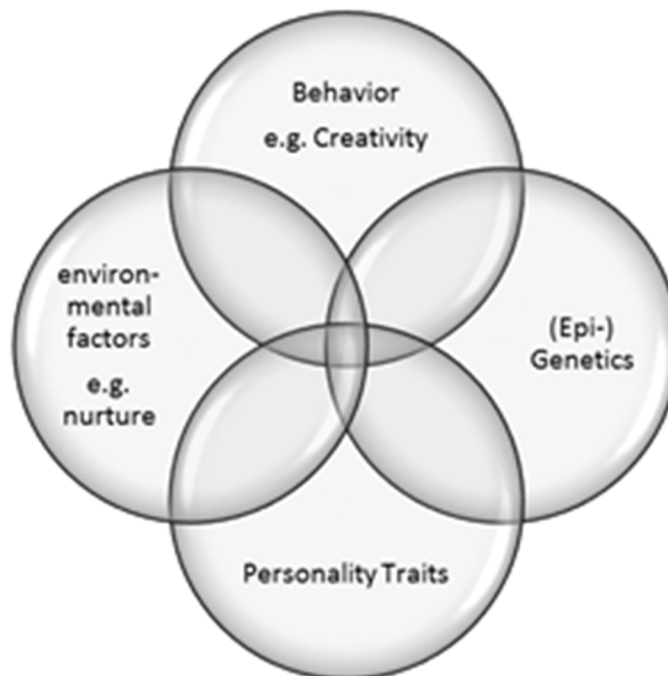
In more recent years, studies started to focus on the role of other hormones as oxytocin, dopamine, norepinephrine and serotonin (Bridges and Schendan, 2019; Chermanhini and Hommel, 2012, Davis et al., 2019; Gu et al., 2019; Want et al., 2020). All studies agree that hormones are chemical modulators of emotions and that emotions lead to behavior (Wang et al., 2020). Gu et al. (2019) developed a ‘three primary color model’ based on the interplay of dopamine-joy, norepinephrine-stress (fear and anger) and serotonin-punishment, trying to explain the relationship of creativity and emotions. They state that the interplay of those hormones can cause motivation and novelty seeking. Murnieks et al. (2020) emphasize that there should be a special effort paid to the nature of motivation as they identified it as a cornerstone to the entrepreneurial process.

Even if there are no doubts that hormones do have an effect on entrepreneurial behavior in general, yet much is left to be investigated. This new research field is facing some problems in what pertains to the right method, as well as some long-term studies on natural and entrepreneurial independent variability are lacking. Furthermore scientists still need to improve the test design regarding i) general accepted definitions (e.g. when is an entrepreneur an entrepreneur?), ii) representative parameters, iii) adequate methods/ protocols, and iv) control variables and v) higher numbers of tested individuals. For example much of the literature on entrepreneurship studied the creation of new firms, which according to some authors may introduce success bias and perhaps a more useful approach would be to study individuals with a propensity to entrepreneurship or nascent entrepreneurs. In this regard, it is fundamental to examine whether people with creative personalities are more likely than others to recognize entrepreneurial opportunities and to start new businesses. Nevertheless, the study of human nature is far from a quick answer, as the individual reactions of each process are quite easy to understand, but the result of those interactions partly remains a mystery.

## ***Much More Than Meets the Eye***

The individual, as a result of its genome, which defines personal traits, and therefore its tendency to a certain response (e.g. behavior) to its environment, is a dynamic interplay. Actions/reactions are not static, just as the environment the individual is living in. This does not only influences the individual behavior but can also change the genome (Lapp & Hunter, 2016). A highly simplified model is presented in Figure 1. How often a gene is translated into its product depends on various factors, among which biological and environmental factors are important. Recently, epigenetic, a whole new branch of bioscience became very popular, it is just dealing with the stable and inheritable changes in gene expression patterns (Cortini, Barbi, & Care, 2016). It might help to in understanding of nascent entrepreneurial behavior. Leading scientists as Nicolaou et al. (2019) have great hope in the joining entrepreneurship research with neuroscience as: i) insights in mental processes; ii) validation of entrepreneurship constructs regarding the discriminant and convergence; iii) examination of antecedents and temporal ordering of entrepreneurship variables; and iv) refining, constraining and adjudicating between different theoretical perspectives; however they emphasized that the ethical and moral implications should be taken extremely seriously.

*Figure 1. The interplay of behavior, genetic background, environmental influences and personal traits*



## **CREATIVITY AND ENTREPRENEURS: A PSYCHOLOGICAL APPROACH**

In terms of personality, entrepreneurs differ from managers (Zhao et al., 2010). The human personality is a dynamic construct and is related to certain persistent qualities in human behavior undertaking individuals as dispositional entities (McAdams, 1996). Several empirical studies based on the person-environment fit theory (Judge & Kristof-Brown, 2004; Kristof-Brown, Zimmerman & Johnson, 2005) and the career choice theory (Lent, Brown & Hackett, 1994; Holland, 1997) provide empirical evidence that people



tend to select work environments that meet their interests, personality and values. The requirements to start and manage a business venture requires an entrepreneur to present certain unique traits such as innovation, risk taking behavior, executive risk reducer behavior, and goal achiever behavior (Chen et al., 1998) that can be translated into openness to experience, neuroticism, agreeableness, conscientiousness and extraversion.

Nevertheless, fewer studies explore how the different pieces of the creativity puzzle fit together. For long, the scientific analysis of creativity has gather great attention from researchers and numerous approaches have been adopted in the study of creativity from different research fields, (Chen, Chang, & Lo, 2015; Edwards-Schachter et al., 2015; Heinonen et al., 2011; Mumford, 2003; Runco, 2004; Ward, 2004).

Empirical psychological studies on creativity vary between the creativity investment theories and the divergent production approach (Sternberg & Lubart, 1999). Although Simonton (1999) consider that the creative behavior is depersonalized and externalized from the individual, attributing the renewal of ideas to social and historical circumstances or contingencies, O'Sullivan and Haklay (2000) locate the determination of behavior within the isolated individual.

The interactionist assessments take in consideration both the social nature of behavior and individual differences (Gruber & Wallace, 1999). This approach in particular develops an intensive and contextualized study of individual cases where social factors assume an important role.

Being creative implies having some personal characteristics, such as taste for risk, sense of humor, persistence, tolerance, and autonomy. However, possessing a creative personality is not guarantee of being creative (Barron & Harrington, 1981; Sawyer, 2006).

Current studies suggest that people with creative personalities are more likely to recognize entrepreneurial opportunities and to start new businesses (Shane & Nicolau, 2015) and center their scope on creative individuals that change paradigms (Simonton, 2000; Sung & Choi, 2009; Klonoski, 2012). However, the fundamentals of creativity and its relation to nascent entrepreneurs are not well understood.

Several studies suggest that creativity and entrepreneurship are correlated (Edwards-Schachter et al., 2015; Ward, 2004). Entrepreneurship is considered as one of the domains in which people with creative personalities are more likely to exercise their creative nature (Chen, Chang, & Lo, 2015; Shane & Nicolau, 2015). Consistent with previous literature, creativity is the result of interaction between internal factors such as intrinsic motivation, individual traits (extraversion, gentleness, openness to experience, emotional stability and awareness) and the environment (Sung & Choi, 2009).

At the individual level, creative skills have been extensively measured by creativity researchers both as part of a personality dimension and a cognitive dimension. Creativity is independently predicted by personality and motivation as well as cognitive and non-cognitive factors – intellectual abilities, knowledge, intellectual styles (Sternberg & Lubart, 1995). Creative performance requires a set of individual skills such as broad interests, attraction to complexity, intuition, self-confidence, persistence, curiosity, energy, and intelligence and initiative (Amabile, 1996; Shalley & Gilson, 2004; Zhou & Shalley, 2003) that will impact the ability to generate novel responses and solutions.

Considerable consensus has emerged that five personality dimensions – neuroticism, extraversion, openness to experience, agreeableness, conscientiousness – capture the basic structure of human personality. The Big Five taxonomy is considered among consumer behavior researchers the psychometric that enjoys the broader agreement (Zhao et al., 2010). The model is organized by personality descriptors grouped together using a factor analysis.

A study developed by Zhao et al. (2010) states that entrepreneurial intentions and entrepreneurial performance are related to the majority of the Big Five personality dimensions.

## ***Much More Than Meets the Eye***

The expression of high levels of extraversion, strong extrinsic motivation, and openness to experience denote a high level of creative performance. High levels of agreeableness, and low extrinsic motivation is a positive predictor of creative performance (Sung & Choi, 2009).

Individuals with high levels of extraversion are gregarious, outgoing, warm, and friendly; they are energetic, active, assertive, and dominant in social situations; they experience more positive emotions and are optimistic; and they seek excitement and stimulation. Optimism, energy and assertiveness are traits that have been associated with people's perception of entrepreneurs (Locke, 2000, Zhao et al., 2010).

Openness to experience reflects originality, open-mindedness and it is associated to an active imagination, aesthetic sensitivity, independent judgement and intellectual curiosity. It relates with divergent thinking, one of the features of intelligence related to creativity (McCrae, 1987). It is related with entrepreneurship and artistic and scientific creativity, since professionals within these fields, scored higher when compared with members of the general population (Ko & Butler, 2007).

High levels of openness to experience refer to individuals curious about the internal and external world, are always open to accept new ideas and values and usually present a very rich range of life experiences. In the other side of the spectrum, individuals that present low scores in this specific trait are considered more conventional and conservative with a limited choice of interests.

Neuroticism evaluates the individual's ability for adaptation, or the contrary, the emotional instability. The academic literature considers entrepreneurs as resilient, optimistic, and steady in the face of stress, uncertainty, and social pressure (Locke, 2000). Thus, low levels of this neuroticism, relates to calm, secure emotionally stable and satisfied-with-himself individuals that deals with stressful situations in a more adaptive way. The opposite side reveals negative affectivity or nervousness.

High levels of neuroticism are found to be more accentuated in people who are worried, nervous, and emotionally insecure, with tendency to feel negative affection and to develop inappropriate coping responses.

Agreeableness dimension assesses one's attitude and behavior towards others'. It is related with the level of interpersonal orientation that varies in a continuum from sympathy to antagonism in thoughts, feelings, and actions. Individuals with a high score in agreeableness are altruistic, cooperative, trustworthy, and kind to others. On the other side, those who present low score in agreeableness are usually characterized as being, rude, unpleasant, suspicious, unhelpful, vindictive, manipulating, and more competitive than cooperative.

The conscientious individual has strong force of will, is determined, scrupulous, punctual, organized, hard-working, self-disciplined, ambitious, persevering, and trustworthy, Conscientiousness reflects control or constraint in behavior directed toward a certain objective. This trait relates to the degree of organization, persistence, and motivation.

A low score in this characteristic depicts individuals who are careless in the pursuit of their objectives, unconcerned, negligent and with a weak force of will.

Hence, creativity is considered imperative to entrepreneurial behavioral since it is connected with identification of opportunities that leads to new businesses and ventures. Chen et al. (2015) define creative entrepreneurs as the founders who establish and remain in charge of a business. Opportunity recognition is considered a creative process involving different steps of preparation, incubation, and insight (Lumpkin & Lichtenstein, 2005). Entrepreneurs who are able to generate more original ideas (openness to experience) are more successful in terms of venture growth. Openness to experience and conscientiousness appear to be the personality constructs most strongly and consistently associated with entrepreneurial intentions and entrepreneurial performance. The study presented by Zhao et al. (2010) disclosures as

well that entrepreneurial intentions and entrepreneurial performance explain the existence of personality differences among entrepreneurial and managerial populations. Entrepreneurship not only relates to creativity and innovation but also requires knowledge and business competence (Heinonen et al., 2011).

According to the presented literature there are in fact evidences for a correlation between hormone concentration and/or genetic background to entrepreneurial behavior (Stenstrom et al., 2011; Greene et al., 2013; Mehta & Josephs, 2015).

## **ENVIRONMENTAL FACTORS OF NASCENT ENTREPRENEURSHIP: AVAILABLE AND ACCESSIBLE KNOWLEDGE**

Knowledge is the foundation, where both firms' competitive advantage and nations' macro-economic growth stand (Agarwal, Audretsch, & Sarkar, 2010). It also plays an exceptional role in motivating new venture creation (Schumpeter, 1934) and facilitating its success (Davidsson & Benson, 2003). The fundamental principle of an organization is the generation, combination, recombination and exploitation of knowledge, which is present during the creation of new ventures converting knowledge into growth (Acs, Audretsch, Braunerhjelm, & Carlsson, 2012; Acs & Sanders, 2013).

In the previous section we have seen the importance of opportunity spotting and exploitation for nascent entrepreneurs, in this section we argue along with Qian, Acs and Stough (2013) that identifying available and accessible novel knowledge is one of the environmental sources of entrepreneurial opportunities leading to new venture creation.

The mechanism, by which an individual or a firm accesses others' knowledge, is described as knowledge sourcing (Gray & Meister, 2004). Organizations can rely on internal knowledge (e.g. employees, departments within the firm) and external knowledge (e.g. competitors, alliance networks, market feedback) to draw profitable information (Agarwal et al., 2004). The ability to recognize the value of new information, assimilate it, and apply it to commercial ends is critical to success, and implies innovative capabilities or absorptive capacity (Cohen & Levinthal, 1990). The higher one's absorptive capacity is, the more and richer knowledge one can take in (Aghion & Jaravel, 2015) leading to higher changes of survival and success (Kato, 2020).

In the domain of nascent entrepreneurship, a founder can draw knowledge from two sources: (1) working in an organization and learning "on the job" incorporating available tacit and explicit knowledge, and (2) participating and observing in the practices of an industry and learning from others' innovations and mistakes; in both cases by recognizing and exploiting the opportunity through the available and accessible knowledge. Furthermore nascent entrepreneurs can source knowledge by two means: knowledge transfer – where available knowledge is transferred in a market-like transaction involving the cross-party compensation of the value of the knowledge (Cristo-Andrade & Ferreira, 2020) – and knowledge spillover – where knowledge created by one agent is "flowing freely" and can be used by someone else without compensation, or with a compensation lower than the value of that knowledge (Jaffe, 1998).

We will focus our attention on knowledge spillover or "unintended knowledge transfer" (Agarwal et al., 2004). As a rich source, we argue that it represents a greater variety and a more successful source of opportunities for new venture creation. Furthermore we target knowledge spillover that is originated from within the firm (from the employer organization) rather than from the market, as organizations, compared to markets, are conceptualized as superior settings for the transfer and integration of knowledge (Argote, McEvily, & Reagans, 2003).

## **KNOWLEDGE INHERITANCE FROM KNOWLEDGE SPILLOVER AND EMPLOYEE ENTREPRENEURSHIP**

New knowledge is the fountainhead of new venture creation (Schumpeter, 1934), and inheriting knowledge is one of the most efficient ways to gain the required innovativeness to start a business (Agarwal et al., 2004).

Knowledge inheritance is (tacit and explicit) knowledge that employees of an incumbent organization acquired (spilled-in) while working at the firm and utilized it afterwards (without compensation) after leaving their employer to create a new venture of their own (Agarwal et al., 2004). This inherited knowledge incorporates both technological knowledge – ability to generate new scientific discoveries and technological breakthroughs –, and market know-how – ability to seize new opportunities or withstand threats, and commercialize technological innovations before competitors do. Spilled-over knowledge is a great source of entrepreneurial opportunity (Acs, Audretsch, & Lehmann, 2013; Ferreira, Ratten, & Dana, 2017; Ghio et al., 2015), but only when it is understood, its value recognized, and its essence commercialized (Qian et al., 2013). The new venture can strategically advance with less effort and costs (Lee, Choo, & Yoon, 2016) on the expense (lost opportunity) of the incumbent organisation. Knowledge spillover directly benefits the recipient exactly at the degree that the originating party is incapable of materialising the benefits of its knowledge investment (Veréb & Ferreira, 2018).

Knowledge by itself is a fundamental condition for the success of any organisation, and therefore entrepreneurs invest increasingly more in acquiring knowledge (Acs, Audretsch, & Lehmann, 2013). A firm's knowledge is not only embedded in the organizational culture, but also makes up the individual human capital (Smith, 2001). As human capital is inherently mobile (Coff, 1997), and knowledge is appropriable by anyone who possess it (Arrow, 1962), employees by “learning on job” and working “in industry” are in a potential position to use their knowledge to create new ventures. Said differently, employees can utilize the knowledge spillover of their former employing organization to establish their own (possibly competing) firm. Campbell, Ganco, Franco and Agarwal (2012) as well as Gambardella and Giarratana (2010) support this view by providing compelling evidence that the more skilled and higher-ability employees are, the more likely to create new ventures. The inclination for nascent entrepreneurship is also sparked by the incumbents having imperfect and permeable knowledge repositories (Kotha, 2010). Previous studies have additionally suggested that spin-outs may be triggered by organizational crisis, change in leadership, or lack of promotional prospects for employees (Garvin, 1983), however scholars do not yet agree on the exact reasons, why some incumbent environments tend to be more prone to spin-outs than others (Burton, Sorensen, & Beckman, 2002).

Agarwal et al. (2004) have developed a theoretical framework linking knowledge inheritance (knowledge spillover) to spin-out (new venture) formation, development and survival. Building on this framework we provide a brief literature review supporting our claim that rich knowledge inheritance is the main determining factor for the success of nascent entrepreneurship.

1. Effect of larger environment: Industries/firms with abundant know-how are more likely to generate spin-outs.

Audretsch and Feldman (1996) emphasized the importance of the knowledge-rich environment when it comes to new venture creation. Because, Wright (2019) explains, spin-outs are not evenly distributed geographically, but they have a tendency to cluster spatially within close proximity to the knowledge

source. Alcácer and Chung (2007) as well as Feller, Ailes, and Roessner (2002) found that start-ups are more likely to be located close to academic knowledge. This implies, on one hand, that new ventures tend to breed in (academic) knowledge-rich environment, on the other hand, start-ups strategically choose a location where further gains from knowledge spillover can be expected.

Emerging industries that are abundant in new knowledge, like blockchain or green environmental technologies, were too found to be more prone to new venture creation even in the face of stringent governmental policies (Cojoianu et al., 2018). As new knowledge provides a range of novel opportunities both scientifically and commercially, as well as attracts venture capital (Park, Shin, & Choy, 2020).

The most recent systematic literature review on the common domain of knowledge spillover and strategic entrepreneurship has also confirmed that location (cluster) plays the major role in fostering entrepreneurship (Cristo-Andrade & Ferreira, 2020). The clusters' agglomeration effects are particularly advantageous for new ventures, like shared costs for infrastructure, the concentration of skilled workforce, transaction efficiency, opportunity for cooperation, supportive public policies and nevertheless, knowledge spillover (Boschma, Eriksson, & Lindgren, 2009).

It is essential to note, however, that location increasingly means both physical and virtual vicinity, as researchers from different parts of the globe can collaborate remotely through the growing use and sophistication of information technology (Hoekman, Frenken, & Tijssen, 2010). So, it is not the physical location per se, but the proximity of knowledge that start-up can benefit from (Alcácer & Chung, 2007).

Besides knowledge-rich industry environment, firms being abundant in knowledge could enhance potential entrepreneurs' ability and sensitivity both to recognize market opportunities and to creatively extend (technological and marketing) knowledge in new ways. Since knowledge asymmetry lies at the heart of entrepreneurship (Venkataraman, 1997), such access to valuable knowledge can be a source of competitive advantage a new venture can rely on. Agarwal, Audretsch, and Sarkar (2007) found that that firm investments in knowledge creation are associated with increased spin-out rates. Even if the complexity of knowledge may limit employee turnover, underutilized opportunities within a firm, regardless of the complexity, tend to spill-out via employee entrepreneurship (Ganco, 2013).

The knowledge inheritance can also incorporate the benefits the nascent entrepreneurs can gain from the affiliation with the incumbent firm through the transfer of status (Agarwal et al., 2004). This positive association can legitimize new ventures in the market, and provide a better access to resources (e.g. finance) through the (inherited) social capital of the incumbent firm. Nevertheless, the common foundation of the knowledge source and knowledge inheritance can provide a great opportunity for collaborative knowledge creation between the incumbent and the start-up, where combining resources can lead to higher individual gains (Ding & Huang, 2010).

There is a final layer of the incumbent's knowledge that can motivate employees for spin-out: it is the how well the incumbent firm utilizes its own knowledge internally. The unexploited opportunities, like new scientific breakthroughs that are not commercialized, marketing insights into emerging and unfulfilled customer needs, underutilized technological inventions can lead to employee frustration, lowering job satisfaction and demising commitment, which can drive employees away (Christensen, 1993). However unexploited opportunities can provide employees not only with an excellent reason to leave, but also to pursue these available prospects for themselves through entrepreneurship (Agarwal et al., 2010). Klepper and Thompson (2007) also found that disagreement within incumbent firms provide a great motivation for employee spin-outs in knowledge-intense industries.

Liu, Wright, Filatotchev, Dai, and Lu (2010) argue along the same lines that former employees of multinational companies are a great source of innovative knowledge benefiting the local industry as

## ***Much More Than Meets the Eye***

well as the national economy. On one hand, they enhance the innovation capacity of any potential firms they are employed by later, and on the other hand, in case they pursue new venture creation themselves, their firm can encourage the innovation of other firms in the industry through cooperation and/or competition. Just like transnational entrepreneurs, who spill in knowledge from multiple location through their transnational embeddedness and generate local knowledge spillovers that benefit the local industry (Veréb and Ferreira, 2018).

2. Quality of knowledge inheritance: The richer the parent firm's knowledge is at the time of the spin-out's inception, the richer the spin-out firm's capabilities likely to be at start and so increase over time.

The inherited knowledge is the foundation where the new venture is built. The stronger this foundation is, the higher the potentials of the spin-out will be (Agarwal et al., 2004). Firms with persistent R&D investments and a general superiority in sales, exports, productivity, profitability and wages are less likely to inspire and enable spin-outs than firms with temporary or no R&D investments, however, if they do, their entrepreneurial spawns tend to be of higher quality indicating the importance of inherited knowledge (Andersson, Baltzopoulos, & Lööf, 2012).

Confirming the above argument, high-performing employees who had a deeper and wider access to knowledge and were aware more of the opportunities left dormant by the parent firm were found more likely to spawn their own ventures outside the parent firms and become more successful in doing so (Acs, Audretsch, & Lehmann 2013; Ghio et al., 2015). Also, individuals who have worked longer and at a higher hierarchical position in the industry as well as who have developed a larger variety of skillsets through their employment period transitioned to successful entrepreneurship at a higher rate (Garrett et al. 2017). De Figueiredo, Meyer-Doyle, and Rawley (2013) explored employee entrepreneurship in the hedge fund industry. They too found evidence of inherited knowledge effects: employee entrepreneurs with prior experience in leadership positions of hedge funds in New York or London outperform their peers, regardless of where the entrepreneurial firms are located.

We also have to mention here that besides the explicit knowledge of the firm (like scientific formulae, technical specifications, blue-prints, strategy reports, hardware, etc.), the tacit knowledge, the competences and the values of the organizational culture held by individual employees also "imprint" on the core of new venture. Moreover, it determines the new firm's knowledge absorptive capacity (i.e. the ability, efficiency and aspiration to learn, discover, and acquire new knowledge). Since starting with a good model can affect subsequent firm performance, superior knowledge endowments at birth can result in longer-term knowledge superiority (Cyert, Kumar, & Williams, 1993). Recent evidence also confirmed that organizational practices do transfer from parents to spawns, particularly the already established and successful ones (Feldman, Ozcan, & Reichstein, 2019).

3. Higher rate of success: Spin-outs (as a type of nascent entrepreneurs) will have higher levels of capabilities than other types of potential entrants.

Nascent entrepreneurs can be "original entrants" and spin-outs, while spin-outs can also be divided further between incumbent backed-up new ventures (e.g. subsidiaries) and independent spin-outs. Agarwal et al. (2004) argue that while both incumbent-backed ventures and spin-outs benefit from knowledge transfers from incumbents, the spin-outs are at an advantage, because their agents of knowledge transfer

are the founders as opposed to recruited employees in subsidiaries. The authors explain this advantage by contrasting the founders' holistic leadership style and influential position with employees' limited vision and status to transfer and reinforce knowledge flow across different departments of a new organization. They also add that since power in organizations depend on having non-replicated knowledge, hired employees could prefer not to lose their knowledge monopolies, thus be discouraged to share and fully utilize their capabilities; on a different perspective founders have high incentives and motivation to share their knowledge and transform it into best practices, so as to appropriate full benefits for the firm as a whole. Finally, Agarwal et al. (2004) defend that when multiple employees from diverse organizational, industrial, and social backgrounds come together to start a new firm, the synergy of their different capabilities, experiences, and social capital can greatly increase the potential value of their combined know-how. Other studies also support the importance of social capital in entrepreneurial adventuring (Mueller, 2006).

Employee entrepreneurs are also better aware of the R&D developments and the essence of the industry knowledge due to their work within the industry. As a result, nascent employee-entrepreneurs are in a better position to re-combine knowledge and to create valuable innovation (Yang & Steensma, 2014) than others without this "insider information". Dahl and Sorenson (2013) as well as Chatterji (2009) go one step further arguing that new entrepreneurs with previous industry experience have higher performance than those without this prior experience. By comparing spin-outs in the German and North American laser industry Buenstorf (2007) explains that specific capabilities, both technological and market-related, acquired at the parent firm are not accessible to new comers in the market and thus, provide unbeatable advantage to employee entrepreneurs. Kato (2020) further adds that founders of new start-up firms who have experience in the industry are more successful as they are capable to constantly spill-in and utilize external knowledge in their new venture through their already-established industry network.

4. Better chances of survival: The likelihood of survival will be greater for spin-out entrants than for all other types of entrants.

Spin-outs benefit from entrepreneurial mindset (effective opportunity-seeking behavior), and are also armed with insider industry knowledge; this combination makes them superior to other types of market entrants.

In addition to having technological and marketing knowledge, spin-out founders are likely to benefit from their previous employer's contacts and network ties, while their own social capital is possibly closely related to the industry they have worked for. Moreover, spin-outs bring with them routines and processes along with links to customers that enable them to better overcome liabilities of newness in the market vis-à-vis other entrants. Campbell et al. (2012) demonstrated that the superior performance of employee entrepreneurs rests on the importance of complementary assets, which are more easily transferred to or recreated in a new firm, because employees who leave for entrepreneurship do not only take their knowledge with them but their business and customer networks, too. Besides local business and customer contacts, Buenstorf and Costa (2018) found that hiring the early employees from within the local industry also contributes to the longevity of spin-outs.

There is a big difference in the leadership style of managers and entrepreneurs (McGrath & MacMillan, 2000), because managers of incumbent-backed spin-outs are likely to be evaluated on the basis of how closely they adhere to a corporate plan, while spin-out founders are motivated by the ends achieved,

## ***Much More Than Meets the Eye***

as their livelihood is tied to their ventures' performance. Therefore spin-out founders are more flexible and faster to change strategic direction if needed, thus enhancing their chances of survival.

The findings of Dencker, Gruber, and Shah (2009) also suggest that pre-entry knowledge and management experience increase firm survival through the moderating the effects of subsequent learning activities. Andersson, Baltzopoulos, and Lööf (2012) too highlight the importance of pre-entry knowledge by demonstrating that spin-outs from firms with persistent R&D investments have a significantly increased probability of survival compared with other types of entrants. They reason that this is because an 'average employee' in an incumbent is more likely to accumulate both the specific technological and market knowledge as compared to an 'average employee' in other firms.

Finally, spatial proximity to knowledge source does not only encourage new venture creation, but it also increases the new ventures' survival chances. Buenstorf and Costa (2018) demonstrated that young firms can greatly benefit from local and larger regional agglomeration externalities. Positive agglomeration externalities are benefits that firms derive from being located close to other economic actors. They can be urbanization externalities (i.e., benefits of city size, like high quality amenities and infrastructure), localization externalities (i.e., benefits that firms derive from the local presence of firms that belong to the same industry) and Jacobs' (1969) externalities (i.e., benefit from the presence of a large number of different industries in the local economy, as source of diverse and free-flowing knowledge). Neffke, Henning, and Boschma (2012) further specified that Jacobs' externalities and localization externalities contribute the most to the survival of new ventures.

## **CONCLUDING THOUGHTS AND CONCEPTUAL MODEL**

In the introduction of this chapter, we raised three important questions we wanted to address regarding nascent entrepreneurship: (1) the individual characteristics of nascent entrepreneurs (2) the environmental factors contributing to new venture creation, and (3) the steps in the creation process. Clearly, new venture creation involves indeed a series of decisions centered on opportunity exploration, evaluation and exploitation. This process of nascent entrepreneurship is surrounded and determined by external and internal factors. While we reviewed several distinct factors that affect nascent entrepreneurs, we conclude that, among internal qualities, creativity plays the most important role when it comes to identifying and utilizing opportunities, and a stimulating environment, abundant with available and accessible knowledge, drives successful formation and growth of new ventures.

Based on our findings we also propose a model incorporating all three aspects of nascent entrepreneurship: opportunity spotting and exploitation, individual creativity, and available external knowledge. Research has shown that regardless of whether opportunities exist in the environment or emerge as a creative act, individuals need to identify and exploit them, engaging in a process of opportunity development. Academic literature and practical knowledge also support the idea that the intention of new venture creation is influenced by contextual stimulus and individuals' internal traits, skills and abilities. Conceptually, the opportunity development model build on the above assumptions is shown in Figure 2.

Although the model incorporates the key process of new venture creation embedded in the main drivers of nascent entrepreneurship, there might be several factors that need to be addressed by the literature as gender issues, as biological characteristics, that are not yet clearly covered by the literature.

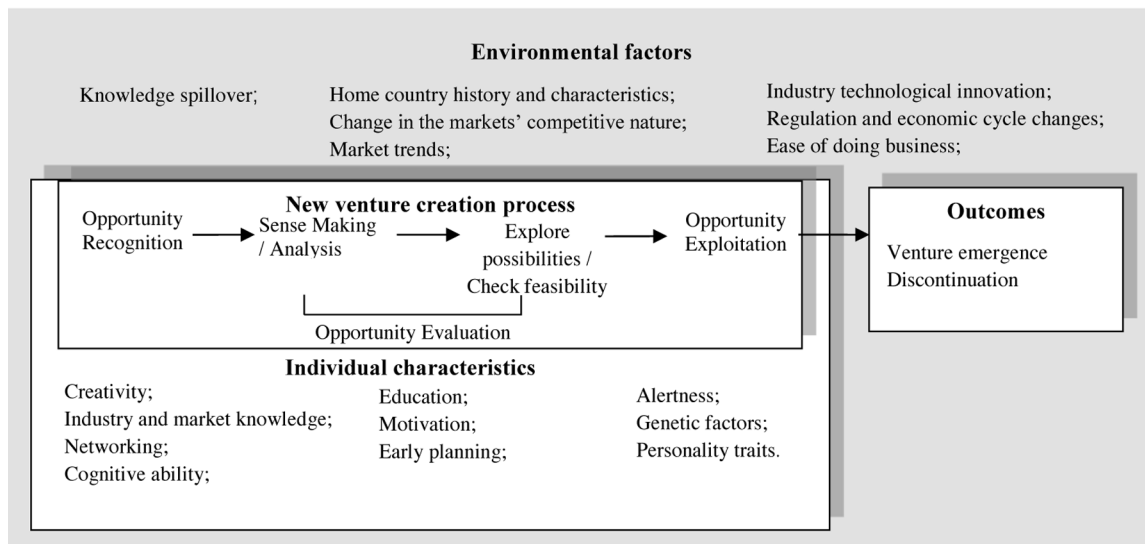
It would also be interesting to invest time and effort in a longitudinal study rather than analyzing a snapshot of the nascent entrepreneurial stage, as new venture creation is a decision carefully deliber-



ated and refined over time and through a series of stages. As such, a longitudinal study incorporating all the preceding decisions would be of added value in analyzing and understanding the evolving nature of nascent entrepreneurship.

Entrepreneurial activities are not fixed or static, they are dynamic, continuously emerging, shaped and constructed through social processes. For this reason, focusing research attention on the entrepreneurial opportunities phenomenon assumes pivotal importance. So, “any effort at understanding the phenomenon of entrepreneurial opportunities, and more specifically, how opportunities emerge in the decision horizon of an entrepreneur, will yield rich dividends in our quest for strengthening entrepreneurship research and scholarship” (Dutta & Crossan, 2005, p. 426).

*Figure 2. Opportunity Development Process*



## REFERENCES

- Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations: Technology, Governance, Globalization*, 1(1), 97–107. doi:10.1162/itgg.2006.1.1.97
- Acs, Z., Audretsch, D., Braunerhjelm, P., & Carlsson, B. (2012). Growth and entrepreneurship. *Small Business Economics*, 39(2), 289–300. doi:10.1007/11187-010-9307-2
- Acs, Z., Audretsch, D., & Lehmann, E. (2013). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 41(4), 757–774. doi:10.1007/11187-013-9505-9
- Acs, Z., & Sanders, M. (2013). Knowledge spillover entrepreneurship in an endogenous growth model. *Small Business Economics*, 41(4), 775–795. doi:10.1007/11187-013-9506-8
- Agarwal, R., Audretsch, D., & Sarkar, M. B. (2010). Knowledge spillover and strategic entrepreneurship. *Strategic Entrepreneurship Journal*, 4(4), 271–283. doi:10.1002/ej.96

### ***Much More Than Meets the Eye***

- Agarwal, R., Echambadi, R., Franco, A., & Sarkar, M. (2004). Knowledge transfer through inheritance: Spin-out generation, development and survival. *Academy of Management Journal*, 47(4), 501–522. doi:10.2307/20159599
- Aghion, P., & Jaravel, X. (2015). Knowledge spillovers, innovation and growth. *Economic Journal (London)*, 125(583), 533–573. doi:10.1111/ecoj.12199
- Alcácer, J., & Chung, W. (2007). Location Strategies and Knowledge Spillovers. *Management Science*, 53(5), 760–776. doi:10.1287/mnsc.1060.0637
- Alon, I., Lerner, M., & Shoham, A. (2016). Cross-national cultural values and nascent entrepreneurship: Factual versus normative values. *International Journal of Cross Cultural Management*, 16(3), 321–340. doi:10.1177/1470595816674744
- Alvarez, S., & Barney, J. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 11–26. doi:10.1002ej.4
- Alvarez, S., Barney, J., & Young, S. (2010). Debates in entrepreneurship: opportunity formation and implications for the field of entrepreneurship. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 23–46). Springer-Verlag., doi:10.1007/978-1-4419-1191-9\_2
- Alvarez, S., & Welter, C. (2015). The state of opportunities: Clarifying the transitions between opportunity types. *Management Decision*, 53(7), 1398–1411. doi:10.1108/MD-07-2014-0466
- Amabile, T. (1996). *Creativity in context: Update to the social psychology of creativity*. Westview Press.
- Andersson, M., Baltzopoulos, A., & Löf, H. (2012). R&D Strategies and Entrepreneurial Spawning. *Research Policy*, 41(1), 54–68. doi:10.1016/j.respol.2011.08.005
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105–123. doi:10.1016/S0883-9026(01)00068-4
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233–247. doi:10.1007/11187-005-1984-x
- Argote, L., McEvily, B., & Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emerging themes. *Management Science*, 49(4), 571–582. doi:10.1287/mnsc.49.4.571.14424
- Arrow, K. J. (1962). The economic implications of learning by doing. *The Review of Economic Studies*, 29(3), 155–173. doi:10.2307/2295952
- Audretsch, D. (2012). Entrepreneurship research. *Management Decision*, 50(5), 755–764. doi:10.1108/00251741211227384
- Audretsch, D., & Feldman, M. (1996). R&D spillovers and the geography of innovation and production. *The American Economic Review*, 86(3), 630–640. doi:10.2307/2118216
- Baron, R. (2006). Opportunity recognition as pattern recognition. *Academy of Management Review*, 20, 104–120. doi:10.5465/AMP.2006.19873412

- Barron, F., & Harrington, D. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology*, 32(1), 439–476. doi:10.1146/annurev.ps.32.020181.002255
- Bjørnskov, C., & Foss, N. J. (2008). Economic freedom and entrepreneurial activity: Some cross-country evidence. *Public Choice*, 134(3-4), 307–328. doi:10.1007/11127-007-9229-y
- Boschma, R., Eriksson, R., & Lindgren, U. (2009). How Does Labour Mobility Affect the Performance of Plants? The Importance of Relatedness and Geographical Proximity. *Journal of Economic Geography*, 9(2), 169–190. doi:10.1093/jeg/lbn041
- Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., & Tarnawa, A. (2020). *Global Entrepreneurship Monitor 2019/2020 Global Report*. Global Entrepreneurship Research Association.
- Brändle, L., Berger, E., Golla, S., & Kuckertz, A. (2018). I am what I am - How nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights*, 9, 17–23. doi:10.1016/j.jbvi.2017.12.001
- Bridges, D., & Schendan, H. E. (2019). Sensitive individuals are more creative. *Personality and Individual Differences*, 142, 186–195. doi:10.1016/j.paid.2018.09.015
- Bryant, P. (2007). Self-regulation and decision heuristics in entrepreneurial opportunity evaluation and exploitation. *Management Decision*, 45(4), 732–748. doi:10.1108/00251740710746006
- Buenstorf, G. (2007). Evolution on the shoulders of giants: Entrepreneurship and firm survival in the German laser industry. *Review of Industrial Organization*, 30(3), 179–202. doi:10.1007/11151-007-9132-1
- Buenstorf, G., & Costa, C. (2018). Drivers of spin-off performance in industry clusters: Embodied knowledge or embedded firms? *Research Policy*, 47(3), 663–673. doi:10.1016/j.respol.2018.01.015
- Burton, M. D., Sorensen, J. B., & Beckman, C. M. (2002). Coming from good stock: Career histories and new venture formation. *Research in the Sociology of Organizations*, 19, 229–262. doi:10.1016/S0733-558X(02)19007-0
- Campbell, B., Ganco, M., Franco, A., & Agarwal, R. (2012). Who leaves, where to, and why worry? Employee mobility, entrepreneurship and effects on source firm performance. *Strategic Management Journal*, 33(11), 65–87. doi:10.1002/mj.943
- Carree, M. A., & Thurik, A. R. (2010). The impact of entrepreneurship on economic growth. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction* (pp. 557–594). Springer-Verlag. doi:10.1007/978-1-4419-1191-9\_20
- Chatterji, A. K. (2009). Spawned with a silver spoon? Entrepreneurial performance and innovation in the medical device industry. *Strategic Management Journal*, 30(2), 185–206. doi:10.1002/mj.729
- Chen, C., Greene, P., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295–316. doi:10.1016/S0883-9026(97)00029-3
- Chen, M., Chang, Y., & Lo, Y. (2015). Creativity cognitive style, conflict, and career success for creative entrepreneurs. *Journal of Business Research*, 68(4), 906–910. doi:10.1016/j.jbusres.2014.11.050

### ***Much More Than Meets the Eye***

- Choi, Y., Lévesque, M., & Shepherd, D. (2008). When should entrepreneurs expedite or delay opportunity exploitation? *Journal of Business Venturing*, 23(3), 333–355. doi:10.1016/j.jbusvent.2006.11.001
- Choi, Y., & Shepherd, D. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3), 377–395. doi:10.1016/j.jm.2003.04.002
- Christensen, C. (1993). The rigid disk drive industry: A history of commercial and technological turbulence. *Business History Review*, 67(4), 531–588. doi:10.2307/3116804
- Coff, R. (1997). Human assets and management dilemmas: Coping with hazards on the road to resource-based theory. *Academy of Management Review*, 22(2), 374–402. doi:10.5465/amr.1997.9707154063
- Cohen, W., & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152. doi:10.2307/2393553
- Cojoianu, T., Clark, G., Hoepner, A., Veneri, P., & Wojcik, D. (2018). Going from zero to one: How environmental knowledge and policy shapes start-up creation across green, brown and gray industries. *SSRN Electronic Journal*. doi:. doi:10.2139srn.3254284
- Corbett, A. C. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*, 22(1), 97–118. doi:10.1016/j.jbusvent.2005.10.001
- Cortini, R., Barbi, M., Caré, B., Lavelle, C., Lesne, A., Mozziconacci, J., & Victor, J.-M. (2016). The physics of epigenetics. *Reviews of Modern Physics*, 88(025002).
- Cristo-Andrade, S., & Ferreira, J. J. (2020). Knowledge Spillovers and Strategic Entrepreneurship: What Researches and Approaches? *The International Entrepreneurship and Management Journal*, 16(1), 263–286. doi:10.1007/11365-018-0541-4
- Cyert, R. M., Kumar, P., & Williams, J. R. (1993). Information, market imperfections and strategy. *Strategic Management Journal*, 14(S2), 47–58. doi:10.1002/mj.4250141006
- Dahl, M. S., & Sorenson, O. (2013). The who, why, and how of spinoffs. *Industrial and Corporate Change*, 23(3), 661–688. doi:10.1093/icc/dtt032
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2015). Entrepreneurship and national culture: How cultural differences among countries explain entrepreneurial activity. In L. C. Carvalho (Ed.), *Handbook of research on internationalization of entrepreneurial innovation in the global economy* (pp. 1–28). IGI Global. doi:10.4018/978-1-4666-8216-0.ch001
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2017a). Entrepreneurship and national culture: How cultural differences among countries explain entrepreneurial activity. In Information Resources Management Association (Ed.), *Entrepreneurship: Concepts, Methodologies, Tools, and Applications* (Volume 3, Chapter 62, pp. 1456-1485). IGI Global.
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2017b). National culture, societal values and type of economy. Are they relevant to explain entrepreneurial activity? In L. C. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Ecosystems and Social Dynamics in a Globalized World* (pp. 75–103). IGI Global.

- Davidsson, P., & Benson, H. (2003). The Role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing, 18*(3), 301–331. doi:10.1016/S0883-9026(02)00097-6
- Davis, C., Zai, C. C., Adams, N., Bonder, R., & Kennedy, J. L. (2019). Oxytocin and its association with reward-based personality traits: A multilocus genetic profile (MLGP) approach. *Personality and Individual Differences, 138*, 231–236. doi:10.1016/j.paid.2018.09.002
- Dencker, J. C., Gruber, M., & Shah, S. K. (2009). Pre-entry knowledge, learning and the survival of new firms. *Organization Science, 20*(3), 516–537. doi:10.1287/orsc.1080.0387
- Dimov, D. (2007). From opportunity insight to opportunity intention: The importance of person-situation learning match. *Entrepreneurship Theory and Practice, 31*(4), 561–583. doi:10.1111/j.1540-6520.2007.00188.x
- Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies, 47*(6), 1123–1153. doi:10.1111/j.1467-6486.2009.00874.x
- Ding, X. H., & Huang, R. H. (2010). Effects of knowledge spillover on inter-organizational resource sharing decision in collaborative knowledge creation. *European Journal of Operational Research, 201*(3), 949–959. doi:10.1016/j.ejor.2009.04.008
- Edwards-Schachter, M., García-Granero, A., Sánchez-Barrioluengo, M., Quesada-Pineda, H., & Amara, N. (2015). Disentangling competences: Interrelationships on creativity, innovation and entrepreneurship. *Thinking Skills and Creativity, 16*, 27–39. doi:10.1016/j.tsc.2014.11.006
- Evans, D. E., & Rothbart, M. K. (2007). Developing a model for adult temperament. *Journal of Research in Personality, 41*(4), 868–888. doi:10.1016/j.jrp.2006.11.002
- Feldman, M., Ozcan, S., & Reichstein, T. (2019). Falling not far from the tree: Entrepreneurs and organizational heritage. *Organization Science, 30*(2), 337–360. doi:10.1287/orsc.2018.1222
- Feller, I., Ailes, C., & Roessner, D. (2002). Impacts of research universities on technological innovation in industry: Evidence from engineering research centers. *Research Policy, 31*(3), 457–474. doi:10.1016/S0048-7333(01)00119-6
- Ferreira, J. J., Ratten, V., & Dana, L. P. (2017). Knowledge spillover-based strategic entrepreneurship. *The International Entrepreneurship and Management Journal, 13*(1), 161–167. doi:10.1007/11365-016-0415-6
- Figueiredo, R., Meyer-Doyle, P., & Rawley, E. (2013). Inherited agglomeration effects in hedge fund spawns. *Strategic Management Journal, 34*(7), 843–862. doi:10.1002/mj.2048
- Fiol, C. M. (1991). Managing culture as a competitive resource: An identity-based view of sustainable competitive advantage. *Journal of Management, 17*(1), 191–211. doi:10.1177/014920639101700112
- Florida, R. (2002). *The rise of the creative class: and how it's transforming work, leisure, community and everyday life*. Basic Books.

### ***Much More Than Meets the Eye***

França, A., Vilares, A., Frankenbach, S., Vereb, V., & Moreira, A. C. (2017). The challenging dynamics of nascent entrepreneurship. In A. C. Moreira, J. G. Dantas, & F. Vanlente (Eds.), *Nascent Entrepreneurship and Successful New Venture Creation* (pp. 1–28). IGI Global.

Gabriel, Y., Muhr, S. L., & Linstead, S. (2014). Luck of the draw? Serendipity, accident, chance and misfortune in organization and design. *Culture and Organization*, 20(5), 334–341. doi:10.1080/14759551.2014.967452

Gambardella, A., & Giarratana, M. S. (2010). Localized knowledge spillovers and skill-biased performance. *Strategic Entrepreneurship Journal*, 4(4), 323–339. doi:10.1002ej.99

Ganco, M. (2013). Cutting the Gordian knot: The effect of knowledge complexity on employee mobility and entrepreneurship. *Strategic Management Journal*, 34(6), 666–686. doi:10.1002mj.2044

Garrett, R. Jr, Miao, C., Qian, S., & Bae, T. J. (2017). Entrepreneurial spawning and knowledge-based perspective: A meta-analysis. *Small Business Economics*, 49(2), 355–378. doi:10.1007/11187-017-9842-1

Gartner, W. B. (1989). “Who is an entrepreneur?” is the wrong question. *Entrepreneurship Theory and Practice*, 13(4), 47–68. doi:10.1177/104225878901300406

Garvin, D. A. (1983). Quality on the line. *Harvard Business Review*, 61(5), 65–75.

Ghio, N., Guerini, M., Lehman, E., & Rossi-Lamastra, C. (2015). The emergence of the knowledge spillover theory of entrepreneurship. *Small Business Economics*, 44(1), 1–18. doi:10.1007/11187-014-9588-y

Gielnik, M., Frese, M., Graf, J. M., & Kampschulte, A. (2012). Creativity in the opportunity identification process and the moderating effect of diversity of information. *Journal of Business Venturing*, 27(5), 559–576. doi:10.1016/j.jbusvent.2011.10.003

Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly. Cornell University*, 42(4), 750–783.

Goss, D., & Sadler-Smith, E. (2018). Opportunity creation: Entrepreneurial agency, interaction, and affect. *Strategic Entrepreneurship Journal*, 12(2), 219–236. doi:10.1002ej.1273

Gray, P. H., & Meister, D. B. (2004). Knowledge sourcing effectiveness. *Management Science*, 50(6), 821–834. doi:10.1287/mnsc.1030.0192

Greene, F., Han, L., Martin, S., Zhang, S., & Wittert, G. (2013). Testosterone is associated with self-employment among Australian men. *Economics and Human Biology*, 13, 76–84. doi:10.1016/j.ehb.2013.02.003 PMID:24565039

Gruber, H. E., & Wallace, D. B. (1999). The case study method and evolving systems approach for understanding unique creative people at work. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 93–115). Cambridge University Press.

Gruber, M., Kim, S. M., & Brinckmann, J. (2015). What Is An Attractive Business Opportunity? An Empirical Study of Opportunity Evaluation Decisions by Technologists, Managers, and Entrepreneurs. *Strategic Entrepreneurship Journal*, 9(3), 205–225. doi:10.1002ej.1196

- Gu, S., Gao, M., Yan, Y., Wang, F., Tang, Y., & Huang, J. H. (2018). The neural mechanism underlying cognitive and emotional processes in creativity. *Frontiers in Psychology, 9*, 1–9. doi:10.3389/fpsyg.2018.01924 PMID:30429805
- Gundry, L., Ofstein, L., & Kickul, J. (2014). Seeing around corners: How creativity skills in entrepreneurship education influence innovation in business. *International Journal of Management Education, 12*(3), 529–538. doi:10.1016/j.ijme.2014.03.002
- Hamdana, A., Almubarak, M., & Sarea, A. M. (2020). Entrepreneurship and economic growth: Literature review. *International Journal of Psychosocial Rehabilitation, 24*(3), 937–943. doi:10.37200/IJPR/V24I3/PR200844
- Hansen, D. J., Monllor, J., & Shrader, R. C. (2016). Identifying the elements of entrepreneurial opportunity constructs: Recognizing what scholars are really examining. *International Journal of Entrepreneurship and Innovation, 17*(4), 240–255. doi:10.1177/1465750316671471
- Heinonen, J., Hytti, U., & Stenholm, P. (2011). The role of creativity in opportunity search and business idea creation. *Education + Training, 53*(8/9), 659–672. doi:10.1108/00400911111185008
- Hoekman, J., Frenken, K., & Tijssen, R. (2010). Research collaboration at a distance: Changing spatial patterns of scientific collaboration within Europe. *Research Policy, 39*(5), 662–673. doi:10.1016/j.respol.2010.01.012
- Holland, J. L. (1997). *Making vocational choices*. Psychological Assessment Resources.
- Hopp, C., & Greene, F. J. (2018). In pursuit of time: Business plan sequencing, duration and intraentrainment effects on new venture viability. *Journal of Management Studies, 55*(2), 320–351. doi:10.1111/joms.12251
- Ilonen, S., Heinonen, J., & Stenholm, P. (2018). Identifying and understanding entrepreneurial decision-making logics in entrepreneurship education. *International Journal of Entrepreneurial Behaviour & Research, 24*(1), 59–80. doi:10.1108/IJEER-05-2017-0163
- Jacobs, J. (1969). *The Economy of Cities*. Random House.
- Jaffe, A. B. (1998). The importance of “spillovers” in the policy mission of the advanced technology program. *The Journal of Technology Transfer, 23*(2), 11–19. doi:10.1007/BF02509888
- Johnson, P., Parker, S., & Wijbenga, F. (2006). Nascent entrepreneurship research: Achievements and opportunities. *Small Business Economics, 27*(1), 1–4. doi:10.1007/11187-006-9004-3
- Jones, R. J., & Barnir, A. (2019). Properties of opportunity creation and discovery: Comparing variation in contexts of innovativeness. *Technovation, 79*, 1–10. doi:10.1016/j.technovation.2018.02.014
- Judge, T., & Kristof-Brown, A. (2004). Personality, interactional psychology, and person-organization fit. In B. Schneider & D. B. Smith (Eds.), *Personality and Organizations* (pp. 87–109). Lawrence Erlbaum Associates Publishers.

### ***Much More Than Meets the Eye***

- Kato, M. (2020). Founders' human capital and external knowledge sourcing: Exploring the absorptive capacity of start-up firms. *Economics of Innovation and New Technology*, 29(2), 184–205. doi:10.1080/10438599.2019.1598670
- Kim, P., Aldrich, H., & Keister, L. (2007). Access (not) denied: The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economics*, 27(1), 5–22. doi:10.1007/11187-006-0007-x
- Klein, P. (2008). Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, 2(3), 175–190. doi:10.1002/ej.50
- Klepper, S., & Thompson, P. (2007). Spin-off entry in high-tech industries: Motives and consequences. In F. Malerba & S. Brusoni (Eds.), *Perspectives on innovation* (pp. 187–218). Cambridge University Press. doi:10.1017/CBO9780511618390.010
- Klofsten, M. (2005). New venture ideas: An analysis of their origin and early development. *Technology Analysis and Strategic Management*, 17(1), 105–119. doi:10.1080/09537320500044776
- Klonoski, R. (2012). How important is creativity? The impact of age, occupation and cultural background on the assessment of ideas. *Journal of Applied Business Research*, 28(3), 411–425. doi:10.19030/jabr.v28i3.6958
- Ko, S., & Butler, J. E. (2007). Creativity: A key link to entrepreneurial behavior. *Business Horizons*, 50(5), 365–372. doi:10.1016/j.bushor.2007.03.002
- Kotha, S. (2010). Spillovers, spill-ins, and strategic entrepreneurship: America's first commercial jet airplane and Boeing's ascendancy in commercial aviation. *Strategic Entrepreneurship Journal*, 4(4), 284–306. doi:10.1002/ej.97
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology*, 58(2), 281–342. doi:10.1111/j.1744-6570.2005.00672.x
- Lapp, H., & Hunter, R. (2016). The dynamic genome: Transposons and environmental adaptation in the nervous system. *Epigenomics*, 8(2), 237–249. doi:10.2217/epi.15.107 PMID:26791965
- Lee, K., Choo, K., & Yoon, M. (2016). Comparing the productivity impacts of knowledge spillovers from network and arm's length industries: Findings from business groups in Korea. *Industrial and Corporate Change*, 25(3), 407–427. doi:10.1093/icc/dtv036
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122. doi:10.1006/jvbe.1994.1027
- Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge University Press. doi:10.1017/CBO9780511815447
- Liu, X., Wright, M., Filatotchev, I., Dai, O., & Lu, J. (2010). Human mobility and international knowledge spillovers: Evidence from high-tech small and medium enterprises in an emerging market. *Strategic Entrepreneurship Journal*, 4(4), 340–355. doi:10.1002/ej.100



- Locke, E. A. (2000). *The prime movers: Traits of the great wealth creators*. Amacom.
- Lumpkin, G., & Lichtenstein, B. (2005). The role of organizational learning in the opportunity-recognition process. *Entrepreneurship Theory and Practice*, 29(4), 451–472. doi:10.1111/j.1540-6520.2005.00093.x
- Maestripieri, D., Baran, N., Sapienza, P., & Zingales, L. (2010). Between- and within-sex variation in hormonal responses to psychological stress in a large sample of college students. *Stress (Amsterdam, Netherlands)*, 13, 413–424. doi:10.3109/10253891003681137 PMID:20666639
- Maine, E., Soh, P.-H., & Dos Santos, N. (2015). The role of entrepreneurial decision-making in opportunity creation and recognition. *Technovation*, 39(40), 53–72. doi:10.1016/j.technovation.2014.02.007
- Martínez-Rodríguez, I., Callejas-Albiñana, F. E., & Callejas-Albiñana, A. I. (2020). Economic and socio-cultural drivers of necessity and opportunity entrepreneurship depending on the business cycle phase. *Journal of Business Economics and Management*, 21(2), 373–394. doi:10.3846/jbem.2020.11848
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, 7(4), 295–321. doi:10.1207/15327965pli0704\_1
- McCrae, R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258–1265. doi:10.1037/0022-3514.52.6.1258
- McGrath, R., & MacMillan, I. (2000). *The entrepreneurial mindset*. Harvard Business School.
- Mesquita, L., Lazzarini, S., & Cronin, P. (2007). Determinants of firm competitiveness in Latin American emerging economies: Evidence from Brazil's auto-parts industry. *International Journal of Operations & Production Management*, 27(5), 501–523. doi:10.1108/01443570710742384
- Metha, P., & Josephs, R. (2010). Testosterone and cortisol jointly regulate dominance: Evidence for a dual-hormone hypothesis. *Hormones and Behavior*, 58(5), 898–906. doi:10.1016/j.yhbeh.2010.08.020 PMID:20816841
- Miller, D. (2015). A downside to the entrepreneurial personality? *Entrepreneurship Theory and Practice*, 39(1), 1–8. doi:10.1111/etap.12130
- Minniti, M., & Levesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*, 23(6), 603–612. doi:10.1016/j.jbusvent.2008.01.001
- Mohan, P., Watson, P., & Strobl, E. (2018). Nascent entrepreneurs in Caribbean small island developing states: Opportunity versus necessity. *Journal of Developmental Entrepreneurship*, 23(4), 1850022. doi:10.1142/S108494671850022X
- Moreira, A. C., Dantas, J. G., & Valente, F. (2017). *Nascent Entrepreneurship and Successful New Venture Creation*. IGI Global.
- Moreira, A. C., & Martins, S. L. (2009). CRER: An integrated methodology for the incubation of business ideas in Portugal. *Journal of Enterprising Communities*, 3(2), 176–192. doi:10.1108/17506200910960860
- Mueller, P. (2006). Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? *Small Business Economics*, 27(1), 41–58. doi:10.1007/11187-006-6951-7

### ***Much More Than Meets the Eye***

- Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal*, 15(2-3), 107–120. doi:10.1080/10400419.2003.9651403
- Murnieks, C. Y., Klotz, A. C., & Shepherd, D. A. (2020). Entrepreneurial motivation: A review of the literature and an agenda for future research. *Journal of Organizational Behavior*, 41(2), 115–143. doi:10.1002/job.2374
- Neffke, F., Henning, M., & Boschma, R. (2012). The impact of aging and technological relatedness on agglomeration externalities: A survival analysis. *Journal of Economic Geography*, 12(2), 485–517. doi:10.1093/jeg/lbr001
- Nicolaou, N., Lockett, A., Ucbasaran, D., & Rees, G. (2019). Exploring the potential and limits of a neuroscientific approach to entrepreneurship. *International Small Business Journal: Researching. Entrepreneurship.*, 37(6), 557–580. doi:10.1177/0266242619843234
- Nicolaou, N., Shane, S., Cherkas, L., Hunkin, J., & Spector, T. (2008). Is the tendency to engage in entrepreneurship genetic? *Management Science*, 54(1), 167–179. doi:10.1287/mnsc.1070.0761
- Nicolaou, N., Shane, S., Cherkas, L., & Spector, T. (2009). Opportunity recognition and the tendency to be an entrepreneur: A bivariate genetics perspective. *Organizational Behavior and Human Decision Processes*, 110(2), 108–117. doi:10.1016/j.obhdp.2009.08.005
- O’Sullivan, D., & Haklay, M. (2000). Agent-based models and individualism: Is the world agent-based? *Environment & Planning A*, 32(8), 1409–1425. doi:10.1068/a32140
- Park, G., Shin, S. R., & Choy, M. (2020). Early mover (dis)advantages and knowledge spillover effects on blockchain startups’ funding and innovation performance. *Journal of Business Research*, 109(March), 64–75. doi:10.1016/j.jbusres.2019.11.068
- Pluess, M. (2015). Individual differences in environmental sensitivity. *Child Development Perspectives*, 9(3), 138–143. doi:10.1111/cdep.12120
- Qian, H., Acs, Z. J., & Stough, R. R. (2013). Regional systems of entrepreneurship: The nexus of human capital, knowledge and new firm formation. *Journal of Economic Geography*, 13(4), 559–587. doi:10.1093/jeg/lbs009
- Runco, M. A. (2004). Personal creativity and culture. In S. Lau, A. N. Hui, & G. Y. Ng (Eds.), *Creativity: When East Meets West* (pp. 9–22). World Scientific Publishing Co. doi:10.1142/9789812567192\_0002
- Sahai, R., & Frese, M. (2019). If you have a hammer, you only look for nails: The relationship between the einstellung effect and business opportunity identification. *Journal of Small Business Management*, 57(3), 927–942. doi:10.1111/jsbm.12346
- Sapienza, P., Zingales, L., & Maestripieri, D. (2009). Gender differences in financial risk aversion and career choices are affected by testosterone. *Proceedings of the National Academy of Sciences of the United States of America*, 106(36), 15268–15273. doi:10.1073/pnas.0907352106 PMID:19706398
- Sarasvathy, S. D., Dew, N., Velamuri, S. R., & Venkataraman, S. (2010). Three views of entrepreneurial opportunity. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 77–98). Springer-Verlag., doi:10.1007/978-1-4419-1191-9\_4

- Sawyer, R. K. (2006). Group creativity: Musical performance and collaboration. *Psychology of Music, 34*(2), 148–165. doi:10.1177/0305735606061850
- Schumpeter, J. (1934). *The theory of economic development*. Harvard University Press.
- Seyb, S. K., Shepherd, D. A., & Williams, T. A. (2019). Exoskeletons, entrepreneurs, and communities: A model of co-constructing a potential opportunity. *Journal of Business Venturing, 34*(6), 105947. doi:10.1016/j.jbusvent.2019.105947
- Shalley, C., & Gilson, L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly, 15*(1), 33–53. doi:10.1016/j.leaqua.2003.12.004
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science, 11*(4), 448–469. doi:10.1287/orsc.11.4.448.14602
- Shane, S. (2005). *Economic development through entrepreneurship. Government, university and business linkages*. Edward Elgar. doi:10.4337/9781845428181
- Shane, S., Locke, E. A., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resource Management Review, 13*(2), 257–279. doi:10.1016/S1053-4822(03)00017-2
- Shane, S., & Nicolaou, N. (2015). Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions. *Journal of Business Venturing, 30*(3), 407–419. doi:10.1016/j.jbusvent.2014.04.001
- Shane, S., Nicolaou, N., Cherkas, L., & Spector, T. (2010). Genetics, the Big Five, and the tendency to be an entrepreneur. *The Journal of Applied Psychology, 95*(6), 1154–1162. doi:10.1037/a0020294 PMID:20718525
- Shepherd, D. A., Williams, T. A., & Patzelt, H. (2015). Thinking about entrepreneurial decision making: Review and research agenda. *Journal of Management, 41*(1), 11–46. doi:10.1177/0149206314541153
- Short, J. C., Ketchen, D. J. Jr, Shook, C. L., & Ireland, R. D. (2010). The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management, 36*(1), 40–65. doi:10.1177/0149206309342746
- Short, J. C., Ketchen, D. J. Jr, Shook, C. L., & Ireland, R. D. (2010). The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management, 36*(1), 40–65. doi:10.1177/0149206309342746
- Simonton, D. (1999). Creativity as blind variation and selective retention: Is the creative process Darwinian? *Psychological Inquiry, 10*(4), 309–328.
- Simonton, D. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *The American Psychologist, 55*(1), 151–158. doi:10.1037/0003-066X.55.1.151 PMID:11392859
- Smith, E. A. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management, 5*(4), 311–321. doi:10.1108/13673270110411733

### ***Much More Than Meets the Eye***

- Stenstrom, E., Saad, G., Nepomuceno, M., & Mendenhall, Z. (2011). Testosterone and domain-specific risk: Digit ratios (2D:4D and rel2) as predictors of recreational, financial, and social risk-taking behaviors. *Personality and Individual Differences, 51*(4), 412–416. doi:10.1016/j.paid.2010.07.003
- Sternberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. Free Press.
- Sternberg, R. J., & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. In R. J. Sternberg (Ed.), *Handbook of Creativity*. Cambridge University Press.
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability, 12*(3), 1186. doi:10.3390/u12031186
- Sung, S., & Choi, J. (2009). Do Big Five personality factors affect individual creativity? The moderating role of extrinsic motivation. *Social Behavior and Personality, 37*(7), 941–956. doi:10.2224/bp.2009.37.7.941
- Tomkins, G., & Martin, D. Jr. (1970). Hormones and gene expression. *Annual Review of Genetics, 4*(1), 91–106. doi:10.1146/annurev.ge.04.120170.000515 PMID:4354441
- van der Loos, M., Haring, R., Rietveld, C., Baumeister, S., Groenen, P., Hofman, A., de Jong, F. H., Koellinger, P. D., Kohlmann, T., Nauck, M. A., Rivadeneira, F., Uitterlinden, A. G., van Rooij, F. J. A., Wallaschowski, H., & Thurik, A. R. (2013). Serum testosterone levels in males are not associated with entrepreneurial behavior in two independent observational studies. *Physiology & Behavior, 119*, 110–114. doi:10.1016/j.physbeh.2013.06.003 PMID:23770427
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. K. Brockhaus (Ed.), *Advances in entrepreneurship, firm emergence, and growth* (pp. 119–138). JAI Press.
- Veréb, V. N., & Ferreira, J. J. (2018). Transnational entrepreneurship as a win-win scenario of international knowledge spillover. *Journal of the Knowledge Economy, 9*(2), 446–472. doi:10.1007/13132-017-0496-7
- Wagner, J. (2004). Are young and small firms hot-houses for nascent entrepreneurship? Evidence from German micro data. *Applied Economics Quarterly, 50*(4), 379–391.
- Wang, F., Yang, J., Pan, F., Ho, R. C., & Huang, J. H. (2020). Editorial: Neurotransmitters and emotions. *Frontiers in Psychology, 11*, 10–12. doi:10.3389/fpsyg.2020.00021 PMID:32116891
- Ward, T. B. (2004). Cognition, creativity, and entrepreneurship. *Journal of Business Venturing, 19*(2), 173–188. doi:10.1016/S0883-9026(03)00005-3
- White, R. E., Thornhill, S., & Hampson, E. (2006). Entrepreneurs and evolutionary biology: The relationship between testosterone and new venture creation. *Organizational Behavior and Human Decision Processes, 100*(1), 21–34. doi:10.1016/j.obhdp.2005.11.001
- Williams, D. W., & Wood, M. (2015). Rule-based reasoning for understanding opportunity evaluation. *The Academy of Management Perspectives, 29*(2), 218–236. doi:10.5465/amp.2013.0017

- Wood, M., Bylund, P., & Bradley, S. (2016). The influence of tax and regulatory policies on entrepreneurs' opportunity evaluation decisions. *Management Decision*, *54*(5), 1160–1182. doi:10.1108/MD-10-2015-0446
- Wood, M., & Mckinley, W. (2010). The production of entrepreneurial opportunity: A constructivist perspective. *Strategic Entrepreneurship Journal*, *4*(1), 66–84. doi:10.1002ej.83
- Wright, M. (2019). David Audretsch and new directions in spillover academic entrepreneurship. In E. Lehmann & M. Keilbach (Eds.), *From Industrial Organization to Entrepreneurship* (pp. 163–168). Springer International Publishing., doi:10.1007/978-3-030-25237-3\_17
- Yang, H., & Steensma, H. K. (2014). When do firms rely on their knowledge spillover recipients for guidance in exploring unfamiliar knowledge? *Research Policy*, *43*(9), 1496–1507. doi:10.1016/j.respol.2014.04.016
- Zanakis, S., Renko, M., & Bullough, A. (2012). Nascent entrepreneurs and the transition to entrepreneurship: Why do people start new businesses? *Journal of Developmental Entrepreneurship*, *17*(1), 1–25. doi:10.1142/S108494671250001X
- Zhang, Z., Zyphur, M. J., Narayanan, J., Arvey, R. D., Chaturvedi, S., Avolio, B. J., Lichtenstein, P., & Larsson, G. (2009). The genetic basis of entrepreneurship: Effects of gender and personality. *Organizational Behavior and Human Decision Processes*, *110*(2), 93–107. doi:10.1016/j.obhdp.2009.07.002
- Zhao, H., Seibert, S. E., & Lumpkin, G. T. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, *36*(2), 381–404. doi:10.1177/0149206309335187

## **ADDITIONAL READING**

- Fernandes, V., Moreira, A. C., & Daniel, A. (2017). A qualitative analysis of social entrepreneurship involving social innovation and intervention. In L. C. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Development and Innovation within Smart Cities* (pp. 417–438). IGI Global. doi:10.4018/978-1-5225-1978-2.ch018
- Fernandes, V., Moreira, A. C., & Daniel, A. (2019). A qualitative analysis of social entrepreneurship involving social innovation and intervention. In Information Resources Management Association (Ed.), *Socio-Economic Development: Concepts, Methodologies, Tools, and Applications* (pp. 400–421), IGI Global: Hershey, PA, USA. doi:10.4018/978-1-5225-7311-1.ch022
- Hernández-Sánchez, B., Sánchez-García, J., & Moreira, A. C. (2020). *Building an Entrepreneurial and Sustainable Society*. IGI Global. doi:10.4018/978-1-7998-2704-7
- Moreira, A. C. (2016). Entrepreneurial Tourism: The Creation of Business Opportunities in the ADRIMAG Region, Portugal. In L. C. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Success and its Impact on Regional Development* (pp. 376–404). IGI Global. doi:10.4018/978-1-4666-9567-2.ch017

## ***Much More Than Meets the Eye***

Moreira, A. C. (2017). Entrepreneurial Tourism: The creation of business opportunities in the ADRIMAG region, Portugal. In Information Resources Management Association (Ed.), *Entrepreneurship: Concepts, Methodologies, Tools, and Applications* (Volume 3, Chapter 50, pp. 1153-1183), IGI Global: Hershey, PA, USA. doi:10.4018/978-1-5225-1923-2.ch050

Moreira, A. C., & Carvalho, M. (2012). Incubation of new ideas: Extending incubation models to less-favored regions. In T. Burger-Helmchen (Ed.), *Entrepreneurship - Creativity and Innovative Business Models* (pp. 41-58), InTech: Rijeka, Croacia. doi:10.5772/36705

Zakria, M., Santos, P., Moreira, A. C., & Mota, J. H. (2019). Exploring female entrepreneurship: Addressing some misconceptions. In E. Pereira & P. Paolini (Eds.), *Global Perspectives on Women in Management and the Global Labor Market* (pp. 239–258). IGI Global. doi:10.4018/978-1-5225-9171-9.ch012

## **KEY TERMS AND DEFINITIONS**

**Creativity:** It is the process of bringing something new into being. It is an essential part of entrepreneurs to drive new opportunities into the market. As creativity requires passion and commitment, it is believed to be part of the entrepreneurial behavior that is necessary to mobilize resources and implement new projects.

**Entrepreneurial Behavior:** It is the capacity of the individuals to spot opportunities in the market and to turn them into profitable businesses. For that individuals need to adopt a risk-taking behavior and to deploy all necessary resources to develop, organize and manage the new business venture profitably.

**Entrepreneurship:** There are several understandings about this concept. It is known as the capacity and willingness to develop, organize and manage new business ventures profitably. The concept it is normally associated to an innovative, risk-taking behavior, which is essential to spot new opportunities in the market and to adapt to an ever changing and increasingly competitive global marketplace. Economically, it has been associated to the creation of new jobs, the enhancement of per capita income growth, and as primary driver of industrial dynamism.

**Epigenetic:** It deals with the stable and inheritable changes in gene expression patterns, due to environmental influences and individual life experiences.

**Nascent Entrepreneurship:** It is closely associated to individuals who are actively engaged in creating new own or co-owned ventures. This venture has not paid salaries, wages, or any other payments to the owners for more than three months.

**Necessity-Driven Entrepreneurship:** It is understood as the type of entrepreneurship motivated by self-employment, or as a result of absent or unsatisfactory work options, normally with a very low impact on economic growth.

**Opportunity Development:** It is a necessary process so that individuals develop new competitive businesses in the market.

**Opportunity-Driven Entrepreneurship:** It is understood as motivated by perceived market opportunities (i.e., entrepreneurs are pulled to entrepreneurship out of a choice).

# Chapter 4

## Factors Influencing Nascent Entrepreneurship Across Countries: An Evolutionary Perspective

**Maria Manuela Santos Natário**

 <https://orcid.org/0000-0002-5983-8399>

*Research Unit for Inland Development, Polytechnic Institute of Guarda, Portugal*

### **ABSTRACT**

*Nascent entrepreneurship is one phase of entrepreneurial activity that covers the first months in creating new ventures after the identification of business opportunities. On the other hand, the 4.0 revolution has created new opportunities but also disruption and polarization within and between economies and societies. Thus, this chapter reflects upon factors that influence nascent entrepreneurship across countries in an evolutionary approach, considering the previous findings and the influence of Fourth Industrial Revolution. The aim is to verify the conditions associated to nascent entrepreneurship using different perspectives of analysis. Correlation analysis is applied using various explanatory variables derived from different approaches. Clusters analysis is applied to verify how different countries are positioned in terms of nascent entrepreneurship. Scheffe's test of mean differences distinguishes the unique characteristics of each cluster and assesses the principal determinants of the nascent entrepreneurship capacity.*

### **INTRODUCTION**

Entrepreneurship is a popular topic for researchers and policymakers. Policymakers look for means to stimulate low economic growth rates and competitiveness. This is also an area ignored by economic theory (Gutterman, 2016). It is important to identify factors that stimulate entrepreneurship, promote economic growth, and increase competitiveness.

DOI: 10.4018/978-1-7998-4826-4.ch004

## ***Factors Influencing Nascent Entrepreneurship Across Countries***

Nascent entrepreneurship is one phase of entrepreneurial activity according to lifecycle ventures used in GEM perspective. This category of entrepreneurship covers the first months in creating new ventures after the identification of business opportunities.

The relationship between nascent entrepreneurship and economic level has been studied by several authors (Davidsson, 2006; Kuznets, 1971; Schultz, 1990; van Stel, 2006; van Stel, Wennekers, Thurik, Reynolds, & de Wit, 2003). According to GEM and van Stel et al. (2003), nascent entrepreneurship is a cultural phenomenon. The relationship between nascent entrepreneurship and the innovative capacity index has also been studied (van Stel et al., 2003).

Entrepreneurship is important to promote economic growth and competitiveness. But does that exist influence of economic level in nascent entrepreneurship rate? Which factors influence this rate? Thus, this chapter reflects upon factors that influence nascent entrepreneurship across countries in an evolutionary approach, considering the previous findings and the influence of Fourth Industrial Revolution. The aim is to verify the conditions associated to nascent entrepreneurship in an evolutionary approach (2015 and 2018), using different perspectives of analysis.

The first analysis reviews the correlation between nascent entrepreneurship and new business and entrepreneurship framework conditions (Singer, Amoros, & Arreola, 2015). The second approach relates the nascent entrepreneurship to economic development levels while considering the country's competitive level and gross domestic product (GDP) per capita. This approach assumes that nascent entrepreneurship depends upon pillars of competitiveness performance. The third approach relates nascent entrepreneurship to cultural dimensions (Hofstede, 2011).

The chapter uses the global entrepreneurship monitor (GEM) database and nascent entrepreneurship rates for 52 countries (in 2015) and for 49 countries (in 2018), as well as the competitiveness database (2015-16 and 2019) of the World Economic Forum and Hofstede's cultural dimensions. It is important highlight that the GEM does not always perform the analysis for the same countries and that from 2015 to 2018 they added the following countries to their database: Bulgaria, Cyprus, Egypt, Israel, Lebanon, Madagascar, Morocco, Saudi Arabia, Sudan, Unit Arab Emirates and in 2018 were excluded the following countries: Australia, Barbados, Belgium, Belize, Bolivia, Bosnia & Hz, Botswana, Burkina Faso, Cameroon, Costa Rica, Denmark, Ecuador, El Salvador, Estonia, Finland, Georgia, Hungary, Jamaica, Kazakhstan, Kosovo, Kuwait, Latvia, Lithuania, Malaysia, Mexico, Norway, Philippines, Portugal, Romania, Singapore, South Africa, Suriname, Trinidad & Tobago, Uganda, and Vietnam. The countries analysed by GEM in 2015 and 2018 are listed in Appendix (Table 16).

The first section of the chapter will discuss literature review. The next two sections will deal with data sources, variables, research methods and results. The final two sections will review the solutions, recommendations, and conclusions.

## **LITERATURE REVIEW**

The GEM considers entrepreneurial activity according to: (1) venture lifecycle phases (nascent, new venture, established venture, discontinuation); (2) types of activity (high growth, innovation, internationalization); (3) and the sector of the activity (total early-stage entrepreneurial activity [TEA], social entrepreneurial activity [SEA], employee entrepreneurial activity [EEA]) (Singer et al., 2015).

Nascent entrepreneurship rate is defined as the percentage of individuals aged 18-64 who are currently a nascent entrepreneur. In other words, they are actively involved in establishing a business they



will own or co-own; this business has not paid salaries, wages, or other payments to the owners for more than three months (Singer et al., 2015). Nascent entrepreneurs are engaged in creating new ventures (Wagner, 2004). Gutterman (2016) considers the nascent entrepreneur phase as covering the first three months after the entrepreneur establishes a new business to pursue identified opportunities.

New business ownership rate is the percentage of individuals aged 18-64 who are currently an owner-manager of a new business. In other words, they own and manage a business that has paid salaries, wages, or other payments to the owners for more than three months but no more than 42 months (Singer et al., 2015).

In the different studies of nascent entrepreneurship, we found a variety of perspectives: psychologic and sociologic; environmental and resulting of opportunity (França, Vilares, Frankenbach, Vereb & Moreira, 2018). For França et al. (2018) the psychologists and sociologists perspective suggests that nascent entrepreneurs have distinctive traits and competences, the environmental perspective related nascent entrepreneurs to environment factors such as knowledge spillover, technological change, market structure, industry and location and finally for the last perspective nascent entrepreneurship emerged of the exploitation of an opportunity.

The type of opportunity pursues explain different levels of entrepreneurial self-efficacy and determine the entrepreneurs' social identity. (Brändle, Berger, Gollab & Kuckert, 2018). The profile of the entrepreneur influenced the type of entrepreneurship: as a necessity, or a different opportunity or a lifestyle (Natário, Braga & Fernandes, 2018) or as a mixed motives (Natário, Braga & Fernandes, 2015).

For Davidsson (2015) research on nascent entrepreneurship has made many fruitful contributions to our understanding of entrepreneurial phenomena and how to study them. The nascent entrepreneurship stream has helped shifting the epicenter of entrepreneurship research towards the very early stages of development of new economic activities.

Tuazon, Bellavitis and Filatotchev (2018) develop a three - stage diagram along which nascent entrepreneurs operate: Antecedents, activities and outcomes and demonstrate the necessity for entrepreneurship scholars to conduct research that effectively explores these multistage aspects of nascent entrepreneurial.

In this context, Marques (2019) analyses the role of personal characteristics, perceptual variables and country level conditioning (financial environment, government quality and support, education quality and entrepreneurship know-how, innovation environment and support, business infrastructure, entrepreneurial culture and society, and gender roles) in explaining the export propensity and intensity of nascent entrepreneurs in four Southern European countries

The study of Beynon, Jones and Pickernell (2016) undertakes a cross-country comparison of the relationship between entrepreneurship attitudes and high and low entrepreneurial activity and provides comprehensive understanding of variations between individual countries at different levels of economic development and groups of countries in their level of opportunity and necessity-related entrepreneurial activity.

Kwapisz (2019) investigates whether minimum wage rates correlate with the probability that a nascent startup hires employees and achieves profitability and found negative but not significant correlation between the minimum wage rates and a nascent venture's probability of hiring employees. However, female entrepreneurs were significantly less likely than male entrepreneurs to hire when faced with higher minimum wage rates. For ventures with employees, higher minimum wage rates were correlated with lower probability of achieving profitability vs. quitting the startup process.

Entrepreneurship, particularly nascent entrepreneurship, is important for the foundation of new firms and newly-founded firms related to economic development of nations and regions (Wagner, 2004). Ef-

## ***Factors Influencing Nascent Entrepreneurship Across Countries***

fectively, there is a positive impact of entrepreneurship on economic growth (Carree & Thurik, 2003; van Stel et al., 2004). According to Singer et al. (2015, p. 9), entrepreneurship initiatives are important because they “contribute to job creation while strengthening the national economy and social development through the transfer of knowledge for business creation, development, and growth.”

Furthermore, policymakers are looking for means to stimulate economic growth rates. Hence, it is important to understand the economy’s aspects influencing entrepreneurship. Additionally, it is necessary to identify factors needed to stimulate nascent entrepreneurs. Enhancing students’ latent nascent entrepreneurship in basic education (Hietanen & Ruismäki, 2019) also assumes an important role to stimulate the entrepreneurship.

In the GEM perspective, entrepreneurship dynamics can be linked to conditions that enhance (or hinder) new business creation. These conditions are known as entrepreneurial framework conditions (EFC) and are associated with entrepreneurship ecosystems: access to finance, government policies, government entrepreneurship programs, entrepreneurship education, research and development (R&D) transfer, commercial and legal infrastructure, market openness, physical infrastructure, and cultural and social norms. According to Singer et al. (2015, p. 14), “the state of these conditions directly influences the existence of entrepreneurial opportunities, entrepreneurial capacity, and preferences, which in turn determines business dynamics.”

Several authors (Davidsson, 2006; Iyigun & Owen, 1998; Kuznets, 1971; Schultz, 1990; van Stel et al., 2003; Yamada, 1996) have studied the relationship between the level of economic development and business ownership (or nascent entrepreneurship rate). In order to analyse the relationship, these authors considered the level of per capita income. GEM considers the importance of the level of economic development to entrepreneurship and uses the global competitiveness index (GCI) developed by the World Economic Forum. GCI serves to assess country performance, including 12 pillars with 114 indicators. It considers competitiveness “as the set of institutions, policies, and factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can earn” (Schwab & Sala-i-Martin, 2015, p. 4).

The following 12 pillars are vital to a country’s competitiveness: (1) institutions, (2) infrastructure, (3) macroeconomic environment, (4) health and primary education, (5) higher education and training, (6) goods market efficiency, (7) labour market efficiency, (8) financial market development, (9) technological readiness, (10) market size, (11) business sophistication, and (12) innovation (see Table 1). Each one affects global competitiveness and will positively or negatively influence a country’s nascent entrepreneurship.

Schwab (2018) introduced the new Global Global Competitiveness Index 4.0 (GCI 4.0), to compass the Fourth Industrial Revolution (4IR). This revolution is disrupting economies and societies by redefining the way we work, live and interact with each other (Schwab, 2018).

The new GCI 4.0 provides a much-needed compass for policy-makers and other stakeholders to bridge this gap and to achieve: growth, inclusion and sustainability (Schwab, 2019). It offers guidance on what matters for long-term growth. It can inform policy debates and help shape economic strategies and monitor progress. Like its predecessor, the GCI 4.0 assesses competitiveness through the factors that determine an economy’s level of productivity (Schwab, 2018). The performance of the economies in terms of competitiveness 4.0 is measured considering the following 12 pillars listed in Table 2.

## Factors Influencing Nascent Entrepreneurship Across Countries

Table 1. Pillars of competitiveness (Source: Schwab & Sala-i-Martin, 2015, pp. 36-37)

Pillar	Description
Pillar 1: Institutions	The institutional environment of a country depends on the efficiency and behaviour of both public and private stakeholders.
Pillar 2: Infrastructure	Extensive and efficient infrastructure is critical for ensuring the effective functioning of the economy.
Pillar 3: Macroeconomic environment	The stability of the macroeconomic environment is important for business. Therefore, it is significant for the overall competitiveness of a country.
Pillar 4: Health and primary education	A healthy workforce is vital to a country's competitiveness and productivity. Workers who are ill cannot function to their potential and will be less productive.
Pillar 5: Higher education and training	Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products.
Pillar 6: Goods market efficiency	Countries with efficient goods markets are well-positioned to produce the right mix of products and services given their particular supply-and-demand conditions. In addition, they can ensure that these goods can be most effectively traded in the economy.
Pillar 7: Labour market efficiency	The efficiency and flexibility of the labour market are critical for ensuring that workers are allocated to their most effective use in the economy and provided with incentives to give their best effort in their jobs.
Pillar 8: Financial market development	An efficient financial sector allocates resources saved by a nation's population, as well as those entering the economy from abroad, to the entrepreneurial or investment projects with the highest expected rates of return rather than to the politically connected.
Pillar 9: Technological readiness	The technological readiness pillar measures the agility with which an economy adopts existing technologies to enhance the productivity of its industries. Specific emphasis is placed on its capacity to fully leverage information and communication technologies (ICTs) in daily activities and production processes for increased efficiency and enabling innovation for competitiveness.
Pillar 10: Market size	The size of the market affects productivity since large markets allow firms to exploit economies of scale.
Pillar 11: Business sophistication	Business sophistication concerns two elements that are intricately linked: the quality of a country's overall business networks and the quality of individual firms' operations and strategies.
Pillar 12: Innovation	Innovation is important for economies as they approach the frontiers of knowledge. The possibility of generating more value by integrating and adapting exogenous technologies tends to disappear.

Table 2. Pillars of global competitiveness index 4.0

Enabling Environment	Markets
Pillar 1 Institutions	Pillar 7 Product market
Pillar 2 Infrastructure	Pillar 8 Labour market
Pillar 3 ICT adoption	Pillar 9 Financial system
Pillar 4 Macroeconomic stability	Pillar 10 Market size
<b>Human Capital</b>	<b>Innovation Ecosystem</b>
Pillar 5 Health	Pillar 11 Business dynamism
Pillar 6 Skills	Pillar 12 Innovation capability

Source: Schwab (2018)

## ***Factors Influencing Nascent Entrepreneurship Across Countries***

Many studies analyse culture as a characteristic of entrepreneurship. Search factors influence the ability of society to develop entrepreneurial culture (Singer et al., 2015). The cultural environment and societal culture affect attitudes regarding entrepreneurship and entrepreneurial activities (Dantas, Moreira, & Valente, 2015; Gutterman, 2016). National cultural values become critical research issues due to their influence on individual behaviours, including those of business decision makers (Bearden, Money, & Nevins, 2006). The culture of a country influences the rate of nascent entrepreneurship.

It assumes a dual role: “it can foster (or hinder) entrepreneurial activity as it contributes (or not) for creating a supportive environment” (Dantas et al. 2015, p.8).

Hofstede (1991) defines culture as a set of shared patterns, thoughts, and emotions (or “mental programs”). These can be described and compared, as well as may vary from one individual to another. With elements common to a group, they are both shared and collective. It is always a collective phenomenon (Hofstede, 2011). Hofstede’s study of national culture considers six dimensions: (1) power distance, (2) individualism, (3) masculinity, (4) uncertainty avoidance, (5) long-term orientation, and (6) indulgence.

Thus, this study considers the definition and the cultural dimensions proposed by Hofstede (2011).

## **METHODOLOGY**

### **Data Sources and Variables**

The GEM National Expert Survey (GEM NES) analyses factors that influence nascent entrepreneurship across countries. This includes nascent entrepreneurship rates for 51 countries (in 2015), as well as a competitiveness database (2015-16) of the World Economic Forum and the Hofstede cultural dimensions, withdrawn from the author’s web page.

The Global Entrepreneurship Monitor 2014 Global Report (Singer et al., 2015) contains variables of the nascent entrepreneurship rate and new business ownership rate:

- **Nascent Entrepreneurship Rate:** The percentage of individuals aged 18-64 who are currently a nascent entrepreneur. In other words, they are actively involved in establishing a business that they will own or co-own (this business has not paid salaries, wages, or other payments to the owners for more than three months).
- **New Business Ownership Rate:** The percentage of individuals aged 18-64 who are currently an owner-manager of a new business. In other words, they own and manage a running business that has paid salaries, wages, or other payments to the owners for more than three months but no more than 42 months.

The GEM NES Key Indicators contain the remaining variables (see Table 3) designated as entrepreneurship ecosystems (Entrepreneurship Framework Conditions).

The competitiveness database (2015-16) of the World Economic Forum contains 114 indicators to capture productivity concepts within 140 economies. These indicators are grouped into 12 pillars: (1) institutions, (2) infrastructure, (3) macroeconomic environment, (4) health and primary education, (5) higher education and training, (6) goods market efficiency, (7) labour market efficiency, (8) financial market development, (9) technological readiness, (10) market size, (11) business sophistication, and (12) innovation. These, in turn, are organized into three sub-indexes aligned with the following stages of

## **Factors Influencing Nascent Entrepreneurship Across Countries**

development: basic requirements, efficiency enhancers, and innovation and sophistication factors. The three sub-indexes are assigned different weights in the calculation of the overall index. This depends on each economy's stage of development. It is represented by its GDP per capita and share of exports represented by raw materials (Schwab & Sala-i-Martin, 2015).

*Table 3. GEM NES key indicators (Source: <https://www.gemconsortium.org/data/sets>)*

<b>Indicators</b>	<b>Definition</b>
<b>Financing for Entrepreneurs</b>	Availability of financial resources, equity, and debt for small and medium enterprises (SMEs) (including grants and subsidies)
<b>Governmental Support and Policies</b>	Extent to which public policies support entrepreneurship and/or entrepreneurship as a relevant economic issue
<b>Taxes and Bureaucracy</b>	Extent to which public policies support entrepreneurship Taxes or regulations are size-neutral or encourage new SMEs
<b>Government Programs</b>	Presence and quality of programs directly assisting SMEs at all levels of government (national, regional, and municipal)
<b>Basic: School Entrepreneurial Education and Training</b>	Extent to which training in creating or managing SMEs is incorporated within education and training systems at primary and secondary levels
<b>Post: School Entrepreneurial Education and Training</b>	Extent to which training in creating or managing SMEs is incorporated within education and training systems in higher education, such as vocational, college, business schools, etc.
<b>R&amp;D Transfer</b>	Extent to which national research and development leads to new commercial opportunities and is available to SMEs
<b>Commercial and Professional Infrastructure</b>	Property rights, commercial, accounting, and other legal and assessment services and institutions that support or promote SMEs
<b>Internal Market Dynamics</b>	Level of change in markets each year
<b>Internal Market Openness</b>	Extent to which new firms are free to enter existing markets
<b>Physical and Services Infrastructure</b>	Ease of access to physical resources (i.e., communication, utilities, transportation, land, space) at a price that does not discriminate against SMEs
<b>Cultural and Social Norms</b>	Extent to which social and cultural norms encourage or allow actions leading to new business methods or activities that can potentially increase personal wealth and income

The new GCI 4.0 (2019) contains 103 individual indicators organized into 12 pillars (see Table 2) and covers 141 economies (Schwab, 2019).

Hofstede's cultural dimensions are power distance, individualism, masculinity, uncertainty avoidance, long-term orientation, and indulgence.

For Hofstede, Hofstede, and Minka (2010), power distance index (PDI) expresses the degree to which less powerful members of society accept and expect that power is distributed unequally. The fundamental issue is how a society handles inequalities among people. People exhibiting a large degree of power distance accept a hierarchical order in which everybody has a place. Justification is not required. In societies with low power distance, people strive to equalise the distribution of power and demand justification for inequalities of power.

Individualism vs. collectivism (IDV) is the high side of this dimension. Also referred to as individualism, it can be defined as a preference for a loosely-knit social framework in which individuals are expected to take care of only themselves and their immediate family. Its opposite, collectivism, represents a prefer-

## ***Factors Influencing Nascent Entrepreneurship Across Countries***

ence for a tightly-knit framework in society in which individuals expect their relatives or members of a particular in-group to look after them in exchange for unquestioning loyalty. A society's position on this dimension is reflected in whether self-image is defined in terms of "I" or "we" (Hofstede et al., 2010).

Masculinity vs. femininity (MAS), according to Hofstede et al. (2010), considers the masculinity dimension as a preference in society for achievement, heroism, assertiveness, and material rewards for success. In general, society is more competitive. Its opposite, femininity, prefers cooperation, modesty, caring for the weak, and quality of life. In general, society is more consensus-oriented. In the business context, MAS is also related to "tough vs. tender" cultures.

The uncertainty avoidance index (UAI) expresses the degree to which members of a society feel uncomfortable with uncertainty and ambiguity. The fundamental issue is how a society deals with an unknown future. One question that may arise is: Should we try to control the future or just let it happen? Countries exhibiting strong UAI maintain rigid codes of belief and behaviour. In addition, they are intolerant of unorthodox behaviour and ideas. Weak UAI societies maintain a relaxed attitude in which practice counts more than principles (Hofstede et al., 2010).

According to Hofstede et al. (2010), societies with long-term orientation (LTO) vs. short-term normative orientation maintain links with the past while dealing with present and future challenges. Societies prioritize these existential goals differently. Societies who score low on this dimension, for example, prefer to maintain time-honoured traditions and norms. In turn, they view societal change with suspicion. Those with a culture who score high take a more pragmatic approach. They prepare for the future by encouraging thrift and modern education. In the business context, this dimension is related to (short-term) normative vs. (long-term) pragmatic (PRA). In the academic environment, the terminology "monumentalism vs. flexhumility" is used.

In addition, Hofstede et al. (2010) reviewed indulgence vs. restraint (IND). It was considered that indulgence stood for a society that allows relatively free gratification of basic and natural human drives related to enjoying life and having fun. Restraint stands for a society that suppresses gratification of needs and regulates it by means of strict social norms.

## **Methodology**

Correlation analysis was applied with various explanatory variables using the entrepreneurship ecosystem (entrepreneurship framework conditions) (Singer et al., 2015): nascent entrepreneurship rate, new business ownership rate, financing for entrepreneurs, governmental support and policies, taxes and bureaucracy, governmental programs, basic-school entrepreneurial education and training, post-school entrepreneurial education and training, R&D transfer, commercial and professional infrastructure, internal market dynamics, internal market openness, physical and services infrastructure, cultural and social norms.

The analysis uses the correlation matrix considering 5% and 10% statistical significance levels. It aims to show a relationship (or statistical significance) between nascent entrepreneurship rate and the variables in the study.

The clusters analysis verifies how different countries are positioned in terms of nascent entrepreneurship. Scheffe tests of mean differences are applied to distinguish the unique characteristics of each cluster and assess the principal determinants of the nascent entrepreneurship capacity. This methodology groups countries according to their nascent entrepreneurship rate. A Scheffe test of mean differences was used to verify whether independent groups differed with respect to the 12 pillars of competitiveness and the cultural

dimensions of Hofstede. It aimed to verify if nascent entrepreneurship rate depends upon competitiveness level at different pillars. In addition, it considers if nascent entrepreneurship is a cultural phenomenon.

## **DETERMINANTS OF NASCENT ENTREPRENEURSHIP AMONG COUNTRIES: RESULTS**

Table 4 shows a direct relationship (statistically significant) between positively correlated nascent entrepreneurship and new business ownership rates.

The correlation matrix in Table 4 shows indirect relations (with statistical significance) between: nascent entrepreneurship rate and financing for entrepreneurs, R&D transfer, internal market dynamics, and internal market openness.

In 2019, the results confirm the positive correlations between nascent entrepreneurship and new business ownership rates (Table 5). Thus it shows a confirmation that the countries with higher nascent entrepreneurship rates are often those who achieve greater new business ownership rates.

The correlation matrix in Table 5 shows indirect relations (with statistical significance) between: nascent entrepreneurship rate and financing for entrepreneurs and internal market dynamics.

Nascent entrepreneurship rate and the entrepreneurship ecosystems (entrepreneurship framework conditions) are negatively correlated. The analysed countries with a higher nascent entrepreneurship rate often: have limited financial resources (i.e., equity and debt) for SMEs (including grants and subsidies) and weak internal market dynamics.

Typically, in these countries the national research and development for commercial opportunities for SMEs are feeble; they have lower levels of market change each year and are associated with smaller openings to markets; and have a small number of new firms enter existing markets.

To verify how different countries are positioned in terms of nascent entrepreneurship clusters analysis is applied. The cluster analysis application identified five groups of economies with different levels of nascent entrepreneurship rate. Results demonstrate that the variable used for this analysis was significant. The statistical significance can be observed through the F-statistic. The level of significance is associated with a low probability of analysis rejection. See Table 6 and Appendix Figure 2.

The results in Table 7 illustrate that the first group has higher values in the nascent entrepreneurship rate variable. The second and third groups present modest values. The fourth group presents lesser values of nascent entrepreneurship rate. The fifth group presents the second-best values of the variable.

In terms of economies included in each group, it can be observed through Figure 1 and Table 17 (see Appendix) that group 1 has four regions in Africa, Latin America, and the Caribbean. Singer et al. (2015) noted that these are factor- and efficiency-driven economies. It covers Botswana, Cameroon, Ecuador, and Peru. In the second group, there are 18 countries, including: Australia, Barbados, Canada, China, Croatia, Estonia, Hungary, Iran, Kazakhstan, the Netherlands, Philippines, Poland, Portugal, Puerto Rico, Romania, Slovakia, Thailand, and the United Kingdom. The third group contains eight countries integrating most of Latin America and the Caribbean (Argentina, Colombia, Guatemala, Mexico, Panama, and Uruguay), Burkina Faso, and the United States. The fourth group is composed of 20 economies, dominated by the north and centre of Europe (Belgium, Finland, Germany, Ireland, Luxembourg, Norway, Slovenia, Sweden, Switzerland, Spain, Italy, and Greece), Brazil, India, Indonesia, Japan, Malaysia, South Africa, Taiwan, and Vietnam. The fifth group contains Chile.

**Factors Influencing Nascent Entrepreneurship Across Countries**

*Table 4. Correlations matrix between nascent entrepreneurship, as well as new business and entrepreneurship framework conditions (2015)*

	Nascent entrepreneurship rate	New business ownership rate	Financing for entrepreneurs	Governmental support and policies	Taxes and bureaucracy	Governmental programs	Basic-school Entrepreneurial Education and training	Post-school entrepreneurial education and training	R&D Transfer	Commercial and professional infrastructure	Internal market dynamic	Internal market openness	Physical and services infrastructure	Cultural and social norms
Nascent entrepreneurship rate	1													
New business ownership rate	0.480**	1												
Financing for entrepreneurs	-0.430**	-0.226	1											
Governmental support and policies	-0.201	-0.048	0.657**	1										
Taxes and bureaucracy	-0.072	0.026	0.501**	0.539**	1									
Governmental programs	-0.092	-0.195	0.586**	0.634**	0.684**	1								
Basic-school Entrepreneurial Education and training	-0.135	-0.051	0.616**	0.445**	0.477**	0.421**	1							
Post-school entrepreneurial education and training	0.227	0.184	0.378**	0.476**	0.277*	0.494**	0.539**	1						
R&D Transfer	-0.362**	-0.230	0.710**	0.621**	0.618**	0.712**	0.675**	0.555**	1					
Commercial and professional infrastructure	-0.243	-0.231	0.535**	0.449**	0.442**	0.654**	0.480**	0.418**	0.549**	1				
Internal market dynamics	-0.417**	0.067	0.338*	0.251	-0.019	-0.158	0.138	-0.145	0.148	-0.249	1			
Internal market openness	-0.329*	-0.313*	0.722**	0.633**	0.689**	0.779**	0.606**	0.426**	0.787**	0.694**	-0.031	1		
Physical and services infrastructure	-0.149	-0.220	0.272	0.255	0.342*	0.328*	0.001	0.068	0.240	0.280*	0.078	0.338*	1	
Cultural and social norms	0.172	0.287*	0.496**	0.417**	0.616**	0.464**	0.572**	0.576**	0.452**	0.336*	0.124	0.497**	0.251	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).



Factors Influencing Nascent Entrepreneurship Across Countries

Table 5. Correlations matrix between nascent entrepreneurship, as well as new business and entrepreneurship framework conditions (2018)

	Nascent entrepreneurship rate	New business ownership rate	Financing for entrepreneurs	Governmental support and policies	Taxes and bureaucracy	Governmental programs	Basic-school Entrepreneurial Education and training	Post-school entrepreneurial education and training	R&D Transfer	Commercial and professional infrastructure	Internal market dynamics	Internal market openness	Physical and services infrastructure	Cultural and social norms
Nascent entrepreneurship rate	1													
New business ownership rate	,474**	1												
Financing for entrepreneurs	-.404**	-0,188	1											
Governmental support and policies	-0,192	-0,199	,430**	1										
Taxes and bureaucracy	-0,100	-0,068	,421**	,731**	1									
Governmental programs	-0,097	-0,273	,451**	,797**	,670**	1								
Basic-school Entrepreneurial Education and training	-0,020	0,020	,565**	,570**	,647**	,531**	1							
Post-school entrepreneurial education and training	0,088	0,002	0,238	,500**	,594**	,604**	,645**	1						
R&D Transfer	-0,257	-0,258	,655**	,758**	,678**	,810**	,667**	,652**	1					
Commercial and professional infrastructure	-0,163	-0,106	,642**	,398**	,526**	,500**	,578**	,521**	,668**	1				
Internal market dynamics	-.303*	0,025	,349*	,364*	0,110	-0,010	0,267	-0,039	0,182	0,034	1			
Internal market openness	-0,170	-0,196	,656**	,614**	,652**	,730**	,676**	,544**	,811**	,682**	0,116	1		
Physical and services infrastructure	-0,270	-.418**	,517**	,495**	,519**	,550**	0,260	0,281	,545**	,417**	0,117	,530**	1	
Cultural and social norms	0,192	0,202	,330*	,444**	,473**	,354*	,625**	,478**	,381**	,356*	0,167	,323*	0,155	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

## Factors Influencing Nascent Entrepreneurship Across Countries

Table 6. ANOVA analysis for groups of economies

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	df		
Nascent entrepreneurship rate	413.335	4	1.380	46	299.491	.000

Table 7. Cluster averages for groups of economies

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	N=4	N=18	N=8	N=20	N=1
Nascent entrepreneurship rate	24.28	6.81	11.58	3.57	16.60

Figure 1 and Table 17 (see Appendix) show that the less-developed economies of the first and fifth groups present higher values in nascent entrepreneurship rate. The second and fourth groups contain some of the most developed economies and present a modest and very modest nascent entrepreneurship rate. Nascent entrepreneurs are labelled as those who commit resources to start a business; the business has not yet yielded wages or salaries (Singer et al., 2015) (involved in setting up a business [0-3 months]). Iyigun and Owen (1998) argued that the decline in self-employment is because a rising economic development had fewer individuals who were willing to risk becoming an entrepreneur as safe professional earnings rise.

Singer et al. (2015, p. 38) confirmed the results, stating:

*... entrepreneurial dynamics is the highest among 2014 GEM African economies and the lowest among European economies (both in EU and non-EU). A high discontinuance rate can be an indicator of the low-level of preparedness of business ventures. At the same time, the low rate of discontinuance can be an indicator of the absence of the entrepreneurship ecosystem, which supports a fast exit from the bad designed venture and a fast re-entering into new venturing process. Building on the analysis of social values toward entrepreneurship and individual attributes, it is obvious that linking any descriptor of entrepreneurship only to the level of economic development would be misleading. It holds also for indicators of entrepreneurial activity.*

In order to interpret the relationship between explanatory variables and the dependent variable of nascent entrepreneurship rate, mean differences between groups in the variables considered in the cases were tested.

Scheffe test of means differences was used to verify whether the five groups of economies differed with respect to the variables of global competitiveness and GDP per capita, pillars of competitiveness performance, and cultural dimensions of Hofstede.

In regards to global competitiveness and GDP per capita, the economies of group 4 and group 2 presented with low and moderate nascent entrepreneurship rate and superior global competitiveness scores compared to groups 5, 3, and 1 (see Table 8). Group 4 and group 2 presented with superior GDP per capita, purchasing power parity (PPP) compared to the other groups.

**Factors Influencing Nascent Entrepreneurship Across Countries**

*Table 8. Mean differences between groups: Competitiveness level and GDP per capita*

ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	Obs.
GCI	3.342	4	.836	3.101	.025	4>2>5>3>1
GDP per capita, PPP (current international \$) 2014	3398140844.880	4	849535211.220	2.845	.034	4>2>5>3>1

Analysis on the influence of pillars of competitiveness performance: institutions, infrastructure, health and primary education, higher education and training, goods market efficiency, technological readiness, business sophistication and innovation, on nascent entrepreneurship rate (Table 9) we observe that this assumes greater expression in groups 4, 2, and 5 than in groups 3 and 1. It can be said that the competitiveness performance in these pillars negatively influenced performance in nascent entrepreneurship rate.

*Table 9. Mean differences between groups: Pillars of competitiveness performance*

ANOVA						
	Sum of Squares	Df	Mean Square	F	Sig.	Obs.
Pillar 1: Institutions	7.629	4	1.907	2.753	.040	4>5>2>3>1
Pillar 2: Infrastructure	12.678	4	3.170	4.781	.003	4>2>5>3>1
Pillar 3: Macroeconomic environment	2.186	4	.546	.711	.589	
Pillar 4: Health and primary education	4.595	4	1.149	4.092	.007	4>2>5>3>1
Pillar 5: Higher education and training	6.249	4	1.562	3.414	.016	4>5>2>3>1
Pillar 6: Goods market efficiency	2.591	4	.648	2.722	.042	4>2>5>3>1
Pillar 7: Labour market efficiency	1.188	4	.297	.815	.523	
Pillar 8: Financial market development	1.008	4	.252	.450	.772	
Pillar 9: Technological readiness	14.794	4	3.698	4.130	.006	4>2>5>3>1
Pillar 10: Market size	5.428	4	1.357	1.539	.208	
Pillar 11: Business sophistication	6.646	4	1.662	4.268	.005	4>2>3>5>1
Pillar 12: Innovation	10.426	4	2.606	4.021	.007	4>2>3>5>1

The results of the following pillars are insufficient in order to differentiate between the five groups: macroeconomic environment, labour market efficiency, financial market development, and market size.

When considering the influence of the differences in the dimensions of the national culture of Hofstede on nascent entrepreneurship rate, we observe that the countries that constitute clusters 4 and 2 (vs. clusters 5, 3, and 1) are the ones that reveal a national culture characterized by a higher long-term orientation. This higher long-term orientation, verified in the countries of groups with low and moderate nascent entrepreneurship rate, appears to have a negative influence in nascent entrepreneurship. This may be due to aspects that derive from high long-term orientation limiting the country's nascent entrepreneurship (Table 10). The remaining cultural dimensions are not significantly different (Table 10).

## Factors Influencing Nascent Entrepreneurship Across Countries

Table 10. Mean differences between groups: Cultural dimensions

ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	Obs.
Power distance	1856.230	4	464.058	.539	.708	
Individualism	4891.659	4	1222.915	1.796	.148	
Masculinity	625.575	4	156.394	.253	.906	
Uncertainty Avoidance	2027.878	4	506.970	.643	.635	
Long Term Orientation	11037.002	4	2759.251	6.468	.000	4>2>5>3>1
Indulgence	2002.576	4	500.644	.984	.427	

Considering now the 2018 GEM database for the 49 countries (see table 16) and applying the cluster analysis it is identified three groups of economies with different levels of nascent entrepreneurship rate. Results demonstrate that the variable used for this analysis was significant. The statistical significance can be observed through the F-statistic. The level of significance is associated with a low probability of analysis rejection. See Table 11.

Table 11. ANOVA analysis for groups of economies

	Cluster		Error		F	Sig.
	Mean Square	Df	Mean Square	df		
Nascent entrepreneurship rate	415,236	2	2,835	46	146,485	0,000

The results in Table 12 illustrate that the first group has higher values in the nascent entrepreneurship rate variable. The second group presents lesser values of nascent entrepreneurship rate. The third group presents modest values of the variable.

In terms of economies included in each group, it can be observed through Table 12 that group 1 has five regions in Africa, Latin America, and the Caribbean: Angola, Chile, Colombia, Guatemala and Peru. The second group is composed by 26 economies, dominated by the north and centre of Europe (Bulgaria, Croatia, Cyprus, France, Germany, Greece, Italy, Netherlands, Poland, Slovenia, Spain, Sweden, Switzerland, UK) Argentina, Brazil, China, Egypt Indonesia, Iran, Japan, Morocco, Qatar, Russian federation, Saudi Arabia, Taiwan.

The third group contains eighteen countries Austria, Canada, India, Ireland, Israel, Lebanon, Luxembourg, Madagascar, Panama, Puerto Rico, Republic of Korea, Slovakia, Sudan, Thailand, Turkey, Unit Arab Emirates, Uruguay and USA.

Scheffe test of means differences was used again to verify whether the five groups of economies differed with respect to the variables of global competitiveness and GDP per capita, pillars of competitiveness performance, and cultural dimensions of Hofstede.

**Factors Influencing Nascent Entrepreneurship Across Countries**

*Table 12. Cluster averages for groups of economies*

	Cluster 1	Cluster 2	Cluster 3
	N=5	N=26	N=18
Nascent entrepreneurship rate	17,2	3,7	8,4
	Angola Chile Colombia Guatemala Peru	Argentina Brazil Bulgaria China Croatia Cyprus Egypt France Germany Greece Indonesia Iran Italy Japan Marocco Netherlands Poland Qatar Russian federation Saudi arabia Slovenia Spain Sweden Switzerland Taiwan UK	Austria Canada India Ireland Israel Lebanon Luxembourg Madagascar Panama Puerto rico Republic of Korea Slovakia Sudan Thailand Turkey Unit arab emirates Uruguay USA

In regards to new global competitiveness index and GDP per capita, the economies of group 2 and group 3 presented with low and moderate nascent entrepreneurship rate are the most competitive economies (superior global competitiveness rank) compared to group 1 (see Table 13). In terms of GDP per capita, purchasing power parity (PPP) there were no statistically significant differences between the groups (see Table 13).

*Table 13. Mean differences between groups: Competitiveness level and GDP per capita*

ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	Obs.
Global Competitiveness Index (Rank) 2019	6377,941	2	3188,970	3,192	0,051	2<3<1
GDP per capita, PPP (current international \$) 2018	2789410512	2	1394705256	2,140	0,130	

### Factors Influencing Nascent Entrepreneurship Across Countries

Analysis on the influence of pillars of new Global Competitiveness Index 4.0, to contemplate 4.0 Revolution: institutions, infrastructure, ICT adoption, skills, business dynamism, Innovation capability, on nascent entrepreneurship rate (Table 14) we observe that this assumes greater expression in groups 2, and 3 than in group 1. It can be said that the competitiveness performance in these pillars negatively influenced performance in nascent entrepreneurship rate.

Table 14. Mean differences between groups: Pillars of competitiveness performance

ANOVA						
	Sum of Squares	Df	Mean Square	F	Sig.	Obs.
Global score of Competitiveness	679,449	2	339,725	3,316	0,046	1<3<2
Pillar 1: Institutions	799,199	2	399,600	3,696	0,033	1<2<3
Pillar 2: Infrastructure	2109,392	2	1054,696	4,476	0,017	1<3<2
Pillar 3: ICT adoption	2212,890	2	1106,445	4,875	0,012	1<3<2
Pillar 4: Macroeconomic stability	357,958	2	178,979	0,583	0,563	
Pillar 5: Health	249,572	2	124,786	0,748	0,479	
Pillar 6: Skills	1159,756	2	579,878	4,614	0,015	1<3<2
Pillar 7: Product market	77,000	2	38,500	0,626	0,539	
Pillar 8: Labour market	257,319	2	128,659	1,630	0,208	
Pillar 9: Financial system	551,181	2	275,591	1,568	0,220	
Pillar 10: Market size	753,190	2	376,595	1,747	0,186	
Pillar 11: Business dynamism	463,729	2	231,865	2,450	0,098	1<2<3
Pillar 12: Innovation capability	2870,793	2	1435,396	5,182	0,010	1<3<2

The results of the following pillars of competitiveness 4.0 are insufficient in order to differentiate between the three groups: macroeconomic stability, health, product market, labour market, financial system, and market size.

When considering the influence of the differences in terms of the dimensions of the national culture of Hofstede on nascent entrepreneurship rate, we observe that the countries that constitute cluster 1 (vs. clusters 2 and 3) reflect a low side of individualism (or high collectivism), and are the ones that reveal a national culture characterized by a lower long-term orientation and a higher indulgence. The higher long-term orientation, verified in the countries of groups with low and moderate nascent entrepreneurship rate, appears to have a negative influence in nascent entrepreneurship, and confirm the previous results. This may be due to aspects that derive from high long-term orientation limiting the country's nascent entrepreneurship and collectivism and indulgence stimulating new business (ventures) (Table 15). The remaining cultural dimensions are not significantly different (Table 15).

*Table 15. Mean differences between groups: Cultural dimensions*

ANOVA						
	Sum of Squares	df	Mean Square	F	Sig.	Obs.
Power distance	1112,467	2	556,233	1,156	0,324	
Individualism	4016,113	2	2008,057	4,641	0,015	1<2,3
Masculinity	1139,176	2	569,588	1,715	0,192	
Uncertainty Avoidance	1376,875	2	688,437	1,755	0,185	
Long Term Orientation	4217,732	2	2108,866	3,713	0,033	1<3<2
Indulgence	2698,718	2	1349,359	3,567	0,038	2<3<1

## **SOLUTIONS AND RECOMMENDATIONS**

The results suggest a negative effect with nascent entrepreneurship rate and the economic level. The less developed economies presented higher values in nascent entrepreneurship rate. The more developed and competitive economies presented lower nascent entrepreneurship level. The nascent entrepreneurship decreased with: the efficiency and behaviour of a country’s institutional environment; efficient infrastructures; a healthy workforce; quality higher education and training; efficiency of the goods market; technological readiness; business sophistication; and innovation. In sum, the results reported a negative empirical relationship between competitiveness performance and the rate of nascent entrepreneurship and are corroborated in 4.0 revolution context in terms of: institutions, infrastructure, ICT adoption, skills, business dynamism, and innovation capability.

A national culture more collectivist, more indulgence and with short-term normative orientation may be conducive to nascent entrepreneurship. These societies prefer tightly-knit framework in society and to maintain time-honoured traditions and norms. They also view societal change with suspicion. Societies with LTO take a more pragmatic approach. They encourage thrift and modern education as a way to prepare for the future. However, they present a modest nascent entrepreneurship rate. These results are in agreement with the results of Dantas et al. (2015), that concludes only individualism and LTO are statistically significant in the cultural model and present different entrepreneurship rates.

These results confirm the conclusions of several authors (Davidsson, 2006; Iyigun & Owen, 1998; Kuznets, 1971; Schultz, 1990; van Stel et al., 2003; Wennekers, Stel, Thurik, & Reynolds, 2005; Yamada, 1996) who have reported a negative empirical relationship between economic development and the rate of business ownership (self-employment) in the labour force or negative empirical relationship between necessity-based entrepreneurship and the level of economic development. Considering nascent entrepreneurs as the first phase of a ventures’ lifecycle of entrepreneurial activity.

Several reasons were offered for the decline of self-employment with increasing per capita income (van Stel et al., 2003). At the demand side of entrepreneurship, a declining share of agriculture and an increasing share of manufacturing diminish the opportunities for self-employment. It was argued that rising economic development caused fewer individuals to run the risk associated with becoming an entrepreneur as the safe professional earnings rise (van Stel et al., 2003). More recently, statistical evidence pointed at a reversal of the negative relationship between real income and self-employment occurring at an advanced level of economic development.

## ***Factors Influencing Nascent Entrepreneurship Across Countries***

Davidsson (2006) argued that developing nations may be better off pursuing the exploitation of scale economies, foreign direct investment, and improved management education. The antecedents, activities and outcomes are the three - stage which nascent entrepreneurs operate in the Tuazon, Bellavitis and Filatotchev (2018) perspective.

These conclusions suggested different policy strategies for countries on different levels of development, considering nascent entrepreneurship in basic education as an important policy for developed skills. Also recommend the necessity for entrepreneurship scholars to conduct research that effectively explores the multistage aspects of nascent entrepreneurial.

## **CONCLUSION**

This chapter reflects upon factors that influence nascent entrepreneurship across countries in an evolutionary approach using three different perspectives and considering the previous findings and the influence of Fourth Industrial Revolution. This first analyses the correlation between nascent entrepreneurship and new business and entrepreneurship framework conditions. The second approach relates the nascent entrepreneurship to competitiveness levels and GDP per capita of the country, while considering the 12 pillars of competitiveness performance. Finally, the third approach relates the nascent entrepreneurship to cultural dimensions of Hofstede.

The results conclude that the countries with higher nascent entrepreneurship rate often use less national research and development, which leads to new commercial opportunities available to SMEs. Countries with higher nascent entrepreneurship have a lower level of change in markets each year converting in weak internal market dynamics. They are associated with lower market openings and few firms enter existing markets.

Thus, the nascent entrepreneurship decreases with financing for entrepreneurs. This includes the availability of financial resources—equity and debt—for SMEs (including grants and subsidies), R&D transfers (the level to which national research and development will lead to new commercial opportunities and is available to SMEs), internal market dynamics (the level of change in markets from year to year), and internal market openness (the extent to which new firms are free to enter existing markets).

The results reported a national culture with collectivism, short-term normative orientation and indulgence may be conducive to nascent entrepreneurship and a negative empirical relationship between competitiveness performance and the rate of nascent entrepreneurship.

Thus, it is clear that Nascent Entrepreneurship Rate differs among countries and depends of cultural characteristics and of economies competitiveness performance, it is a cultural phenomenon and the country of origin are differently influential, as referred Dantas et al. (2015) in their study on entrepreneurship and National Culture.

## **FUTURE RESEARCH DIRECTIONS**

This study presents some limitations to the comprehension of the micro mechanisms which create new business: a more detailed analysis of the effectiveness of the several national entrepreneurship strategies. These limitations arise as a pathway for future research about this theme, and appear to be of great interest to the embodiment of indicators about national and regional entrepreneurship strategy.



Another limitation is the use of data from GEM, World Economic Forum and Hofstede reports which present different countries and lack of indicators in some countries, which allowed the study of 51 countries or 49 countries separately. GEM database does not always perform the analysis for the same countries. Thus, this study can be developed enlarging the sample.

Another field of future research should address the inclusion of micro level variables, in order to measure the profile of entrepreneurship from the fact of being present in countries with more Nascent Entrepreneurship Rate, so the future research will begin to tackle these challenges and involves the construction and application of panel data sets to analyze the decisions of nascent entrepreneurs since childhood.

## REFERENCES

- Bearden, W. O., Money, R. B., & Nevins, J. L. (2006). Multidimensional versus unidimensional measures in assessing national culture values: The Hofstede VSM 94 example. *Journal of Business Research*, 59(2), 195–203. doi:10.1016/j.jbusres.2005.04.008
- Beynon, M. J., Jones, P., & Pickernell, D. (2016). Country-based comparison analysis using FSQCA investigating entrepreneurial attitudes and activity. *Journal of Business Research*, 69(4), 1271–1276. doi:10.1016/j.jbusres.2015.10.091
- Brändle, L., Berger, E. S. C., Gollab, S., & Kuckert, A. (2018). I am what I am - How nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights*, 9, 17–23. doi:10.1016/j.jbvi.2017.12.001
- Carree, M. A., & Thurik, A. R. (2003). The impact of entrepreneurship on economic growth. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship* (pp. 557–594). Kluwer Academic Publishers.
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2015). Entrepreneurship and National Culture: How Cultural Differences Among Countries Explain Entrepreneurial Activity. In L. C. Carvalho (Ed.), *Handbook of Research on Internationalization of Entrepreneurial Innovation in the Global Economy* (pp. 1–28). IGI Global. doi:10.4018/978-1-4666-8216-0.ch001
- Davidsson, P. (2006). Nascent entrepreneurship: Empirical studies and developments. *Foundations and Trends in Entrepreneurship*, 2(1), 1–76. doi:10.1561/03000000005
- Davidsson, P. (2015). Nascent Entrepreneurship. In D. B. Audretsch, C. S. Hayter, & A. N. Link (Eds.), *Concise Guide to Entrepreneurship, Technology and Innovation* (pp. 131–136). Edward Elgar.
- França, A., Vilares, A., Frankenbach, S., Vereb, V., & Moreira, A. C. (2018). The Challenging Dynamics of Nascent Entrepreneurship. In A. C. Moreira, J. G. Dantas, & F. M. Valente (Eds.), *Nascent Entrepreneurship and Successful New Venture Creation* (pp. 1–28). IGI Global., doi:10.4018/978-1-5225-2936-1.ch001
- Gutterman, A. S. (2016). *Entrepreneurship. A Library of Resources for Growth-Oriented. Definitions and Types of Entrepreneurship*. *Entrepreneurs International Center for Growth-Oriented Entrepreneurship*. <https://alangutterman.typepad.com/files/en---definitions-types-1.pdf>

## **Factors Influencing Nascent Entrepreneurship Across Countries**

- Hietanen, L., & Ruismäki, H. (2019). Enhancing students' latent nascent entrepreneurship in basic education. In A. Fayolle, D. Kariv, & H. Matlay (Eds.), *The Role and Impact of Entrepreneurship Education. Methods, Teachers and Innovative Programmes* (pp. 146–163). Edward Elgar Publishing., doi:10.4337/9781786438232.00015
- Hofstede, G. (1991). *Culturas e Organizações, Compreender a Nossa Programação Mental*. Edições Sílabo, Lda.
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1). doi:10.9707/2307-0919.1014
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind*. McGraw-Hill.
- Iyigun, M. F., & Owen, A. L. (1998). Risk, entrepreneurship, and human capital accumulation. *The American Economic Review*, 88, 454–457.
- Kuznets, S. (1971). *Economic growth of nations, total output and production structure*. Harvard University Press/Belknap Press.
- Kwapisz, A. (2019). Minimum Wages and Nascent Entrepreneurship in the US. *The B.E. Journal of Economic Analysis & Policy*, 20(1). Advance online publication. doi:10.1515/bejeap-2018-0140
- Marques, H. (2019). Export activity, innovation and institutions in Southern European nascent entrepreneurship. *Economics: The Open-Access, Open Assessment E-Journal*, 13(2019-53), 1-48. . doi:10.5018/economics- ejournal.ja.2019-53
- Natário, M. M., Braga, A. M., & Fernandes, G. P. (2018). Determinantes do desempenho empreendedor e inovador nas regiões transfronteiriças. *Innovar (Universidad Nacional de Colombia)*, 28(70), 39–54. doi:10.15446/innovar.v28n70.74445
- Natário, M. M. S., Braga, A. M. M., & Fernandes, G. J. P. (2015). Entrepreneurship in Frontier Regions: Study of Four Municipalities from BIN. *Revista de Estudios Regionales*, 104, 83–109.
- Schultz, T. P. (1990). Women's changing participation in the labor force: A world perspective. *Economic Development and Cultural Change*, 38(3), 457–488. doi:10.1086/451811
- Schwab, K. (2018). *The Global Competitiveness Report 2018*. World Economic Forum.
- Schwab, K. (2019). *The Global Competitiveness Report 2019*. World Economic Forum.
- Schwab, K., & Sala-i-Martin, X. (2015). *The Global Competitiveness Report 2015–2016*. Geneva: World Economic Forum.
- Singer, S., Amoros, J. E., & Arreola, D. M. (2015). *Global Entrepreneurship Monitor 2014 Global Report*. Global Entrepreneurship Research Association (GERA). Retrieved from [https://www.researchgate.net/publication/281290871\\_Global\\_Entrepreneurship\\_Monitor\\_2014\\_Global\\_Report](https://www.researchgate.net/publication/281290871_Global_Entrepreneurship_Monitor_2014_Global_Report)
- Tuazon, G., Bellavitis, C., & Filatotchev, I. (2018). *Nascent Entrepreneurship: Current Research Directions and Controversies (2018)*. Available at SSRN: <https://ssrn.com/abstract=3112511>

van Stel, A. (2006). *Empirical analysis of entrepreneurship and economic growth*. Springer. doi:10.1007/0-387-29419-8

van Stel, A., Wennekers, S., Thurik, R., Reynolds, P., & de Wit, G. (2003, May). *Explaining nascent entrepreneurship across countries*. SCALES-paper N200301. Retrieved from [https://www.researchgate.net/publication/5012661\\_SCALES-paper\\_N200301\\_Explaining\\_nascent\\_entrepreneurship\\_across\\_countries](https://www.researchgate.net/publication/5012661_SCALES-paper_N200301_Explaining_nascent_entrepreneurship_across_countries)

Wagner, J. (2004, September). *Nascent entrepreneurs*. Discussion Paper Series No. 1293. IZA. Retrieved from <http://ftp.iza.org/dp1293.pdf>

Wennekers, S., Stel, A., Thurik, A. R., & Reynolds, P. D. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293–309. doi:10.1007/11187-005-1994-8

Yamada, G. (1996). Urban informal employment and self-employment in developing countries: Theory and evidence. *Economic Development and Cultural Change*, 44(2), 289–314. doi:10.1086/452214

## KEY TERMS AND DEFINITIONS

**Competitiveness:** The set of institutions, policies, and factors that determine the level of productivity of a country.

**Cultural Dimensions:** Represent independent preferences for one state of affairs over another that distinguish countries (rather than individuals) from each other.

**Entrepreneurship:** The process of creation of business (nascent, new business, established business, discontinuation).

**Entrepreneurship Framework Conditions:** The most important components of any entrepreneurship ecosystem and constitute the necessary oxygen of resources, incentives, markets and supporting institutions for the creation and growth of new firms.

**Nascent Entrepreneurship:** Individuals aged 18-64 who are actively involved in establishing a business that they will own or co-own (this business has not paid salaries, wages, or other payments to the owners for more than three months).

**National Culture:** The collective programming of the mind distinguishing the members of one group or category of people from others.

**New Business:** Individuals aged 18-64 who are currently an owner-manager of a new business that has paid salaries, wages, or other payments to the owners for more than three months but no more than 42 months.

**Pillars of Competitiveness:** Different components or categories, each measuring a different aspect of competitiveness. The Global Competitiveness Report published by the World Economic Forum grouped into 12 categories the pillars of competitiveness.

**APPENDIX**

*Table 16. Countries studied in 2015 and 2018*

Countries 2015	Countries 2018
ARGENTINA	ANGOLA
AUSTRALIA	ARGENTINA
BARBADOS	AUSTRIA
BELGIUM	BRAZIL
BOTSWANA	BULGARIA
BRAZIL	CANADA
BURKINA FASO	CHILE
CAMEROON	CHINA
CANADA	COLOMBIA
CHILE	CROATIA
CHINA	CYPRUS
COLOMBIA	EGYPT
CROATIA	FRANCE
ECUADOR	GERMANY
ESTONIA	GREECE
FINLAND	GUATEMALA
GERMANY	INDIA
GREECE	INDONESIA
GUATEMALA	IRAN
HUNGARY	IRELAND
INDIA	ISRAEL
INDONESIA	ITALY
IRAN	JAPAN
IRELAND	LEBANON
ITALY	LUXEMBOURG
JAPAN	MADAGASCAR
KAZAKHSTAN	MAROCCO
LUXEMBOURG	NETHERLANDS
MALAYSIA	PANAMA
MEXICO	PERU
NETEHERLANDS	POLAND
NORWAY	PUERTO RICO
PANAMA	QATAR
PERU	REPUBLIC OF KOREA
PHILIPPINES	RUSSIAN FEDERATION

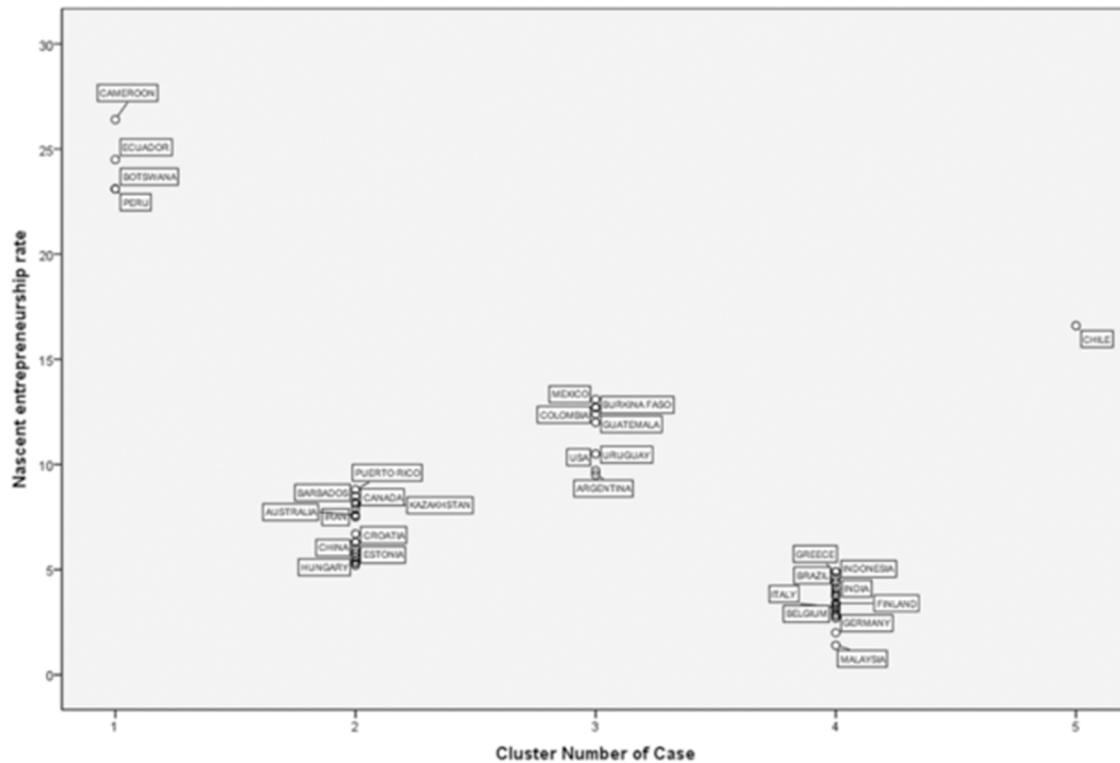
*continues on following page*

**Factors Influencing Nascent Entrepreneurship Across Countries**

*Table 16. Continued*

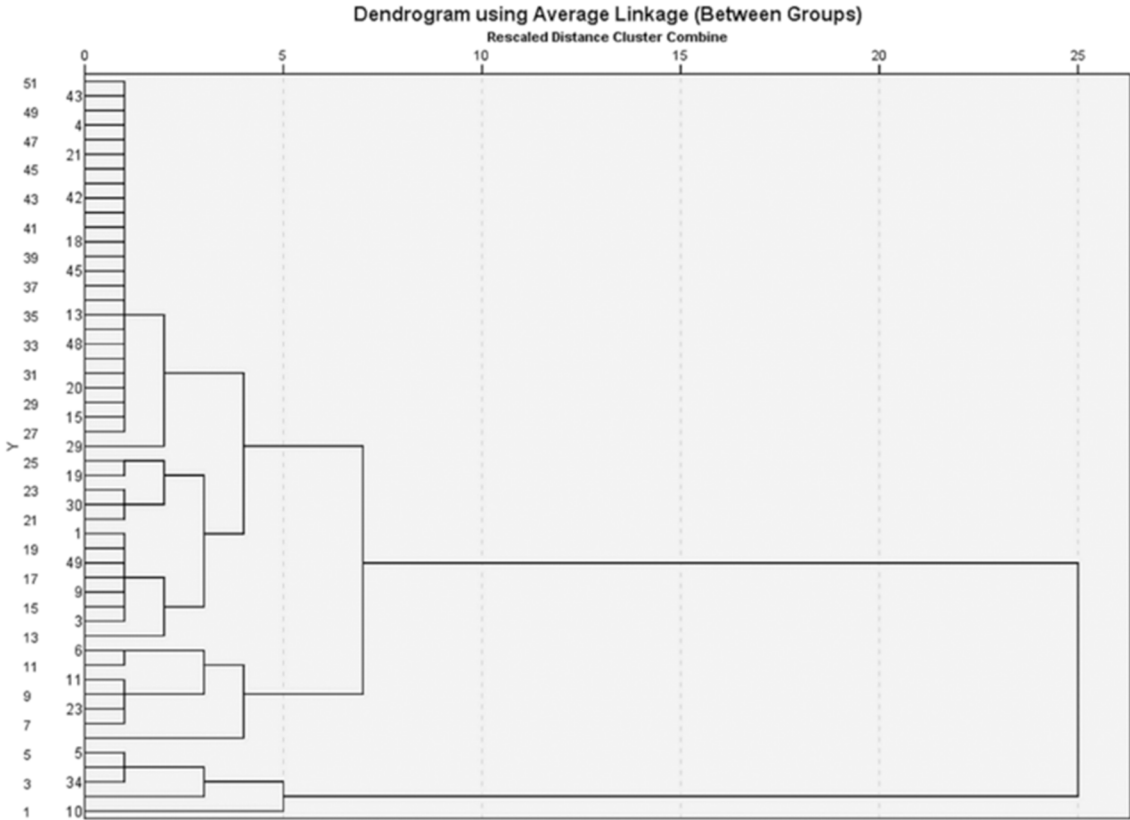
Countries 2015	Countries 2018
POLAND	SAUDI ARABIA
PORTUGAL	SLOVAKIA
PUERTO RICO	SLOVENIA
ROMANIA	SPAIN
SLOVAKIA	SUDAN
SLOVENIA	SWEDEN
SOUTH AFRICA	SWITZERLAND
SPAIN	TAIWAN
SWEDEN	THAILAND
SWITZERLAND	TURKEY
TAIWAN	UNIT ARAB EMIRATES
THAILAND	UK
UK	URUGUAY
URUGUAY	USA
USA	
VIETNAM	

*Figure 1. Distribution of the countries by clusters*



**Factors Influencing Nascent Entrepreneurship Across Countries**

*Figure 2. Dendrogram*



**Factors Influencing Nascent Entrepreneurship Across Countries**


*Table 17. Distribution of countries by clusters (2015)*

Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
BOTSWANA	AUSTRALIA	ARGENTINA	BELGIUM	CHILE
CAMEROON	BARBADOS	BURKINA FASO	BRAZIL	
ECUADOR	CANADA	COLOMBIA	FINLAND	
PERU	CHINA	GUATEMALA	GERMANY	
	CROATIA	MEXICO	GREECE	
	ESTONIA	PANAMA	INDIA	
	HUNGARY	URUGUAY	INDONESIA	
	IRAN	USA	IRELAND	
	KAZAKHSTAN		ITALY	
	NETHERLANDS		JAPAN	
	PHILIPPINES		LUXEMBOURG	
	POLAND		MALAYSIA	
	PORTUGAL		NORWAY	
	PUERTO RICO		SLOVENIA	
	ROMANIA		SOUTH AFRICA	
	SLOVAKIA		SPAIN	
	THAILAND		SWEDEN	
	UK		SWITZERLAND	
			TAIWAN	
			VIETNAM	
4	18	8	20	1


# Chapter 5

## Analysis of Entrepreneurial Dynamics in Spain: The Role of Corporate Social Responsibility

**Dolores Gallardo-Vázquez**

 <https://orcid.org/0000-0003-4749-6034>  
*University of Extremadura, Spain*

**Juan de la Cruz Sánchez-Domínguez**

 <https://orcid.org/0000-0003-4830-193X>  
*University of Extremadura, Spain*

### ABSTRACT

*Entrepreneurship is becoming one of Spain's economic driving forces. The Triple Bottom Line concept has gained notoriety in the last 30 years, creating a theoretical framework that justifies the measuring of the organizations' results not only economically, but also socially and environmentally, which has raised the awareness of the need to add Corporate Social Responsibility to the organizations' strategies. The goals of this study are to analyse the current state of entrepreneurship in Spain, to link entrepreneurship with CSR and to establish which aspects of CSR can be challenging for entrepreneurs.*

### INTRODUCTION

Entrepreneurship is one of the most interesting aspects of human beings, because the entrepreneurs can show a lot of themselves in their businesses, thereby making their organizations a reflection of what they would like to start (Fauchart & Gruber, 2011). The social aspects of the founder are important in entrepreneurship, because the act of creating a business is an inherently social activity, and the organizations are social constructions in themselves (Whetten & Mackey, 2002).

From an academic point of view, entrepreneurship is defined as “how opportunities to create future products and services are discovered, created and exploited, by whom and with which consequences” (Venkataraman 1997, p. 120). Later, Cohen and Winn (2007, p. 35) defined entrepreneurship as “the

DOI: 10.4018/978-1-7998-4826-4.ch005



analysis of how opportunities of creating future products and services are discovered and exploited, by whom and with which economical, psychological and environmental consequences”.

The main goal of this chapter is twofold. First, we analyse the current situation of entrepreneurship in Spain and its evolution in the period of thirteen years going from 2005 to 2017, to study how the 2008 global crisis affected entrepreneurship, how the statistics have changed, and what are the main differences between the population that have been involved in entrepreneurship and the population who has not in their opinions, feelings and beliefs about entrepreneurship, and which of them can be a challenge for potential entrepreneurs. We also analyse the differences between age groups and gender. Secondly, we study the role that CSR plays in the entrepreneurial process, especially its environmental and social dimensions, to observe which challenges CSR could pose to entrepreneurs.

To carry out the study a descriptive methodology was used. After doing the bibliographical review that allowed us to establish the theoretical framework, we undertook a descriptive analysis that allowed us to describe the situation of entrepreneurship in Spain.

This chapter is organized as follows. After this introduction, the second section presents the current situation of entrepreneurship in Spain. Then the role of CSR is analysed in section three. In the fourth section we analyse the link between entrepreneurship and the environmental dimension of CSR. The fifth section studies the link between entrepreneurship and the social dimension of CSR, and the chapter ends with the conclusions and future lines of research in the last sections, as well as with the explanation of some key concepts.

## **CURRENT SITUATION OF ENTREPRENEURSHIP IN SPAIN**

The Global Entrepreneurship Monitor (GEM) research program was developed with the aim of providing harmonized data for the research of entrepreneurship in different economies around the world, at very different developmental levels (Tominc, 2019). The first population survey was carried out in 1999, with ten countries participating. Nowadays, the GEM has evolved into a consortium in which a big number of countries participate and represents a unique global research project, unprecedented in entrepreneurial research (Tominc, 2019). Its framework is focused on the analysis of early-stage entrepreneurship, which often is not entirely aligned with the objectives pursued by policy makers, who focus mainly on a macroeconomic aspect, which notices entrepreneurship only when it manifests itself in a successful and growing company (Rebernik *et al.*, 2016). The study of entrepreneurship within the framework of the GEM is, therefore, the study of the fundamental driving force behind entrepreneurship, that is, the individuals and their ambitions, innovativeness and abilities (Rebernik *et al.*, 2018).

The GEM uses the TEA (Total Entrepreneurship Activity) index to measure and compare the level of entrepreneurship of different countries. The index measures the percentage of responders that work in businesses less than three years old, to capture the entrepreneurial dynamic of a country and its characteristics. Figure 1 shows the different values of the TEA index for Spain for people between 18 and 64 years old, and its evolution in the period 2005-2017.

The index is divided in different age ranges, and each of them contains some interesting data:

- TEA between 18 and 24: the higher values (5% in 2007 and in 2008) are scored just before the start of the economic crisis, and between 2009 and 2016 they get halved, recovering in the last year analysed.

## Analysis of Entrepreneurial Dynamics in Spain

- TEA between 25 and 34: it reaches its highest value before the start of the crisis too (11.8% in 2007) and reaches its lowest point in 2013 (6.1%). It also recovers at the end of the analysed period, although it does not reach the values obtained before the crisis.
- TEA between 35 and 44: it is the most constant index of all, but it obtained its lowest value during the crisis (5.8% both in 2009 and in 2010). Notwithstanding, it has been relatively constant during the studied period: it marked a 7.1% in 2005 and a 7.8% in 2017.
- TEA between 45 and 54: it increased from 4.6 to 5.9% during the analysed period; it reached its lowest point with a 3.2% in 2010 but it has not stopped increasing between 2011 and 2017.
- TEA between 55 and 64: the lowest of all TEA indexes shown, it decreased from 3.9 to 3% during the studied period. Its lowest point was in 2010, with a 1.4%.

Figure 1. Evolution of the TEA index for Spain, divided by age ranges, between 2005 and 2017

Source: GEM Spain Report 2017-2018.

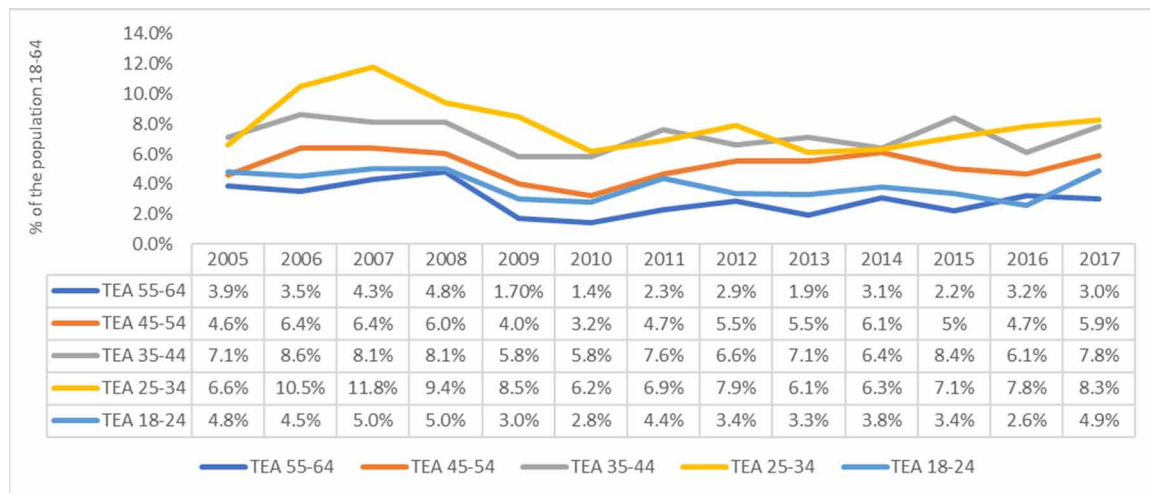
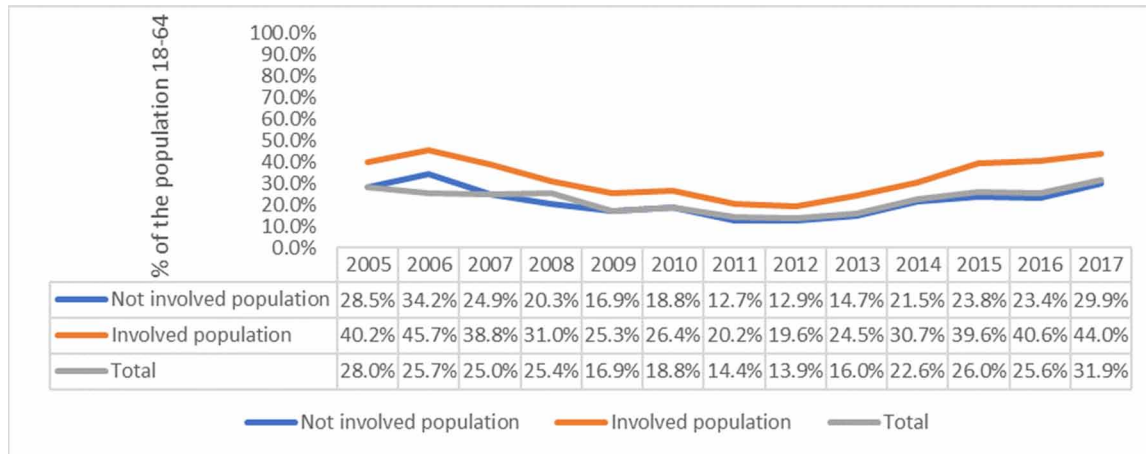


Figure 2 shows the evolution between 2005 and 2017 of the **percentage of people** between 18 and 64, both of the involved and not involved population (that is, both people that are either starting a new business or owners of already established businesses; and people that are not doing any entrepreneurial activity at all) that saw **starting a new business** possible in a maximum of six months after participating in the survey.

The figure shows how the perception of entrepreneurial opportunities is linked to economic cycles: between 2008 and 2013, the perception of opportunities decreased from 20.3 to 14.7% for the not involved population and from 31 to 24.5% in involved population, recovering from 2014 onwards to the levels it had before the crisis, even increasing in 2017 to a 9.6% for the not involved population and to a 13% in involved population compared to the last data before the crisis, that of 2008. A second characteristic is the difference of the perception of opportunities between the involved population and the people who is not involved in business activities, because the bigger experience of the people who have already started a business allows them to see some opportunities that could be more difficult to perceive for the people that has not been involved in any entrepreneurial activity at all.

Figure 2. Evolution of the perception of opportunities to start a new business in the six months after being surveyed, in the period 2005-2017

Source: GEM Spain Report 2017-2018.



**Entrepreneurial education** is defined as the formal teachings who educate any person interested in the creation of a company (Bechard and Toulouse, 1998), and it can cause the creation of entrepreneurial initiatives by teaching entrepreneurial attitudes to students (Lubis, 2014). Nevertheless, there is an open debate about how students should be educated and the perception of students of the education they receive. The traditional education system teaches how to be a good employee, not a good entrepreneur (Solomon, 1989); entrepreneurship shouldn't be equated with new venture creation or small business management, but with creativity and change (Kirby, 2004). The curriculums of business schools nowadays teach *about* entrepreneurship, and not *to start a new business*. When designing study programmes for entrepreneurs, Mani (2015) assures that certain aspects must be taken into account: a) understanding the specific needs of students, b) making sure that the teachings adjust to what the students need, c) using more didactical methods to provide new information (readings, seminars, etc.), d) the active study of cases and group debates should help to get new abilities and e) for getting real experience real problems in real situations should be solved, and they should be consultants for small businesses. Entrepreneurship programmes should be designed to inform students about the real-world circumstances and teach them the way to solve said complexities (Petridou, Sarri & Kyrgidou, 2009).

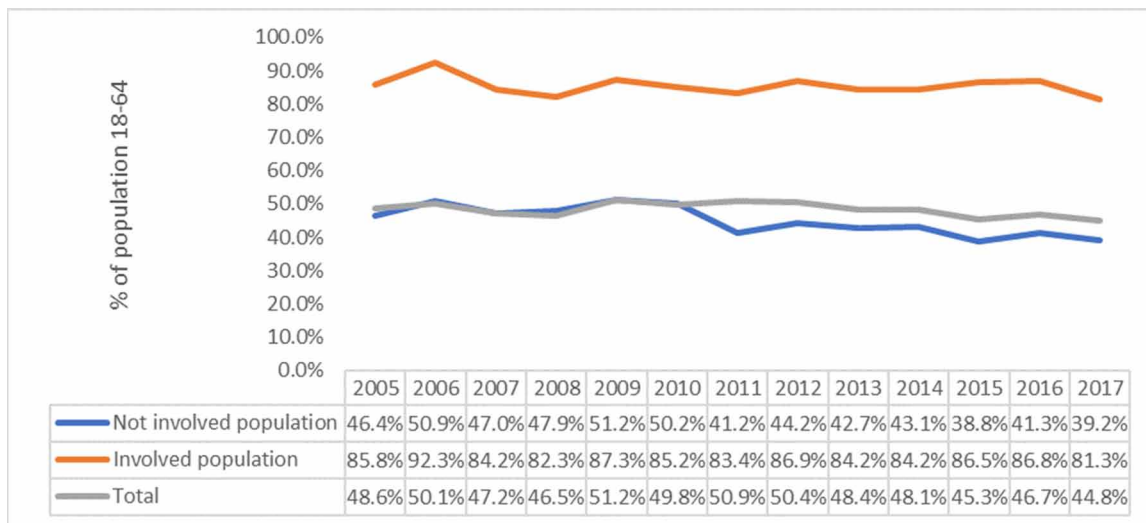
The entrepreneurial vision is not the only thing needed to launch new businesses, **having the knowledge to consolidate the business** is also needed. That is why the GEM reports also include a question about the perception that people have about their knowledge and ability to create a new business. Figure 3 shows the answers. There are important differences between the involved and not involved population once more: in 2017, an 81.3% of the people involved in business activities answered affirmatively to the question of having the needed knowledge and abilities to start a new business, while 39.2% of the not involved population answered affirmatively.

A very important third characteristic for entrepreneurs is **risk tolerance** because, even though the income fluctuates, the costs are usually fixed, so entrepreneurs face very big risks of losing money. Even though the risk tolerance data analysed is divided between involved and not involved population and not by gender, the influence of gender in entrepreneurship can create more barriers to women in terms of risk

## Analysis of Entrepreneurial Dynamics in Spain

Figure 3. Evolution of the perception of having of the needed knowledge and abilities to start a new business, on the period 2005-2017

Source: GEM Spain Report 2017-2018.

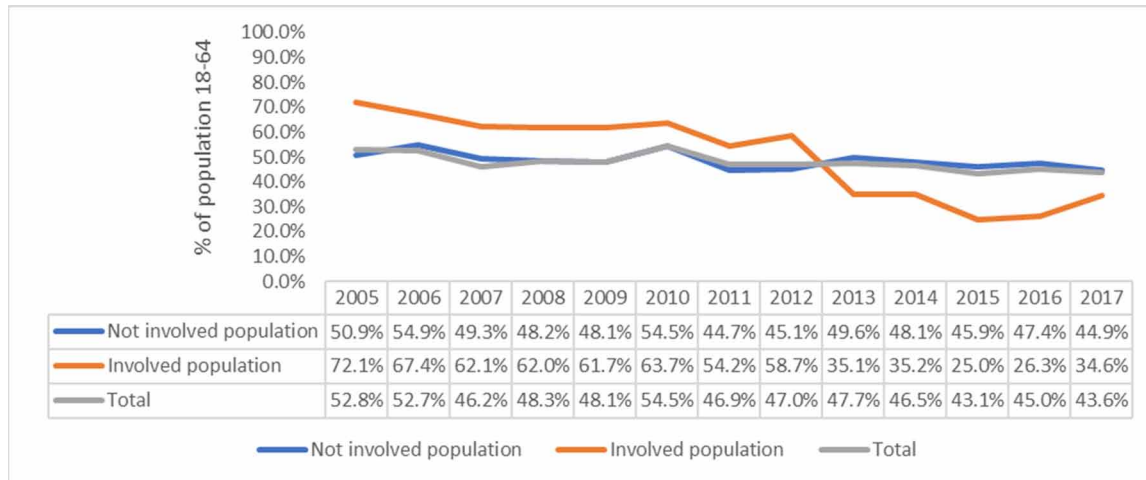


aversion (Heilman, 1983). Women can have more fear to failure when they start a business, because doing so implies taking a career path which is unadvisable for women (Shinnar, Giacomini, & Janssen, 2012). Some studies asseverate that women are more frightened of risk than men, which influences negatively in their inclination to start a new business (Wagner, 2007). The report shows this risk tolerance using the fear of failure as an indicator, by making the question of whether the fear of failure is an impediment to start new businesses. Figure 4 shows the answers. There also are big differences between the involved and not involved population, as a consequence of the experience in business; nevertheless, in the last part of the study (from 2013 to 2017) the perception of the fear of failure of the involved population slightly increases, but in general the perception of the fear of failure in the involved population halved in the analysed period. As for the not involved population, the fear of failure decreased a 6% during the studied years, being stable even during the crisis years. In the whole of the involved population, the percentage of people that perceive the fear of failure as an obstacle to starting a business has halved in the studied period, from 72.1% in 2005 to 34.6% in 2017.

**Gender perspective** is also important because, traditionally, men have always started new businesses more than women. Given the complexity of entrepreneurship, Baron and Henry (2011) say that the individual reasons are important. One of the reasons studied is the way jobs are designed. Some women see entrepreneurship as the solution to the problems that exist in more traditional jobs, like for example the not so favourable working conditions or the conflicts between work and family (Sullivan & Meek, 2012). As for the working conditions, women who did not like their bosses and thought they could do a better management job had more probabilities of starting a new business (Zapalska, 1997). Another reason that makes women start their own businesses is the frustration of not moving up at work, owing to causes like the crystal ceiling (Buttner & Moore, 1997). Women have shown more preference for family reasons to start new businesses than men, especially when they have children (De Martino & Barbato, 2003).

Figure 4. Evolution of the perception of the fear of failure as an obstacle to starting a new business in the period 2005 to 2017

Source: GEM Spain Report 2017-2018.



As for **contact networks**, Greve and Salaff (2003) assure that both men and women trust their networks to debate ideas and activities useful for the identification of opportunities, although women rely in their families to identify opportunities more heavily than men. **Cultural values** help to the creation of stereotypes and gender roles in societies, which in turn end up making professions seem “masculine” or “feminine”, so individuals aspire to have jobs socially accepted for their gender, avoiding at the same time jobs who are linked with the opposite gender (Heilman, 1983). These gender stereotypes are not only descriptive (which remark differences between how women and men really are), but also prescriptive, because they remark how women and men “should” behave (Heilman, 2001). Entrepreneurship has always been dominated by men, which owned more businesses than women (Marlow, 2002). Table 1 shows the answer, divided by gender, of both the involved and not involved population to questions about the perception of entrepreneurship opportunities, the possession of knowledge and abilities, the fear of failure and about their contact networks. Men have higher percentages on the factors that stimulate entrepreneurship and lower percentages on the fear of failure, which blocks entrepreneurship. The lower difference between men and women is in the perception of having the necessary knowledge and abilities to start a new business (3%), while the highest differences are in the fear of failure (8% of difference in the involved population).

The entrepreneurial ecosystem is the economic and social environment that surrounds the entrepreneurship process, the “complexity and diversity of actors, roles and environmental factors that interact to determine the entrepreneurial performance of a region or city” (Spilling, 1996, p. 91). This environment help entrepreneurs grow in two different ways: firstly, the existence of a supportive culture in the system normalizes the entrepreneurial activities, increasing both the number of potential entrepreneurs and the number of people willing to take the risk of working, investing or otherwise supporting new entrepreneurial projects (Minguzzi & Passaro, 2001). Secondly, entrepreneurs obtain resources such as knowledge, investment and advice from experts, thus increasing the possibilities of survival and growth (Audretsch, Falck, & Heiblich, 2011). The regions’ culture plays an important role both in the will of entrepreneurs to take risks and start a business and in the will of investors, workers and mentors to work with them (Spigel, 2016).

## Analysis of Entrepreneurial Dynamics in Spain

Table 1. Perception of the Spanish population about their values and attitudes towards starting a new business, seen from a gender perspective, in 2017

% of population between 18 and 64 who perceives that...	Men involved in the process of starting a new business	Women involved in the process of starting a new business	Men not involved in the process of starting a new business	Women not involved in the process of starting a new business
There will be opportunities to start a new business on the next 6 months	46.7%	40.3%	33.5%	26.4%
They have the knowledge and abilities needed to start a new business	82.6%	79.4%	40.7%	37.8%
The fear of failure is an obstacle to starting a new business	31.3%	39.1%	42.1%	47.6%
Knows anyone that started a new business the year before	57.4%	50.4%	31.5%	28.1%

Source: Own elaboration, based on the GEM Spain Report 2017-2018.

The GEM has created an index to analyse the existing levels of **entrepreneurship support culture** in a specific economy, using the indicators we mentioned earlier. Figure 5 shows the data of the entrepreneurship support culture index for Spain in 2017 and its comparative with 2016. Related with culture, figures 6 and 7 show the evolution of the opinion that starting a new business is a good option in Spain and that starting a new business gives social and economic status in Spain, respectively. Figure 5 shows how the values of the index of entrepreneurship support culture haven't changed in one year: null support has increased a 0.1%, low support a 0.3% and medium support, the one who has increased the most from 2016 to 2017, a 1%. The percentage of high support decreased a 1.2%.

The opinion of Spaniards about the suitability of entrepreneurship as a job (figure 6) has been generally positive during the period that we studied, even during the crisis years and in both the individuals involved and not involved on the entrepreneurial process. Nevertheless, related to the social and economic status that entrepreneurship could or could not bring (figure 7), the situation is not the same: both the involved and the not involved population think alike, but this time in a negative sense. There was a 10% decrease in the opinion that entrepreneurship brings status among the involved population during the analysed years, and a 7.3% decrease among the not involved population. The not involved population maintained a more positive opinion during the years of crisis.

Apart from the GEM report, we think it is interesting to mention the South Summit, which is held every year in Madrid, which creates an Entrepreneurship Map with data that defines the profile of the Spanish entrepreneur. In the fifth edition of the Summit, held in 2018, 3200 projects of start-up businesses took part, 1252 of which participated in the study to create the profile of the Spanish entrepreneur in 2018. Some of the conclusions of said study are:

- Women surpassed for the first time the 20% ceiling, reaching 22% of the total entrepreneurs in Europe.
- Less than 2% of Spanish entrepreneurs were unemployed before beginning their start-up (55% of them were employed, 31% had started a business before, 3% had another type of employment and

9% were students). Almost half of the entrepreneurs are recurrent, a number which has remained stable in the last four years.

- 14% of entrepreneurs have launched two or more start-ups, and each start-up had an average of 2.5 founders.

Figure 5. Entrepreneurship support culture index in Spain, comparative 2016-2017

Source: GEM Spain Report 2017-2018.

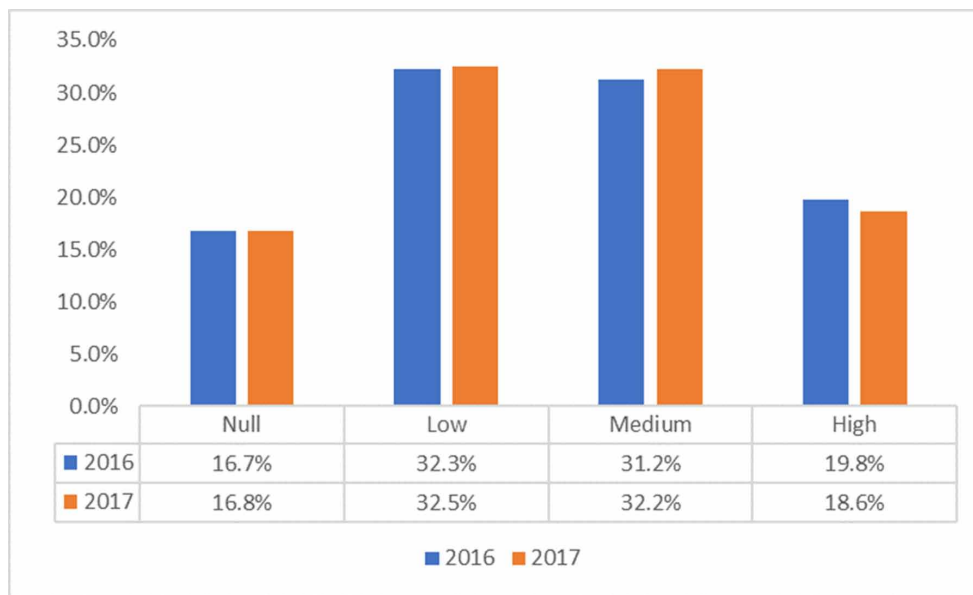
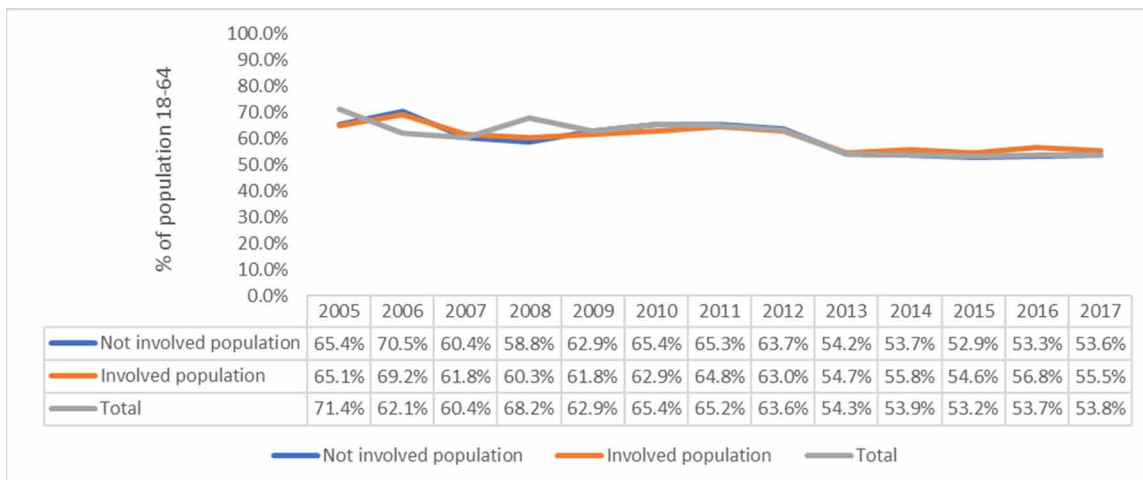


Figure 6. Percentage of people that think that starting a business is a good professional option in Spain, evolution 2005-2017

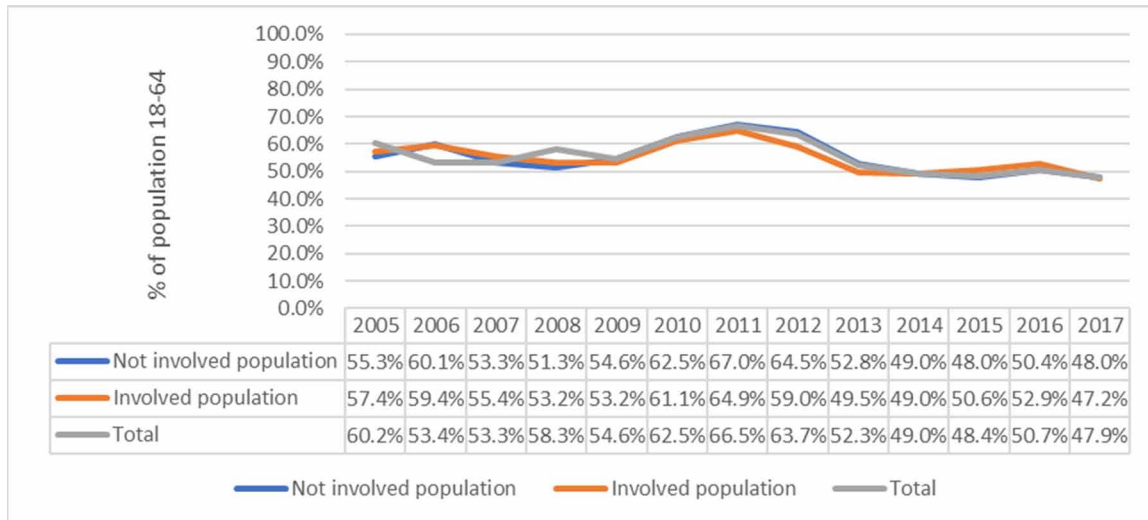
Source: GEM Spain Report 2017-2018.



## Analysis of Entrepreneurial Dynamics in Spain

Figure 7. Percentage of people that think that starting a new business brings economic and social status, evolution 2005-2017

Source: GEM Spain Report 2017-2018.



- 48% of the start-ups still exist, and 39% were sold. Tendency to fail decreases as the entrepreneur creates more start-ups.
- A person is an entrepreneur out of vocation, not of need. In Spain, a 61% of the total of entrepreneurs has always wanted to start a new business, 23% of them joined a project they believed in and the remaining 16% started a new business because they wanted to change their career.

As for start-ups, the 2018 Entrepreneurship Map established this profile:

- 72% of them are still on the seed phase (the product or service and its development are still being conceived) or in the initial phase (there is a product and a group of clients in the market, and the organization is starting to grow).
- 53% of them are between one and three years old, and 61% of them have between two and ten employees.
- Two from each seven had more than €150,000 of income in 2018.
- Start-ups are, on average, 2.33 years old.
- 17% of the start-ups had positive EBITDA in 2018, 3% more than the previous year.
- 38% of the start-ups create their products for other companies (in Spain, B2B commerce prevails), and a majority focuses in apps and services (21% of them).
- Spanish start-ups have an average of 7 employees, one more than 2017, and an 83% of them are looking for new workers.
- The most sought-after profiles are those of start-ups in marketing, sales and software development.
- Start-ups need more private financing. 60% of entrepreneurs use equities as the first source of financing, 25% is helped by friends and family, 11% use private funds, 3% use bank loans and 2% use crowdfunding.



- The sources of income for start-ups are diverse: e-commerce (17%), freemium (18%), licensing (19%) and the remaining 46% by other means.
- Start-ups look less for investment and more for strategic agreements (80% of the total).
- In 2018, Spanish start-ups were looking for strategic agreements and visibility (80% of the sample), investment (72%) or customers (64%). The start-ups were less interested in finding technological and management support, talent, and coworking spaces.
- Start-ups led by women have a lower failure index than those led by men (22 against 52%) and are focused mainly in the education sector.

After explaining the general aspects of entrepreneurship in Spain, we are going to study the role of CSR when starting a new business.

## **THE ROLE OF CORPORATE SOCIAL RESPONSIBILITY**

The modern idea of company adds concepts like CSR, by which the company becomes a social entity where stakeholders are the main objectives of the corporate strategy, so a company cannot be understood without its environment (de la Cuesta, 2004). During the 20<sup>th</sup> century and the start of the 21<sup>st</sup> century, there has been controversy among authors about whether CSR practices are needed in the organizations or not: while some authors, like Bowen (1953) or Porter and Kramer (2003) defended the union of economic and social values and the benefits that such an union has, other authors, like Hayek (1960) or Friedman (1970) defended that the only objective of a company is maximizing value for their shareholders. During the 20<sup>th</sup> century it was also discussed whether the social value was a priority, and whether it could be joined with economic value; a discussion which was started in 1971 by analysing the interaction between both concepts, taking into account that the function of the company is not only economic, but that it must also satisfy the needs of the stakeholders that surround it. In this more modern view of companies, they must add to their strategies the distribution of value not only to their shareholders, but also to all the stakeholders affected by its operations (Canyelles, 2011).

The start of the new millennium has brought radical change for all the societies of the world, and the role of international institutions like the OECD<sup>1</sup> or the UN<sup>2</sup> protecting society and the environment is growingly important (Escamilla-Solano, Plaza-Casado, & Flores-Ureba, 2016). At the same time, the impact of organizations and industries in natural resources and globalization has implied an exponential growth, in some cases in an unsustainable rhythm (Stiglitz, 2002), which has caused the introduction of ethical values in organizational strategies, and the development of activities with the aim of sustaining the environment (Senge & Carstedt, 2001).

The general aim of CSR is increasing the quality of life standards, and at the same time preserving the creation of profits for the people both in and outside the organization (Hopkins, 2003; Barin-Cruz, Boehe & Ogasavara, 2013). Even though many organizations fight to reach the objectives we mentioned earlier, the lack of integration between CSR activities and the systems of management of organizations is still remarkable (Ranagem, 2015). As Wesselink, Blok, van Leur, Lans and Dentoni (2015) assure, a lot of obstacles must be surpassed before the organizations can create an integral management system which really fulfils the objectives of all the stakeholders while also creating value. Other problems related with CSR are the identification of the real needs of society and the analysis of the value that the

## ***Analysis of Entrepreneurial Dynamics in Spain***

practices and projects can add to the people that need it (Anholon, Quelhas, Leal-Filho, de Souza-Pinto & Feher, 2016).

It is necessary to make a reference to the stakeholders who coexist inside organizations. Literature identifies four groups which have an influence in the application of CSR in organizations: the customers, buyers of the products or services that are offered by the organization (McWilliams & Siegel, 2001); the managers, as individuals who decide how the resources of the company are used (Jamali & Mirshak, 2007); the governments, which can encourage or coerce the organizations to apply CSR by laws or voluntary regulations (Steurer, 2010) and employees, because talent is an important determinant of competitive advantage (Rodrigo & Arenas, 2008).

The theoretical basis of the concept of CSR has developed in the framework of business ethics, as one of the most important areas of applied ethics (Carroll, 2008). The concept of CSR was initially based on two ideas: firstly, the vision of the activities of organizational structures from the point of view of corporate selfishness (organizations are only responsible of increasing the income of their shareholders by increasing the efficiency of their economic activity), and secondly, the understanding of the activities of the organization from the point of view of corporate altruism (companies must significantly contribute to the improvement of the quality of life of society, implementing environmental and social programmes) (D'Amato, Henderson & Florence, 2009).

One of the main aspects of CSR is the care of the environment that surrounds the organizations, so many companies are changing their processes to more sustainable ones (Hoogendoorn, Guerra, & Zwan, 2015). These authors made a study about why SMEs applied environmental practices, and the conclusions they achieved were the following:

1. The small businesses have more probability of having sustainable processes than micro businesses, even though the offer of products and services is independent of the size of the organization.
2. Companies with more than €100.000 of income have more probability of having sustainable production processes than those with lower income.
3. The commitment of SMEs with sustainable processes is bigger in tangible sectors.
4. The organizations that sell directly to consumers and those which sell to other companies have the same probability of having sustainable processes.

In relation to the emergence of CSR initiatives, Jenkins (2004) assures that there are three main reasons for said emergence:

1. **Government policies.** Governments can introduce detailed formal policies which rigorously define the requirements which companies must be compliant with, which causes that the CSR actions of the participants in the markets stay uniform.
2. **CSR infrastructure**, which promotes voluntary actions generally. Industrial associations or activists can create CSR frameworks and invite other companies to comply with their regulations (Wirth, Kulczycka, Hausner, & Konski, 2016). In the case of developed countries, CSR frameworks are usually proposed by international institutions (García-Rodríguez, García-Rodríguez, & Castilla-Gutiérrez, 2013).
3. The third source of initiatives is related with the organizations themselves: **the organizations decide which practices are the best taking their own interests into account** (Raufflet, Barin-Cruz, & Bres, 2014). CSR projects are generally the result of a long-term strategic plan, and they focus on

transforming threats into opportunities (Wirth et al., 2016). Organizations believe that, apart from direct social profit, the leaning towards the application of environmental and community developing strategies happened because of the link between CSR, the value of the shares and financial performance. Hilson (2012) offers five arguments which support this theory: A) consumers favour products and services produced by honest and socially responsible organizations; B) investors favour socially responsible organizations, and the socially irresponsible organizations must face much higher financial costs; C) socially responsible organizations attract better employees; D) getting involved with stakeholders has positive effects on innovation; and E) undertaking CSR projects decreases the potential risks derived of safety matters and of a negative environmental footprint.

After presenting the CSR strategy needed to start any business, we'll analyse the link between entrepreneurship and two of the CSR dimensions: environmental and social.

## **ENTREPRENEURSHIP AND THE ENVIRONMENT**

Sustainable development (SD) emerged as an influential yet controversial concept (Hall, Daneke, & Lenox, 2010). We are growingly conscious of the need of transforming the way society uses resources and produces energy if we want to mitigate problems like climate change or the deterioration of the environment. Linking entrepreneurship with environment protection is a very important necessity. Using Venkataraman's (1997) definition of entrepreneurship as a base, Dean and McMullen (2007, p. 58) define both environmental entrepreneurship as "the process of discovering, evaluating and exploiting economic opportunities that are present in environmentally relevant market failures", and sustainable entrepreneurship as "the process of discovering, evaluating and exploiting economic opportunities that are present in market failures which detract from sustainability, including those that are environmentally relevant".

CSR is a multi-faceted concept that has its roots in the principles of sustainable development (Xia *et al.*, 2018), which refer to the capacity to meet the needs of present generations without compromising the ability of future ones to meet their own needs (WCED, 1987). CSR translates the principles into self-regulations that are related to social and environmental aspects, which constitute the cornerstones of CSR's integration within business operations, as is clearly stated by the European Commission's definition of CSR (European Commission, 2001). By adopting such principles, companies have started to assume responsibilities towards their social and natural environments (Anbarasan, 2018) and to integrate them within their economic activities, creating the two archetypical CSR domains (Contini *et al.*, 2020): The first is the social CSR domain, which refers to the establishment of responsible relationships and behaviours with employees, local communities, suppliers, NGOs and with all the relevant actors that fully account for the impact of a company in society. The second is the environmental CSR domain, which refers to the protection of the natural environment and to the establishment of relationships with bodies in charge of the protection and conservation of ecological systems.

Environmental entrepreneurship is closer to the environmental dimension of CSR than the purely altruist or ethical vision of responsibility, which consists in the demonstration of responsible creativity achieved by an equal and achievable development, by means of the integration of human and natural resources in business (Spence, Gherib, & Biwole, 2011). Sustainable entrepreneurs can act as catalysts in the transition to sustainability of the economy and can take the place of both businesses and the government creating critically important social and environmental goods (Iyigün, 2015).

## ***Analysis of Entrepreneurial Dynamics in Spain***

Sustainable development implies that renewable resources should be used whenever possible, and that non-renewable resources must be used frugally for them to be able to be used by future generations (Hall et al., 2010). Research in the field of entrepreneurship and natural environment has principally used an economic point of view to explain the emergence of entrepreneurial opportunities (Anderson & Huggins, 2008; Larson, 2000). Although that theoretical base gives a good framework for entrepreneurship from an economic point of view, it gives few information about the impact context has in the decision of an environmental entrepreneur to take advantage of an entrepreneurial opportunity (Meek, Pacheco, & York, 2010).

Corporate environmental responsibility is a very important part of CSR (Karassin & Bar-Haim, 2016), and it is a factor that can improve the performance of organizations due to the constantly increasing environmental preferences of the stakeholders (Jo, Song & Tsang, 2015). Empiric evidence demonstrates that CSR can significantly increase the long-term value of the organization (Mahoney & Thome, 2005), decrease the capital cost (Sharfman & Fernando, 2008) and promote stability (Wahba, 2008). Nevertheless, there is evidence which proves that managers can use CSR to serve their own interest, for example, to improve their personal reputation, thus preventing environmental responsibility from improving the organization's performance (Miles & Covin, 2000).

The traditional literature of environmental economics and of the welfare state concludes that market failures not only prevent entrepreneurial action from solving environmental problems, but it also motivates entrepreneurial behaviours which are harmful for the environment (Dorfman, 1993; Tietenberg, 2000). Owing to the unique characteristics of many environmental resources, there are some obstacles that prevent their efficient assignation on the market; and therefore, entrepreneurial action will not protect valuable environmental resources (Dorfman, 1993).

From a practical point of view, these assertions have led to policies that focus in regulatory interventions, which have created a general lack of knowledge about how entrepreneurs can help to solve environmental problems (Dorfman, 1993). The environmental economy reaches the conclusion that environmental degradation is derived from market failures, and entrepreneurship literature concludes that opportunities are inherent to market failures, so the logical conclusion is that environmentally relevant market failures, represent opportunities both to make profit and to reduce environmentally degrading behaviours at the same time (Dean & McMullen, 2007). Companies must modify their business models, including the proposal of value (their offer of products and services), creation and distribution (partners and activities) and the capture of value (costs and income sources); all these must include the worries of stakeholders, and the environment and society must be taken into account as fundamental stakeholders to face global problems (Bocken, Morgan, & Evans, 2013). The organizations that manage to take care of their natural and social capital will have competitive advantage in the next decades, so environmental sustainability can also be an opportunity for business (Russo, 2003).

Research on innovation and corporate sustainability has focused on big companies because they are the ones which have the administrative systems and motivations to report about their sustainable practices (Bos-Brouwers, 2010). Start-ups have a fundamental role in the creation of sustainable organizations, because the initial phases of a business determine the model to be followed, the strategy and the offer of products and services. Decisions made in the first phases of the business determine a great part of their environmental impact (Bocken, Farracho, Bosworth, & Kemp, 2014). Sustainable organizations try to achieve the equilibrium of the Triple Bottom Line (TBL): they balance good economic health, social equality and environmental resilience via their business behaviour (Kuckertz & Wagner, 2010). Sustainable businesses can find opportunities in the innovation of sustainable business models and in new

financing technologies and platforms, as well as developing their business models so that the company can succeed more than with their “green” customer base only (Bocken, 2015). The concept of sustainable business model is based in the business model concept defined earlier; nevertheless, sustainable business models include the conscience of negative effects in the environment and of social externalities, as well as the desire to solve them (Teece, 2010). In sustainable business models, sustainability implies that the value must be created at the same time as measures that solve the economic, environmental and social problems are applied (Elkington, 1997; Bansal, 2002; Stubbs & Cocklin, 2008).

## **Entrepreneurship and the Social Dimension**

There are a lot of definitions of social entrepreneurship, but they all agree in the combination of entrepreneurship and social mission (Alvord, Brown, & Letts, 2004; Mair & Martí, 2009; Santos, 2012; Azmat, Ferdous, & Couchman, 2015). For some, social entrepreneurship focuses in the creation of income while trying to get social benefits (Dart, 2004), and others have a more progressive vision of social entrepreneurs as agents of change in the social sector (Dees, 2001). The social entrepreneur has unique characteristics that a non-entrepreneur person does not have, like knowledge, cognitive abilities and altruist values (Dacin, Dacin, & Tracey, 2011).

The traditional theories that explain the creation of not for profit organizations explain that when the State is unable to provide either enough goods or with the needed quality to its citizens, and when the capitalist markets are unable to manufacture them, those type of companies appear. These theories would explain the emergence of not for profit organizations, especially in the education and health sectors, among others (Ben-Ner, 1986). More recently, Bryce (2006) proposed a new paradigm in which not for profit organizations have a fundamental role in the management of some specific public goods and services, and a big influence on the application of public policies. The base of this paradigm is that not for profit organizations are created by a rational decision of a group of people with common interests. Personal economic profit is not the reason for its creation, but rather the increase of utility of other kinds of social value, of a more altruist nature. These organizations give citizens the power to influence decisions about the use, preservation and assignation of public resources, and so the social and solidary economy is born (Díaz Fonca & Marcuello, 2012). Defourny and Nyssens (2008, p. 5) define social enterprises as “private not for profit organizations that create goods or services directly related to their explicit aim of benefitting the community. They are based in collective dynamics which imply different stakeholders in their governing bodies, give a lot of importance to their autonomy and take economic risks related with their activity”.

Although the main objective of the social entrepreneur is to increase the wellbeing of others, it is expected that social entrepreneurs will improve their own personal wellbeing due to the improvement of the wellbeing of others (Andreoni, 1990; Mair & Martí, 2006; Bacq & Alt, 2018). The importance it has for individuals to provide wellbeing to others is known as **prosocial attitude**, which is a general construct formed by a variety of attitudes and feelings like altruism, empathy, morality, care, compassion, guilt, self-esteem or personal satisfaction (Zahra, Gedaljovic, Neubaum, & Shulman, 2009; Bacq & Alt, 2018). On the other hand, the **motivation to innovate** is also an important part of social entrepreneurship (Phillips, Lee, Ghobadian, O’Regan, & James, 2015), because products, services and/or the innovative process of manufacturing and distribution can be needed to solve both government problems and market failures (Santos, 2012), which cause social problems to continue existing. Innovation is a

potential solution for government problems and market failures when it is a source of more income and/or of costs saving (Douglas & Prentice, 2019).

The convergence of political, economic and social pressures is causing different sectors of society to cooperate (Austin, 2000). The alliances between different sectors of businesses and social organizations happen with the clear aim of solving social problems actively (Selsky & Parker, 2005). This cooperation has increased in recent years: in 2009, the United Nations Office for Partnerships (UNOP) financed 500 projects with a total value of \$1 billion (UNOP, 2009). As a type of alliance between different sectors, social alliances are voluntary cooperation between businesses and social organizations, and they emerge as tools to face complex social problems which are difficult to face for companies alone (Waddock, 1991). The difference from other alliances is that their aims are not economic, they focus on increasing social wellness instead (Berger, Cunningham, & Drumwright, 2004). The social involvement of the organization by this collaboration gives the chance and the mean to achieve a good corporate social performance (Sakarya, Bodur, Yildirim Öktem, & Selekler, 2012).

The internal moral obstacles, the Industrial Revolution and the decline of the welfare state have affected the way the companies got socially implied during the years. In parallel, the social implication of organizations changed from philanthropy to CSR, which is growingly used as social investment (Porter & Kramer, 2002). Even though the only responsibility of organizations for a long time has been providing the positive economic profit demanded by shareholders, nowadays it is expected that they provide a range of benefits with value for all stakeholders (Freeman, 1984; Smith, 2007). When designing their strategies to survive and be successful, companies should also interact with the components of their surroundings that are outside of the markets: the general public, stakeholders, governments, media and public bodies (Hemphill, 2005; Baron, 2010). The incorporation of the social aspect to corporate strategy is being boosted when the conscience of the need of integrating corporate strategies with policies of social responsibility increases (Berger et al., 2004).

As we have shown, the link between entrepreneurship and CSR is evident, needed and compulsory to be made.

It is also worth noting, that there has been a long-standing interest among researchers to understand whether CSR activities increase, diminish or have no impact at all in firm performance. Good CSR practices should, in principle, align with good overall governance, which is a key component of a strong and sustainable business model. However, good CSR also comes at a cost, because the organizations need to engage in new activities to build and maintain their image, some of which could only have intangible returns. If CSR expenses are material and its returns intangible, investors and stakeholders may have problems to appraise the long-term value proposition (Broadstock et al., 2019).

## **CONCLUSIONS**

Entrepreneurship in Spain has some important characteristics. Firstly, the **entrepreneurial activity index** has recovered after the crisis, in all age ranges except from 55 to 64 years old, that is, the older part of the population is less likely to create a new business venture. It is also worth noting that the **perception of the opportunities to start a new business** is linked to the economic cycles (in crisis there are less opportunities to start new businesses) and to previous experience (when an individual has started a new business at least once, he or she can see opportunities that other people cannot see), and that the involved population perceives they have more knowledge (the people that have already started a new business

have a previous experience that those who have not ever started a new business do not have). Although having previous experience is important to get new opportunities for business, the economic cycles are key when deciding whether to start a new business or not.

As for **risk tolerance**, it is lower in women. They have more fear of failure, and so they start fewer new businesses than men because they are less prone to risk their personal finances. For women, starting a new business is the solution for problems like precarious conditions or labour disputes. New business opportunities are born of frustration with their bosses and the belief that they can do better. As for **economic results and innovation**, they are more important for men than for women, who value independency more. It is also worth highlighting that meeting people and forming **contact networks** is important for both genders. **Entrepreneurship culture** is highly supported in Spain, and there is a generally positive opinion of **entrepreneurship as a professional option**. Nevertheless, there is a generally negative opinion about whether **entrepreneurship gives social and economic status**.

The exponential growth of world economies has reached unsustainable heights, which have caused ethical values and sustainable practices being part of organizational strategies. These values and practices in modern organizations help to create value not only for shareholders but also for all the stakeholders, both inside (customers, managers, governments and employees) and outside the organization (local communities, environmentalist groups and even society in general). CSR initiatives emerge because of three main reasons: governmental policies, CSR infrastructure (voluntary actions) and because of the decisions of the organizations following their interests (as a part of the strategic long-term plan for transforming threats into opportunities).

The main issue organizations face, no matter how big, is achieving sustainable development and the integration between CSR activities and their management systems. To achieve that goal, a lot of obstacles must be surpassed before the organizations can create an integral management system which really fulfils the objectives of stakeholders while also creating value. Other problems related with CSR are identifying the real needs of society and analysing the value that CSR projects and actions can add to the people that need them.

Sustainable development implies that renewable resources should be used whenever possible, and non-renewable resources frugally for them to be able to be used by future generations. The research in the field has principally used an economic point of view, so it gives few information about the impact context has in the decision of an environmental entrepreneur to take advantage of an entrepreneurial opportunity. The traditional literature of environmental economics concludes that market failures not only prevent entrepreneurial action from solving environmental problems, but it also motivates entrepreneurial behaviours which are harmful to the environment. Owing to their characteristics, there are some obstacles that prevent the efficient assignation of environmental resources on the market. These assertions have led to regulatory policy intervention, which have created a lack of knowledge about how entrepreneurs can help solve environmental problems.

The TBL perspective has gained awareness since it was created by Elkington in 1997, and the concept is explicitly based in the idea of integrating the three dimensions of the organization (economic, social and environmental). The theoretical concept of economic capital should be broadened to incorporate the social and environmental capitals, which must also be protected.

We consider that the stakeholder theory identifies the creation of value as one of the main reasons of existence of enterprises, but it adds that this value must be shared by a group of stakeholders which must include not only shareholders, but also all the members of society who are interesting in the good working of the company. Profits are fundamental for the survival of the organization, but they are only

## ***Analysis of Entrepreneurial Dynamics in Spain***

one of the multiple results of the process of creating value. The legitimacy that the organizations want to obtain by applying CSR practices is given to them by the stakeholders depending on how they have developed said practices, because everyone of the, is a message that is used to externally evaluate the organization.

We finally consider that the characteristics of the social entrepreneur have been defined and analysed, and that he or she is characterized by a group of unique and specific traits, for his or her will to add CSR to his or her practices and to get a certain economic performance while doing so.

## **FUTURE RESEARCH DIRECTIONS**

This study is a contribution to entrepreneurship, corporate social responsibility and stakeholder literature, both from an academic as well as from an organizational management point of view. After doing a complete review of the literature some future research lines open. Our contribution shows the need of linking the entrepreneurial activity with the perspective of CSR, and it can be done with a broader vision than the one on this study. From that point on, some different research lines can be analysed. Firstly, an in-depth bibliometric study with the help of any software that can help us take advantage of the sample of papers analysed, and a structured review of bibliography. Secondly, it would be interesting to analyse the studied link with a sample of organizations and to observe whether the entrepreneurs have the attributes that have been identified in this study. Thirdly, some case studies could be done to learn first-hand the will and attitudes of businesspeople towards CSR when they start their activity. Fourthly, it would be interesting to analyse the studied situation in another regional context, both in and outside of Spain, to observe the convergence or divergence of the entrepreneurial perspective. And lastly, it should be noted that this study could be applied to any region in the world and for any type of organization. It is useful to learn the motives why entrepreneurs decide to start a new business and which factors affect them, existing even the possibility of empirically establishing the differences between the entrepreneurship culture of each region that is analysed.

## **REFERENCES**

- Ahl, H. (2006). Why research on women entrepreneurs needs new directions. *Entrepreneurship Theory and Practice*, 30(5), 592–621. doi:10.1111/j.1540-6520.2006.00138.x
- Alvord, S. H., Brown, L. D., & Letts, C. W. (2004). Social entrepreneurship and societal transformation: An exploratory study. *The Journal of Applied Behavioral Science*, 40(3), 260–282. doi:10.1177/0021886304266847
- Anbarasan, P., & Sushil. (2018). Stakeholder engagement in sustainable enterprise: Evolving a conceptual framework and a case study of ITC. *Business Strategy and the Environment*, 27(3), 282–299. doi:10.1002/bse.1999
- Anderson, T., & Huggins, L. (2008). *Greener than Thou: Are You Really an Environmentalist?* Hoover Institution Press.



- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm glow giving. *Economic Journal (London)*, 401(100), 464–477. doi:10.2307/2234133
- Anholon, R., Quelhas, O. L. G., Leal Filho, W., de Souza Pinto, J., & Feher, A. (2016). Assessing corporate social responsibility concepts used by a Brazilian manufacturer of airplanes: A case study at Embraer. *Journal of Cleaner Production*, 135, 740–749. doi:10.1016/j.jclepro.2016.06.169
- Audretsch, D. B., Falck, O., & Heblich, S. (2011). *Handbook of Research on Innovation and Entrepreneurship*. Chentelham: Edward Elgar Publishing. doi:10.4337/9781849807760
- Austin, J.E. (2000). Strategic collaboration between non-profits and businesses. *Non-profit and Voluntary Sector Quarterly*, 29 (supplement to issue 1), 69-97.
- Azmat, F., Ferdous, A. S., & Couchman, P. (2015). Understanding the dynamics between social entrepreneurship and inclusive growth in subsistence marketplaces. *Journal of Public Policy & Marketing*, 34(2), 252–271. doi:10.1509/jppm.14.150
- Bacq, S., & Alt, E. (2018). Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing*, 33(3), 333–350. doi:10.1016/j.jbusvent.2018.01.004
- Bansal, P. (2002). The corporate challenges of sustainable development. *The Academy of Management Perspectives*, 16(2), 122–131. doi:10.5465/ame.2002.7173572
- Barin-Cruz, L., Boehe, D. M., & Ogasavara, M. H. (2013). CSR-based differentiation strategy of export firms from developing countries: An exploratory study of the strategy tripod. *Business & Society*, 54(6), 723–762. doi:10.1177/0007650312473728
- Baron, D. (2010). *Business and its environment*. Prentice Hall.
- Baron, R. A., & Henry, R. A. (2011). Entrepreneurship: The genesis of organizations. In *Handbook of industrial and organizational psychology, Vol. 1: building and developing the organization*. American Psychological Association.
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behaviour: A measure and correlates. *Journal of Organizational Behavior*, 14(2), 103–118. doi:10.1002/job.4030140202
- Bechar, J. P., & Toulouse, J. M. (1998). Validation of a didactic model for the analysis of training objectives in entrepreneurship. *Journal of Business Venturing*, 13(4), 317–332. doi:10.1016/S0883-9026(98)80006-2
- Ben-Ner, A. (1986). Non-profit organizations: Why do they exist in market economies. The economics of non-profit institutions. *Studies in Structure and Policy*, 1, 94–113.
- Berger, I. E., Cunningham, P. H., & Drumwright, M. E. (2004). Social alliances: Company/non-profit collaboration. *California Management Review*, 47(1), 58–90. doi:10.2307/41166287
- Bocken, N. (2015). Sustainable venture capital–catalyst for sustainable start-up success? *Journal of Cleaner Production*, 108, 647–658. doi:10.1016/j.jclepro.2015.05.079

## ***Analysis of Entrepreneurial Dynamics in Spain***

- Bocken, N., Farracho, M., Bosworth, R., & Kemp, R. (2014). The front-end of eco-innovation for eco-innovative small and medium sized companies. *Journal of Engineering and Technology Management*, 31, 43–57. doi:10.1016/j.jengtecman.2013.10.004
- Bocken, N., Morgan, D., & Evans, S. (2013). Understanding environmental performance variation in manufacturing companies. *International Journal of Productivity and Performance Management*, 62(8), 856–870. doi:10.1108/IJPPM-03-2013-0042
- Bos-Brouwers, H. E. J. (2010). *Sustainable innovation processes within small and medium-sized enterprises*. University of Amsterdam.
- Bowen, H. R. (1953). *Social responsibility of the businessman*. Harper & Row.
- Broadstock, D. C., Matousek, R., Meyer, M., & Tzeremes, N. G. (2019). Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *Journal of Business Research*. Advance online publication. doi:10.1016/j.jbusres.2019.07.014
- Bryce, H. J. (2006). Non-profits as social capital and agents in the public policy process: Toward a new paradigm. *Nonprofit and Voluntary Sector Quarterly*, 35(2), 311–318. doi:10.1177/0899764005283023
- Buttner, E. H., & Moore, D. P. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations and correlates with success. *Journal of Small Business Management*, 35, 34–46.
- Canyelles, J. M. (2011). Responsabilidad Social de las administraciones públicas. *Revista de Contabilidad y Dirección*, 13, 77–104.
- Carroll, A. (2008). Corporate social responsibility (CSR) and corporate social performance (CSP). In A. Carroll (Ed.), *Encyclopaedia of business ethics and society*. Sage. doi:10.4135/9781412956260.n206
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, 38(1), 33–53. doi:10.1111/1540-6288.00034
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29–49. doi:10.1016/j.jbusvent.2004.12.001
- Contini, M., Annunziata, E., Rizzi, F., & Frey, M. (2020). Exploring the influence of Corporate Social Responsibility (CSR) domains on consumers' loyalty: An Experiment in BRICS countries. *Journal of Cleaner Production*, 247, 1–10. doi:10.1016/j.jclepro.2019.119158
- D'Amato, A., Henderson, S., & Florence, S. (2009). *Corporate social responsibility and sustainable business: A guide to leadership tasks and functions*. Centre for Creative Leadership.
- Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social entrepreneurship: A critique and future directions. *Organization Science*, 22(5), 1203–1213. doi:10.1287/orsc.1100.0620
- Dart, R. (2004). The legitimacy of social enterprise. *Nonprofit Management & Leadership*, 14(4), 411–424. doi:10.1002/nml.43
- De la Cuesta González, M. (2004). El porqué de la responsabilidad social corporativa. *Boletín Económico del ICE*, 2813, 45–58.

- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76. doi:10.1016/j.jbusvent.2005.09.003
- Dees, J. G. (2001). *The meanings of 'social entrepreneurship'*. University of Stanford.
- Defourny, J., & Nyssens, M. (2008). Social enterprise in Europe: Recent trends and developments. *Social Enterprise Journal*, 4(3), 202–228. doi:10.1108/17508610810922703
- DeMartino, R., & Barbato, R. (2003). Differences between women and men MBA entrepreneurs: Exploring family flexibility and wealth creation as career motivators. *Journal of Business Venturing*, 18(6), 815–832. doi:10.1016/S0883-9026(03)00003-X
- DeMartino, R., Barbato, R., & Jacques, P. H. (2006). Exploring the career/achievement and personal life orientation differences between entrepreneurs and non-entrepreneurs: The impact of sex and dependents. *Journal of Small Business Management*, 44(3), 350–368. doi:10.1111/j.1540-627X.2006.00176.x
- Díaz Foncea, M., & Marcuello, C. (2012). Social enterprises and social markets: Models and new trends. *Service Business*, 6(1), 61–83. doi:10.1007/11628-011-0132-8
- Dorfman, R. (1993). Some concepts from welfare economics. In R. Dorfman & N. S. Dorfman (Eds.), *Economics of the Environment: Selected Readings* (pp. 79–96). W. W. Norton.
- Douglas, E., & Prentice, C. (2019). Innovations and profit motivations for social entrepreneurship: A fuzzy-set analysis. *Journal of Business Research*, 99, 69–79. doi:10.1016/j.jbusres.2019.02.031
- Elkington, J. (1997). *Cannibals with Forks. The Triple Bottom Line of 21st Century Business*. Capston Publishing Ltd.
- Escamilla Solano, S., Plaza Casado, P., & Flores Ureba, S. (2016). Análisis de la divulgación de la información sobre la responsabilidad social corporativa en las empresas de transporte público urbano en España. *Revista de Contabilidad*, 19(2), 195–203. doi:10.1016/j.rcsar.2015.05.002
- European Commission Directorate-General for Employment. (2001). *Promoting a European Framework for Corporate Social Responsibility: Green Paper*. Office for Official Publications of the European Communities.
- Fauchart, E., & Gruber, M. (2011). Darwinians, communitarians, and missionaries: The role of founder identity in entrepreneurship. *Academy of Management Journal*, 54(5), 935–957. doi:10.5465/amj.2009.0211
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman Publishing.
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine*, 122-126.
- García Rodríguez, F. J., García Rodríguez, J. L., Castilla Gutiérrez, C., & Major, S. A. (2013). Corporate social responsibility of oil companies in developing countries: From altruism to business strategy. *Corporate Social Responsibility and Environmental Management*, 20(6), 371–384. doi:10.1002/csr.1320
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28(1), 1–22. doi:10.1111/1540-8520.00029

## ***Analysis of Entrepreneurial Dynamics in Spain***

Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, 25(5), 439–448. doi:10.1016/j.jbusvent.2010.01.002

Hayek, F. A. (1960). *The Constitution of Liberty*. The University of Chicago Press.

Heilman, M. E. (1983). Sex bias in work settings: The lack of fit model. *Research in Organizational Behavior*, 5, 269–298.

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *The Journal of Social Issues*, 57(4), 657–674. doi:10.1111/0022-4537.00234

Hemphill, T. A. (2005). National technology entrepreneurship policy: Foundation of a network economy. *Science & Public Policy*, 32(6), 469–478. doi:10.3152/147154305781779254

Hilson, G. (2012). Corporate Social Responsibility in the extractive industries: Experiences from developing countries. *Resources Policy*, 37(2), 131–137. doi:10.1016/j.resourpol.2012.01.002

Hoogendoorn, B., Guerra, D., & Zwan, P. (2015). What drives environmental practices of SMEs? *Small Business Economics*, 44(4), 759–781. doi:10.1007/11187-014-9618-9

Hopkins, M. (2003). *The Planetary Bargain - Corporate Social Responsibility Matters*. Earthscan.

İyigün, N. O. (2015). What could entrepreneurship do for sustainable development? A corporate social responsibility-based approach. *Procedia: Social and Behavioral Sciences*, 195, 1226–1231. doi:10.1016/j.sbspro.2015.06.253

Jamali, D., & Mirshak, R. (2007). Corporate social responsibility (CSR): Theory and practice in a developing country context. *Journal of Business Ethics*, 72(3), 243–262. doi:10.1007/10551-006-9168-4

Jenkins, H. (2004). A critique of conventional CSR theory: An SME perspective. *Journal of General Management*, 29(4), 37–57. doi:10.1177/030630700402900403

Jo, H., Song, M. H., & Tsang, A. (2015). Corporate social responsibility and stakeholder governance around the world. *Global Finance Journal*, 27, 18–45. doi:10.1016/j.gfj.2015.05.001

Karassin, O., & Bar-Haim, A. (2016). Multilevel corporate environmental responsibility. *Journal of Environmental Management*, 183, 110–120. doi:10.1016/j.jenvman.2016.08.051 PMID:27595527

Kirby, D. A. (2004). Entrepreneurship education: Can business schools meet the challenge? *Education + Training*, 46(8), 510–519. doi:10.1108/00400910410569632

Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions - Investigating the role of business experience. *Journal of Business Venturing*, 25(5), 524–539. doi:10.1016/j.jbusvent.2009.09.001

Larson, A. (2000). Sustainable innovation through an entrepreneurship lens. *Business Strategy and the Environment*, 9(5), 304–307. doi:10.1002/1099-0836(200009/10)9:5<304::AID-BSE255>3.0.CO;2-O

Lubis, R. L. (2014). Students' entrepreneurial strategy: Connecting minds? *The International Journal of the Arts in Society*, 7(3), 545–568.

- Mahoney, L. S., & Thorne, L. (2005). Corporate social responsibility and long-term compensation: Evidence from Canada. *Journal of Business Ethics*, 57(3), 241–253. doi:10.1007/10551-004-5367-z
- Mair, J., & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, 41(1), 36–44. doi:10.1016/j.jwb.2005.09.002
- Mair, J., & Marti, I. (2009). Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of Business Venturing*, 24(5), 419–435. doi:10.1016/j.jbusvent.2008.04.006
- Mani, M. (2015). Entrepreneurship Education: A students' perspective. *International Journal of Entrepreneurship and Innovation*, 5(1), 1–14. doi:10.4018/ijeei.2015010101
- Marlow, S. (2002). Women and self-employment: A part of or apart from theoretical construct? *International Journal of Entrepreneurship and Innovation*, 3(2), 83–91. doi:10.5367/000000002101299088
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127. doi:10.5465/amr.2001.4011987
- Meek, W. R., Pacheco, D. F., & York, J. G. (2010). The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context. *Journal of Business Venturing*, 25(5), 493–509. doi:10.1016/j.jbusvent.2009.09.007
- Miles, M. P., & Covin, J. G. (2000). Environmental marketing: A source of reputational, competitive, and financial advantage. *Journal of Business Ethics*, 23(3), 299–311. doi:10.1023/A:1006214509281
- Minguzzi, A., & Passaro, R. (2001). The network of relationships between the economic environment and the entrepreneurial culture in small firms. *Journal of Business Venturing*, 16(2), 181–207. doi:10.1016/S0883-9026(99)00045-2
- Parasuraman, S., & Simmers, C. A. (2001). Type of employment, work–family conflict and well-being: A comparative study. *Journal of Organizational Behavior*, 22(5), 551–568. doi:10.1002/job.102
- Petridou, E., Sarri, A., & Kyrgidou, L. P. (2009). Entrepreneurship education in higher educational institutions: The gender dimension. *Gender in Management*, 24(4), 286–309. doi:10.1108/17542410910961569
- Phillips, W., Lee, H., Ghobadian, A., O'Regan, N., & James, P. (2015). Social innovation and social entrepreneurship: A systematic review. *Group & Organization Management*, 40(3), 428–461. doi:10.1177/1059601114560063
- Porter, M. E., & Kramer, M. R. (2002). The competitive advantage of corporate philanthropy. *Harvard Business Review*, 80(12), 56–69. PMID:12510538
- Porter, M.E., & Kramer, M.R. (2003). *Corporate philanthropy: Taking the high ground*. Foundation Strategy Group, document n° 13.
- Ranagem, H. (2015). Stakeholder management in reality: Moving from conceptual frameworks to operational strategies and interactions. *Sustainable Production and Consumption*, 3, 21–33. doi:10.1016/j.spc.2015.07.008

### ***Analysis of Entrepreneurial Dynamics in Spain***

- Raufflet, E., Cruz, L. B., & Bres, L. (2014). An assessment of corporate social responsibility practices in the mining and oil and gas industries. *Journal of Cleaner Production*, 84, 256–270. doi:10.1016/j.jclepro.2014.01.077
- Rebernik, M., Tominc, P., Crnogaj, K., Bradač Hojnik, B., Rus, M., & Širec, K. (2018). *The growth of entrepreneurial aspirations*. University of Maribor Press.
- Rebernik, M., Tominc, P., Crnogaj, K., Širec, K., Bradač Hojnik, B., & Rus, M. (2016). *Entrepreneurship between opportunity and necessity: GEM Slovenia 2015*. University of Maribor Press.
- Rodrigo, P., & Arenas, D. (2008). Do employees care about CSR programs? A typology of employees according to their attitudes. *Journal of Business Ethics*, 83(2), 265–283. doi:10.1007/10551-007-9618-7
- Russo, M. V. (2003). The emergence of sustainable industries: Building on natural capital. *Strategic Management Journal*, 24(4), 317–331. doi:10.1002/mj.298
- Sakarya, S., Bodur, M., Yildirim Öktem, Ö., & Selekler Göksen, N. (2012). Social alliances: Business and social enterprise collaboration for social transformation. *Journal of Business Research*, 65(12), 1710–1720. doi:10.1016/j.jbusres.2012.02.012
- Santos, F. M. (2012). A positive theory of social entrepreneurship. *Journal of Business Ethics*, 111(3), 335–351. doi:10.1007/10551-012-1413-4
- Selsky, J. W., & Parker, B. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of Management*, 31(6), 849–873. doi:10.1177/0149206305279601
- Senge, P. M., & Carstedt, G. (2001). Innovating our way to the next industrial revolution. *MIT Sloan Management Review*, 42(2), 24–38.
- Sharfman, M. P., & Fernando, C. S. (2008). Environmental risk management and the cost of capital. *Strategic Management Journal*, 29(6), 569–592. doi:10.1002/mj.678
- Shinnar, R. S., Giacomini, O., & Janssen, F. (2012). Entrepreneurial perceptions and intentions: The role of gender and culture. *Entrepreneurship Theory and Practice*, 36(3), 465–493. doi:10.1111/j.1540-6520.2012.00509.x
- Smith, A. D. (2007). Making the case for competitive advantage of corporate social responsibility. *Business Strategy Series*, 3(3), 186–195. doi:10.1108/17515630710684187
- Solomon, G. (1989). Youth: Tomorrow's entrepreneurs. *International Council of Small Businesses Bulletin*, 26(5), 1–2.
- Spence, M., Gherib, J. B. B., & Biwole, V. O. (2011). Sustainable entrepreneurship: Is entrepreneurial will enough? A North-South Comparison. *Journal of Business Ethics*, 99(3), 335–367. doi:10.1007/10551-010-0656-1
- Spigel, B. (2016). Developing and governing entrepreneurial ecosystems: The structure of entrepreneurial support programs in Edinburgh, Scotland. *International Journal of Innovative Research and Development*, 7(2), 141–160. doi:10.1504/IJIRD.2016.077889

- Spilling, O. R. (1996). Regional variation of new firm formation: The Norwegian case. *Entrepreneurship and Regional Development*, 8(3), 217–244. doi:10.1080/08985629600000014
- Steurer, R. (2010). *The Role of Governments in Corporate Social Responsibility: Characterising Public Policies on CSR in Europe*. Institute of Forest, Environmental and Natural Resource Policy.
- Stiglitz, J. E. (2002). *Globalization and its Discontents*. W.W. Norton.
- Stubbs, W., & Cocklin, C. (2008). Conceptualizing a ‘Sustainability business model’. *Organization & Environment*, 21(2), 103–127. doi:10.1177/1086026608318042
- Sullivan, D. M., & Meek, W. R. (2012). Gender and entrepreneurship: A review and process model. *Journal of Managerial Psychology*, 27(5), 428–458. doi:10.1108/02683941211235373
- Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172–194. doi:10.1016/j.lrp.2009.07.003
- Tietenberg, T.H. (2000). *Environmental and Natural Resource Economics*. Addison Wesley Longman.
- Tominc, P. (2019). Perceived innovativeness and competitiveness of early-stage entrepreneurs. *Croatian Economic Survey*, 21(1), 87–108. doi:10.15179/ces.21.1.3
- UNOP, United Nations Office for Partnerships. (2009). *Yearly report about the United Nations Office for Partnerships*. Data obtained from <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N09/370/02/pdf/N0937002.pdf?OpenElement>
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. In J. A. Katz & R. H. Brockhaus (Eds.), *Advances in entrepreneurship, firm emergence and growth* (pp. 119–138). JAI Press.
- Waddock, S. A. (1991). A typology of social partnership organizations. *Administration & Society*, 22(4), 480–515. doi:10.1177/009539979102200405
- Wagner, I. (2007). What a difference a Y makes - female and male nascent entrepreneurs in Germany. *Small Business Economics*, 28(1), 1–21. doi:10.1007/11187-005-0259-x
- Wahba, H. (2008). Does the market value corporate environmental responsibility? An empirical examination. *Corporate Social Responsibility and Environmental Management*, 15(2), 89–99. doi:10.1002/csr.153
- WCED. (1987). World commission on environment and development. *Our Common Future*, 17, 1-91.
- Wesselink, R., Blok, V., van Leur, S., Lans, T., & Dentoni, D. (2015). Individual competencies for managers engaged in corporate sustainable management practices. *Journal of Cleaner Production*, 106, 497–506. doi:10.1016/j.jclepro.2014.10.093
- Whetten, D. A., & Mackey, A. (2002). A social actor conception of organizational identity and its implications for the study of organizational reputation. *Business & Society*, 41(4), 393–414. doi:10.1177/0007650302238775
- Wirth, H., Kulczycka, J., Hausner, J., & Koński, M. (2016). Corporate social responsibility: Communication about social and environmental disclosure by large and small copper mining companies. *Resources Policy*, 49, 53–60. doi:10.1016/j.resourpol.2016.04.007

## ***Analysis of Entrepreneurial Dynamics in Spain***

Xia, B., Olanipekun, A., Chen, Q., Xie, L., & Liu, Y. (2018). Conceptualising the state of the art of corporate social responsibility (CSR) in the construction industry and its nexus to sustainable development. *Journal of Cleaner Production*, *195*, 340–353. doi:10.1016/j.jclepro.2018.05.157

Zahra, S. A., Gedaljovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, *24*(5), 519–532. doi:10.1016/j.jbusvent.2008.04.007

Zapalska, A. (1997). A profile of woman entrepreneurs and enterprises in Poland. *Journal of Small Business Management*, *35*(4), 76–82.

## **ADDITIONAL READING**

Argento, D., Culasso, F., & Truant, E. (2019). From Sustainability to integrated reporting: The legitimizing role of the CSR manager. *Organization & Environment*, *32*(4), 484–507. doi:10.1177/1086026618769487

Barucic, A., & Umihanic, B. (2016). Entrepreneurship education as a factor of entrepreneurial opportunity recognition for starting a new business. *Management*, *2*(2), 27–44.

Calic, G., & Mosakowki, E. (2016). Kicking off Social Entrepreneurship: How a Sustainability Orientation influences Crowdfunding success. *Journal of Management Studies*, *53*(5), 738–767. doi:10.1111/joms.12201

Deslatte, A. (2020). Revisiting bureaucratic entrepreneurialism in the age of urban austerity: Framing issues, taking risks, and building collaborative capacity. *Urban Studies and Entrepreneurship*, 143–159. doi:10.1007/978-3-030-15164-5\_8

Geradts, T. H. J., & Bocken, N. M. P. (2019). Driving Sustainability-oriented innovation. Organizations can innovate to address environmental and social problems but they need to build the right culture. *MIT Sloan Management Review*, *60*(2), 78–83.

Horne, J., Recker, M., Michelfelder, I., Jay, J., & Kratzer, J. (2020). Exploring entrepreneurship related to the sustainable development goals – mapping new venture activities with semi-automated content analysis. *Journal of Cleaner Production*, *242*, 118052. doi:10.1016/j.jclepro.2019.118052

Luedeke-Freund, F. (2019). (in press). Sustainable entrepreneurship, innovation, and business models: Integrative framework and propositions for future research. *Business Strategy and the Environment*.

Swanson, K. K., & DeVereaux, C. (2017). A theoretical framework for sustaining culture: Culturally sustainable entrepreneurship. *Annals of Tourism Research*, *62*, 78–88. doi:10.1016/j.annals.2016.12.003

## **KEY TERMS AND DEFINITIONS**

**Corporate Social Responsibility:** Voluntary integration by the organizations of social and environmental concerns in its business operations and the relationships with their interlocutors.



**Entrepreneurship:** Actions to initiate a new activity that demand effort and work and concludes in a business result. The entrepreneur must be willing to take risks related to time, money, and hard work.

**Global Entrepreneurship Monitor (GEM) Spain Report:** The world's foremost study of entrepreneurship. GEM provides high quality information, comprehensive reports, and interesting stories, which greatly enhance the understanding of the entrepreneurial phenomenon.

**Responsible/Sustainable Entrepreneurship:** Type of entrepreneurship that incorporates economic, social and environmental characteristics, in such a way that a link between CSR and entrepreneurship is achieved.

**Stakeholders:** People, individuals, and groups of people that affect, can affect and can be affected by the activities of an organization. They are an essential element on the strategic planning of the organizations.

**Sustainable Development:** Development that satisfies present needs without compromising the capacity of future generations, guaranteeing the balance between economic development, taking care of the environment and social wellbeing.

**Triple Bottom Line perspective:** Accounting framework with three parts (social, environmental, and financial). Some organizations have adopted this framework in order to evaluate their performance in a broader perspective to create greater business value.

## ENDNOTES

<sup>1</sup> More information available at: <http://www.oecd.org/>

<sup>2</sup> More information available at: <https://www.un.org/>

## Chapter 6

# Will They or Won't They? Understanding Nascent Entrepreneurship and Entrepreneurial Emergence Through Authentic Leadership Behaviours

**Josh Rowlands**

 <https://orcid.org/0000-0002-5935-1628>

*Tasmanian School of Business and Economics, University of Tasmania, Australia*

**Matthew Knox**

 <https://orcid.org/0000-0002-6092-071X>

*University of Tasmania, Australia*

**Anna Anna Cui**

 <https://orcid.org/0000-0001-7199-3669>

*University of Tasmania, Australia*

**Tessa Campbell**

*Tasmanian School of Business and Economics, University of Tasmania, Australia*

### ABSTRACT

*Our society faces many obstacles in its continuing growth and development. With the shared anxiety of recent threats such as COVID-19, individuals around the world are forming their own ways to combat change and degradation. Even small hospitality businesses in Tasmania have been deeply impacted, with many close to closing their doors due to the reliance on the tourism industry. The absence of relevant and extensive research into nascent entrepreneurship continues to limit the pragmatic and theoretical application of the potential individuals have to instigate change. As such, the authors highlight the need for further study into the emergence and potential of entrepreneurs to further explore their behavioral development and growth. In doing so, they look to answer our research question: How can authentic leadership behaviors provide a clearer understanding to the phenomena of nascent entrepreneurial emergence and aid in their ethical development?*

DOI: 10.4018/978-1-7998-4826-4.ch006

## INTRODUCTION

In the field of entrepreneurship, there is a variety of emerging schools of thought. The social entrepreneurs, for example, seek to address society's wicked problems through innovation and creativity (Crawford et al., 2020b). Sustainable entrepreneurs provide innovative creations that consider their sustainable development (Rowlands et al., *in-press*), whereas classical understandings of entrepreneurship link innovation with profit and place social ramifications as afterthoughts (Schumpeter, 1982). Whatever the driving force is behind the phenomena of entrepreneurship, social good, sustainable development, financial gain, and fame can all offer a spark to the dormant candle of nascent entrepreneurs. One's potential for enterprising lacks specific encapsulation in theory. Moreover, the spark of these intentions, as well as the associated antecedent behaviors needs further exploration (Reynolds & White, 1992). With the potential for improving the understanding of entrepreneurial emergence and its ramifications, the authors believe that it is important to identify the enablers of nascent entrepreneurs, who emerge acting ethically.

Scholars have only recently begun to deeply explore entrepreneurship and the behaviors that foster it. Social entrepreneurship enhanced through authentic leader behaviors (ALBs) has been theoretically linked to the sustainable growth and development of ecotourism (Knox et al., *in-press*; Rowlands et al., *in-press*). To further explore the effects of ALBs on fostering entrepreneurship, one may address the COVID-19 pandemic and the methods in which the Australian State and Federal Governments are responding. For instance, the Victorian Government (2020) is creating jobs amid the pandemic, calling on individuals to work as public servants to assist in the maintenance of the Victorian society. This initiative is poignant as many thousands of Victorians may lose their jobs across many industries during the crisis (Victorian Government, 2020). The ethical challenges faced by the global society in the past such as the Global Financial Crisis and 9/11 have led to rapid theoretical and empirical progress, encouraging the development of strong leaders (Crawford et al., 2020a). Positive behavioral development has been demonstrated to aid organizations in facing unprecedented obstacles such as these (Luthans & Avolio, 2003); with many industries altering their daily operations to remain ethical, the necessity for strong leadership and innovation is at its peak.

There is a genuine need to understand the enablers of ethical behavior in emerging entrepreneurs, now, more than ever. To this end, this Chapter focuses on emergence and intentions. The authors begin with an explication of what exactly an entrepreneur is, followed by an investigation into the phenomena of nascent entrepreneurs, and entrepreneurial emergence. Next, the authors explore the theories of authentic leadership and authentic followership, highlighting their significance in improving the development of positive organizational ethics. The following synthesis brings this all together, discussing the potential effects of ALBs on nascent entrepreneur's and their emergence, as well as the possible implications, for the purposes of exploring the research question:

*How can authentic leadership behaviors provide a clearer understanding to the phenomena of nascent entrepreneurial emergence, and aid in their ethical development?*

## CRITICAL REVIEW METHOD

The aim of this Chapter is to provide a critical exploration on nascent entrepreneur and their emergence. The literature on this topic tends to describe the authentic leader, the authentic follower, transformational

### ***Will They or Won't They?***

leadership, social entrepreneurship, ethical leadership, and entrepreneurial emergence. The challenge posed to this chapter is the lack of literary synthesis between these disparate areas of inquiry. The data collected, cannot be generalized because of its qualitative and exploratory nature, and thus presents limitations for the Chapter. As such, the authors consider a critical review method, concentrating on identifying and analyzing the key elements of different literatures as they relate to the research question. In doing so, the authors intend to first focus on a critical review of the different sections of the literature identified in their independence. The authors have a focus on the literature as it relates to the broad research question. The aim of which is to develop a synthesized understanding of the topic in the discussion to improve the ethical emergence of entrepreneurs.

## **ENTREPRENEURSHIP**

Scholarly discourse on entrepreneurship lacks a universally accepted definition, with the term being highly popularized but also entailing a wide variety of differing meanings (Churchill & Lewis, 1986; Cunningham & Lischeron, 1991; Gartner, 1985; Peterson, 1985; Schumpeter, 1934). While there is debate about the meaning of the term, entrepreneurship is, and continues to be a subject of interest (Cunningham & Lischeron, 1991). Six schools of thought have emerged: The “Great Person”, psychological, classical, management, leadership and entrepreneurship schools, each containing their own underlying viewpoints (Cunningham & Lischeron, 1991). The leadership school that aligns with the definition of those who demonstrate situational forms of leadership is, “entrepreneurs are the leaders of people; they have the ability to adapt their style to the needs of the people” (Cunningham & Lischeron, 1991, p. 47). Appropriateness of each entrepreneurial model depends on situational context and desired aspects. However, examining the strengths of the leadership school demonstrates that it may be most helpful for technical and interpersonal skills along with employee motivation, within entrepreneurial activities. The development of such skills may be advantageous for entrepreneurs as they can enable informal influence and heightened awareness, through greater emotional intelligence and awareness.

Entrepreneurs are motivated by opportunities and are distinguished by their capacity for innovation, whereas managers, are distributors of resources (Dyck & Neubert, 2008). The following factors have been found to influence the emergence of entrepreneurial activities: age, education, and dissatisfaction with past employment (Reynolds et al., 1999). Greater understanding of the characteristics, behaviors, and competencies that lead to successful business, is beneficial for entrepreneurs, as well as organizations whom attract entrepreneurs for the added value they offer as employees (Driessen & Zwart, 2007). Continuous learning is one example commonly exercised by entrepreneurs, otherwise known as ‘learning orientation’ (Crawford & Butler-Henderson, 2020; Wang, 2008). Similarly, risk-taking is a behavior found among entrepreneurs who encounter the unknown in attempts to be innovative and maintain points of difference in their business (Naldi et al., 2007). At an individual level entrepreneurship impacts a person’s very behavior. The authors posit that this impact is something that lacks needed consideration in literature.

Entrepreneurship also has an impact on the activity of national economic growth (Stel, Carree & Thurik, 2005). Economists have indicated that entrepreneurship is crucial to the economic progress of countries worldwide, and yet at times it has been absent from mainstream economic discourse despite the notoriety of its effect, spillover theory (Acs et al., 2009). A compelling reason for this, was the lack of measurement systems available (Stel, Carree & Thurik, 2005), until the Global Entrepreneurship

Monitor was founded in Babson College and London Business School in 1999 (Global Entrepreneurship Monitor, 2020). Entrepreneurs introduce innovations, create new products and services, design different production processes and increase competition and productivity (Acs & Audretsch, 2003; Geroski, 1989; Nickell, Nicolitsas & Dryden, 1997). It is also noted that entrepreneurs are more likely to accept extended work hours with more efficiency because their personal wage is directly linked to their hours of input (Stel, Carree & Thurik, 2005). The automobile, telephone, air conditioning and computers are examples of entrepreneurial ideas that were commercialized into today's society (Acs & Szerb 2007).

There are several recommendations for encouraging and developing entrepreneurship within Australia (Kinner, 2015). Firstly, an entrepreneurial culture must be imbedded into schools and universities making it a priority with national strategic direction. Secondly, support for entrepreneurial initiatives, firms and social groups through policy and programs with evaluation tools. Thirdly, facilitation of the collaboration between industry and the entrepreneurial community. Lastly, encouraging the young generation to maintain a global mindset regarding entrepreneurship and expose students to the best start-ups worldwide.

The City of Launceston, in the Australian state of Tasmania, has seen the increasing popularity of the lifestylepreneur (Salt, 2017). Lifestylepreneurs are business owners who are motivated by a dual offer; an opportunity to become a business operator in a location that offers the desired lifestyle. This emergent trend demonstrates the ever-evolving nature of entrepreneurship and its continued influence on people, places and processes globally, that will be vital in the future. Lone Goose Farm founded by Bec Rumble and Paul Hallier, is an example of lifestylepreneurs in the North of Tasmania (Devereaux, 2020). Leaving a corporate training company and mechanical engineering firm, Bec and Paul chose the Tasmanian agri-business lifestyle experience over pursuing the Melbourne corporate ladder on the mainland of Australia.

Likewise, Provenance Coffee founder, Jesse Campling, moved to Launceston for the outdoor-centric lifestyle, livability, relative isolation, and suitability for raising a family (Vinall, 2018). After working locally in hospitality for several years, Campling's entrepreneurial spirit led him to start Provenance in 2016 with the vision for a transparently sourced coffee bean product in the Launceston market.

Lastly, Launceston Global Shapers Hub is one chapter of a global entrepreneurial initiative (Jarvis, 2020). Spanning 156 countries the initiative enables young and local social entrepreneurs to instigate change and belong within a global community (World Economic Forum, 2020). Young Northern Tasmanians that have chosen to remain in the southernmost island state of Australia, rather than follow fellow students and colleagues to the mainland for study or work opportunities, want to pursue goals in climate change, education and environment, along with equity and inclusion (Jarvis, 2020). These individuals see the value of being lifestylepreneurs in Launceston and desire to contribute to collaborative movements such as the Launceston Together Community Network.

## **Nascent Entrepreneurship**

Consensus among scholars regarding the nature of nascent entrepreneurs encompasses the concept as: an individual who starts a business independently (Carter et al., 2003; Delmar & Davidsson, 2000; Chuang, Yeh & Lin, 2019), although the theory still lacks a clear definition. The term was first observed in literature in 1992 and offers a preliminary definition, but it does not identify the specific characteristics of a nascent entrepreneur or the behaviors which would provide supporting evidence while seeking to classify an individual as a nascent entrepreneur (Davidsson, 2006; Reynolds & White, 1992). Three criteria established by the Global Entrepreneurship Monitor and Panel Study of Entrepreneurial Dynamics have

## ***Will They or Won't They?***

been used to describe nascent entrepreneurs (Chuang, Yeh & Lin, 2019). Firstly, a nascent entrepreneur is a person in the process of starting a new business. Secondly, ownership is solely or partially held by the founder of the business. And lastly, that the individual has been actively establishing the business within the past year.

Research has found that the career choice of nascent entrepreneurs demonstrated that of self-realization, financial success, innovation, and independence (Carter et al., 2003). Given this, it may seem as though there are specific behaviors and characteristics which would assist in the classification or identification of nascent entrepreneurs, few of which have been identified within the scholarly community. Scholars have, however, deduced many factors that influence specific variances regarding the behaviors of a nascent entrepreneur (Blanchflower; 2000; Wennekers et al., 2005).

Within the realm of economic development, nascent entrepreneurship has an important role in determining the rate of growth experienced by nations (Wennekers et al. 2005). Nascent entrepreneurship literature demonstrates that for advanced nations, fostering opportunities for nascent business ideas generates the highest rewards for continued economic growth. However, research demonstrated that increasing economies of scale, foreign direct investment and management education are more beneficial for a developing nation's sustained economic development (Wennekers et al., 2005).

Chuang, Yeh and Lin (2019) utilized predictor variables to analyze and cluster countries based on distinguishing characteristics of nascent entrepreneurs found within each country. Firstly, Courageous Entrepreneurs found mainly in South Africa exhibited lower levels of education, younger age, fewer entrepreneurial networks, and used innovative technologies. Secondly, Experienced Entrepreneurs were in America, the United Kingdom and Argentina. Characteristics included management experience, skills for new startups and opportunistic behavior. Thirdly, Conservative Entrepreneurs from Japan, Finland and Germany were older, held no fear of failure and were less likely to use technology. Lastly, Compensative Entrepreneurs were typically older, had broad entrepreneurial networks, fear of failure, the highest level of education and predominately based in Denmark and France. This exploration resulted in several propositions which provide invaluable insight into the nascent entrepreneurship field of study (Chuang, Yeh & Lin, 2019). Aligning with Wennekers et al. (2005), entrepreneurship from different countries was influenced by their economic position and growth. Additionally, South Africa demonstrated the highest cultural support for entrepreneurship, even though America is typically considered a nation that fosters entrepreneurial spirit. Finally, higher education does not counteract for psychological fear of failure during nascent entrepreneurship.

## **Entrepreneurial Emergence in Tasmanian Tourism**

The Southernmost island of Australia, Tasmania, has examples of emergent entrepreneurial endeavors in the tourism sector (Rowlands et al., in-press). Pennicott Wilderness Journey's managing director, Robert Pennicott, is a renowned Tasmanian entrepreneur who has significantly boosted the tourism industry on Bruny Island (Burgess, 2018). Similarly, James Ravens, the general manager of Bridestowe Lavender Estate in Tasmania's North, is another entrepreneur who turned a business on the brink of collapse, into one of Australia's most internationally recognized tourism destinations (Piotrowski, 2020). Both Ravens and Pennicott exhibit entrepreneurial spirit and authentic leader behaviors, which have contributed to the success of their Tasmanian tourism ventures. For example, Ravens exhibits heightened self-awareness by allowing Bridestowe's branding to be used for one of the Road Safety Advisory Council's campaigns on basic rules for safe driving (Gramenz, 2016). Ravens recognizes the influx of tourists visiting Tas-

mania and the impact it has on road safety for local Tasmanians. The willingness of Ravens to allow their Bobbie Bear to be the mascot exemplifies Bridestowe's contribution to the road fatalities issue in Tasmania. Pennicott demonstrates balanced processing through his annual donations to the Bruny Island District School's 'learn to swim' program and sponsorship of Diabetes Tasmania, that hosts a Schools Triathlon Challenge every year (Pennicott Wilderness Journeys, 2020). Additionally, Pennicott invested \$3.2 million into the regional economy by ensuring that seventy eight percent of business purchases were through local suppliers (Pennicott Wilderness Journeys, 2020).

## **Entrepreneurial Emergence and Education**

As society looks to face the wicked problems it's dealt, economic downturns, and aggressive pandemics, individuals from different countries, varying in economic and social status, have the potential to instigate positive change. Entrepreneurial emergence refers to the conceptualization of an enterprise by an individual, and the translation of ideas and values to a functional business venture (Akpór-Robaro, 2012). This definition of entrepreneurial emergence has parallels with characteristics of Karp's (2006) definition.

An entrepreneur perceives an opportunity in an existing market, articulating the value to the economy as being from the perspective of the entrepreneur. They develop an entrepreneurial model that is workable, identify the market for the enterprise, and have the potential to find partners in order to close on the deal, all leading to the formation of an enterprise (Karp, 2006). The businesspeople in the self-employment or partnership frameworks are at odds with the more traditional business hierarchy that is often pervasive in the organizations that society is familiar with today. It is important to keep in mind that self-employment is not a prerequisite for establishing a business or being a successful entrepreneur. Individuals can choose to become entrepreneurs without self-employment. Yet, entrepreneurs who are self-employed, can begin business without necessarily being successful entrepreneurs. The scholarly consensus supports entrepreneurship being one of the most important contributors for change across a nation's economic environment (Acs, 1999; Baumol, 1968; Birch, 1979; Davidsson, Steffens & Gordon, 2011).

Acknowledged by prior literature, entrepreneurial emergence and the study of nascent entrepreneurs are observed as crucial to understanding the development of successful entrepreneurial communities (Gartner et al., 2004; Davidsson, Steffens & Gordon, 2011). The velocity of entrepreneurial emergence in an emerging market, or the velocity of innovators in an established market are strong predictors of the entrepreneurial success of a community (Florida & Kenney, 1988; Smith, 2007). From a macro-economic perspective, the increase in creative activity within a market can have a much bigger impact on the global economy. Entrepreneurial emergence is relevant due to its contribution to broadening the understanding of nascent entrepreneurship, and the way in which it represents the beginning of the further study of nascent entrepreneurship behaviors. This latter outcome is related to the role of entrepreneurial emergence, as such the authors highlight the definition as a way of describing:

*The development of the individual entrepreneur, not the entire entrepreneurial activity of a start-up.*

A focus on the process of nascent entrepreneurs is important to facilitate understanding of their behavior's and helps with the application of theory but does not lead to an increased focus on the overall entrepreneurial effect. Increasingly, younger generations are participating in ventures that are conceptual-

## ***Will They or Won't They?***

ized as entrepreneurial rather than precariat (Crawford et al., 2020b). They are more willing than older generations to accept temporary change and live with the consequences, or to try alternative approaches in order to survive the harsh reality of their circumstances, existing skills and economic environment, or from a crisis in old economies that is both systemic and societal in nature.

The literature on emergence looks to understand the potential of individuals, although theories tend to differ in focus, from an assessment of intent, behavior, and capacity (Azoulay et al., 2020). Education has proven beneficial to fostering leadership behaviors, intentions and success, while poor teaching strategies and a lack of personal development tend to hasten entrepreneurial emergence (Oosterbeek, Van Praag & Ijsselstein, 2010). Despite research into its effects on growth and sustainability, little has been explored regarding the development of leadership behaviors for the purpose of educating those who wish to become entrepreneurs. Though the education of leaders is important, the education of followers should also be considered for there to be a successful business or economic venture. Without the dyadic support and followership of these individuals, the term 'leadership' becomes obsolete. As there are authentic leaders, there are also authentic followers, who play an important role in promoting and backing up the cause of what they are working towards. The relation between leader and follower is also reliant on transparency and shared values (Crawford et al., 2020c). It has been demonstrated that those who have highly valued behavioral attributes can propel social advancement and are essential in obtaining the talent pool necessary to sustain industrialization, but, as a rule, they are most relevant when making entrepreneurial decisions (Baliga, Dachler & Schriesheim, 1988). The notion posited by Baliga, Dachler & Schriesheim(1988), may be observed as being reinforced by the relationship between authentic leaders and authentic followers. As such, this Chapter posits that individuals who can forge ahead of the herd, demonstrate boldness and resourcefulness, an ability to influence others and encourage followership, will find greater success in the capitalist marketplace while remaining ethical. The current literatures attempt to aid these individuals' hinges on the great uncharted territory that is entrepreneurship. As such, this Chapter will now explore these nuances in the literature, focusing on the positive development of nascent entrepreneurs through authentic leadership behaviors and how it may lead to desirable outcomes for future entrepreneurs.

## **AUTHENTICITY**

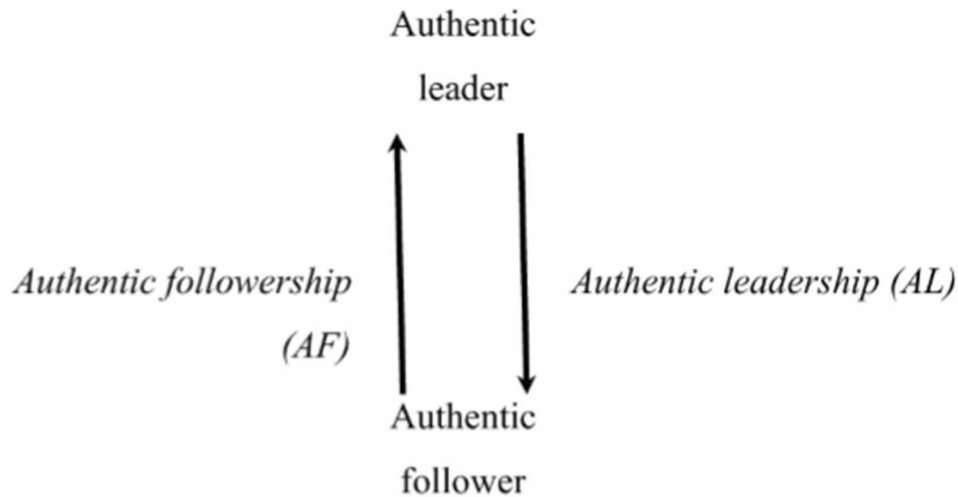
The idea of authenticity has become one of great importance in today's modern society. Changes throughout societal norms have brought forth the desire to feel 'genuine' and 'real' as individuals, within today's fast-paced world. The origins of authenticity can be found throughout Greek philosophical teachings, yet the literature challenges the fluidity of one's ability to be authentic (Crawford et al., 2018). Some scholars theorize the notion that authenticity is kept separate from one's morality, while others suggest one's authentic self requires awareness of morality and self-actualization (Heidegger, 1962).

The concept of sincerity often convolutes authenticity theories, as they are 'sister constructs' (Crawford et al., 2018), the main difference between the two being the idea of 'self' vs 'others'. For example, Figure 1 illustrates the domains of authentic leader-follower relationship with leaders needing followers to enact authenticity and vice versa (Crawford et al., 2020a).

Current literature appears to support the assumptions of authenticity, which incorporate ones' ability to think without bias, an awareness of self, and demonstrating honesty in relationships with others (Kernis & Goldman, 2004). As such the interaction between sincerity and authenticity is a relationship



Figure 1.



involving how one expresses their ‘self’, and how others interpret the perceived truth of their sincerity as authenticity. This presentation is just one of the behavioral nuances of authentic leadership, a theory explored, followed by an explication of authentic followership.

## Leaders

Authentic leadership theory came into fruition in the face of ethical concerns in the contemporary business world (Luthans & Avolio, 2003). An influx of leadership literature was also on the rise. Most, however, lacked evidence and were more to do with the authors experience (Luthans, 2002), likewise these publications made broad claims regarding training and development without realistic strategies (Zaccaro & Klimoski, 2002). To combat ethical concerns, shallow claims, and wishful hopes of messiah-like leaders, authentic leader behavior theory conceptualizes the notions of an effective and ethical leader (see Crawford et al., 2020a), explicating behaviors of one who understands themselves and those around them. Likewise, authentic leaders have a strong sense of positive ethics (Gardner et al., 2005) and can enhance employee wellbeing (Laschinger & Fida, 2014). By being sincere and seeking to understand and be aware of others, authentic leaders can support those around them and foster a culture of positive organizational engagement, while adhering to contextual social rules. It has been theorized in rigorous critical reviews that authentic leaders also aid entrepreneurial development, emergence, and success (Crawford et al., 2020b; Knox et al., 2020). This Chapter endeavors to strengthen this theorization, with a concentration on the relationship between entrepreneurial intentions and behaviors to strengthen the one’s understanding of the phenomena that is nascent entrepreneurs.

## Followers

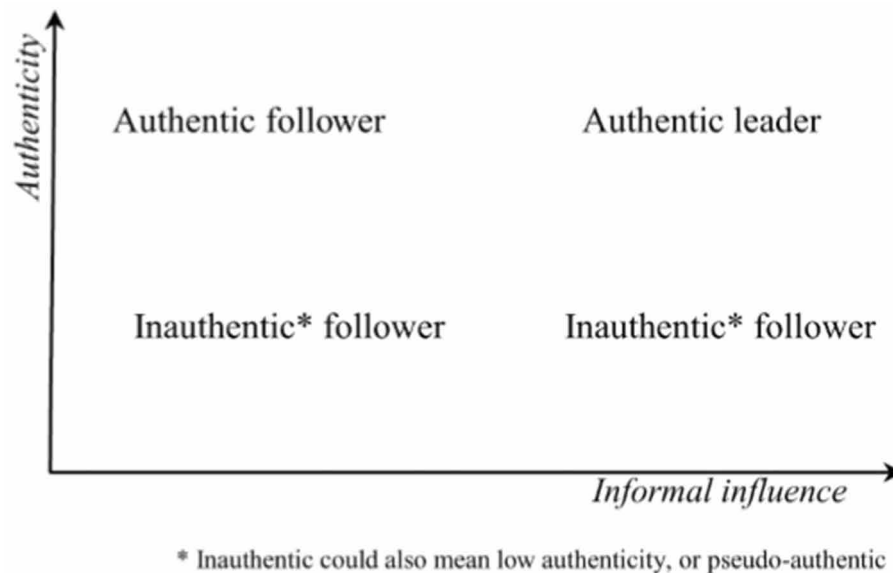
The concept of the authentic follower lies within authentic leadership behavior theory. Crawford et al. (2018) defines the concept of authentic followers (Figure 2, Crawford et al. 2020a), by their own indi-

## Will They or Won't They?

vidual capacity to be authentic, demonstrating the importance of awareness, sincerity, internal balanced processing, and a positive moral perspective. This definition is illustrated in Figure 2 (Crawford et al. 2020a), distinguishing an authentic leader from an authentic follower;

*An authentic follower is an individual who, through their capacity for authenticity and positive organizational engagement, are self-managing and follow leaders with whom they share values.*

Figure 2.



Followers within any setting play a key role, whether it be abiding by the wishes of their leader or challenging the directives presented to them (Carsten & Uhl-Bien, 2013). Thus, enabling the notion that strong minded, innovative and independent thinking followers may be more likely to become nascent entrepreneurs, thus becoming leaders by their own right. The role of the follower is still one which requires a greater depth of exploration and recognition within leadership theory, as it is still marginalized in today's contemporary literature (Agho, 2009; Crawford et al., *in-press*). The lack of research into the topic presents many issues for those wishing to use follower theory in their own exploration and discussion of complementing topics. It is acknowledged that there is an overemphasis placed on the role of the leader, thus causing leadership theory to appear more prominent when compared to follower theory (Baker, 2007; Crawford et al., 2020a), so one may ask themselves why the gap is present when followers are observed as a powerful and integral part of organizational objectives and operations, given their ability to enable or become the downfall of their given leader.

Early literature exploring leadership theory and its behaviors, describe that of heroic and idolized individuals as leaders, suggesting followers were expected to be passive and complacent towards their given leader. Throughout the years, and as research has progressed, scholars have overlooked the importance of the follower, as it is observed as antecedent to leadership and organizational outcomes (Ilies et

al., 2005). Scholarly research into the origins of followership are not often presented in literature, with a vague assumption being made of the leader and follower objectives being ones of an identical nature (Van Vugt, 2006). This literature gap may present issues for those who wish to apply formulations and theories to real world scenarios, as well as that of future research into human behavior coinciding with leader and follower theory. Some research, however, has further filled the gap and thus broadened the community's depth of knowledge. Scholars have distinguished five groups in which one may categorize a follower, a few of which intertwine with one another: those who are passive and dependent on their leader, those who are positive, active, yet leader-dependent, those who feel negative and alienated, those who are often undecided and observe from the sidelines, and finally those who are independent of their leader and behave in a way which is active and positive (Kelley, 1998). The formulation of these identifiers allows for future research to be carried out in a more effective manner, across a multitude of topics, which will further advance the scholarly understanding of the leader-follower relationship.

There has been a greater importance placed on leadership and its theories, rather than the relationship which allows one to become a leader; for without followers, there are no leaders. The consideration of followers who demonstrate behaviors which align with their true selves is important, more so when understanding how authentic leader behaviors (e.g. awareness, sincerity, balanced processing, a positive moral perspective, and informal influence) foster self-determination within followers, as well as motivation and workplace performance (Leroy et al., 2015; Crawford et al., 2018). Followers, in theory, are more likely to have a stronger relationship with their leader given the behaviors demonstrated by an authentic individual. With the support of authentic leaders, authentic followers may develop and flourish into nascent entrepreneurs thus becoming authentic leaders themselves. Scholars have identified the need to develop communicative practices and structures which will support and nurture followers, regardless of the context (Crawford et al., 2020a). This ideal will enable individuals to explore their options as entrepreneurs and further expand the market, as it would create new businesses thus becoming an advantageous goal any follower may aspire to achieve.

## **SYNTHESIS**

As highlighted through this Chapter, society faces many obstacles in its continuous growth and development. With the shared anxiety of recent threats such as COVID-19, individuals around the world are forming their own ways to combat change and degradation. Even small hospitality businesses in Tasmania have been deeply impacted, with many closing their doors due to the decline of the tourism industry across the state (Baker, 2020).

### **Nascent Entrepreneurship**

The absence of relevant and extensive research into nascent entrepreneurship continues to limit the pragmatic and theoretical application of the subject (Reynolds & Curtin, 2007). There continues to be a lack of understanding encompassing nascent entrepreneurship (Edelman et al., 2010; Honig, Davidsson, & Karlsson, 2005). Specifically, education on nascent entrepreneurship is an area that remains under researched (Edelman, Manolova & Brush, 2008). Nascent entrepreneurship has significant potential, yet this is not being capitalized upon, which hastens significant behavioral examination of individuals. Promoting the emergence of nascent entrepreneurship also lacks (Honig, Davidsson & Karlsson, 2005),

## ***Will They or Won't They?***

as such this Chapter seeks to highlight the need for further study into the emergence and potential of entrepreneurs, to further explore their behavioral development and growth.

### **Education**

Education is important and plays a large role in addressing the issue of the leadership gap in nascent entrepreneurship. Research conducted on entrepreneurial education and the practice of nascent entrepreneurship contains some differences (Edelman, Manolova & Brush, 2008). This highlights the need for further nascent entrepreneurial education that is based on research involving practicing nascent entrepreneurs today. Throughout the Chapter, the importance of behavior is outlined, and how it can have direct and indirect impacts on organizations and society. Consistent educative practices of good behavior will have a positive impact on entrepreneurs by embedding strong ethics and morals into their sets of values (Knox et al., *in-press*). Therefore, by incorporating authentic leadership theories into societal education systems for all nascent entrepreneurs, it may close the existing leadership gap. Authentic leaders have these five behavioral traits; self-awareness, positive morals, balance processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development (Crawford et al., 2020a). Consideration of these behaviors in the fostering of entrepreneurs through training and development may lead to a clearer understanding of nascent entrepreneurs and entrepreneurial emergence, and aid in their ethical development.

### **Awareness**

Considering Crawford et al. (2020a), awareness conceptualizes a leader's understanding of the world around them in conjunction with the development of their own self-image. An authentic leader possesses a heightened awareness that is superior to an individual's level of self-awareness. Heightened awareness will enable entrepreneurial leaders the ability to provide relevant stakeholders with education regarding the benefits of nascent entrepreneurship. For example, nascent entrepreneurship has been found to positively contribute to economic development across nations (Wennekers et al., 2005). A deeper understanding of consumer needs, government strategic directions, employee challenges and societal trends allows these emerging nascent businessmen and women to comprehend why their inventions, ideas, and technological developments are beneficial. Specifically, governments can partner with nascent entrepreneurs who possess heightened awareness because they are able to effectively contribute to a nations' economic development.

### **Sincerity**

Sincere behavior fosters the honest and transparent manifestation of an individual's true self. The open relationships generated provide nascent entrepreneurs with the foundations necessary to express the ethical development of their ideas in ways that will be received well by stakeholders (Salamzadeh & Kesim, 2015). New start-ups face challenges, even more so when they champion ethical development and prioritize purpose before profit. However, sincerity is powerful for those starting a new business. Nascent entrepreneurs can capitalize on not only their 'true to self' attitude but also a transparent relationship with others. For example, nascent entrepreneurs can admit their own weaknesses as a business owner or wholeheartedly listen to individuals who critique their ideas. Without the transparency, openness

and honest relationships that come with sincerity, nascent entrepreneurs would resist critical feedback and the exposure of personal weakness, ultimately leading to failure early on in their start-up's lifecycle (Salamzadeh & Kesim, 2015).

## **Positive Moral Perspective**

An internalized moral perspective enables leaders to be guided by internal moral standards. Preventing them from giving into external pressures. However, Crawford et al. (2018) explores how this negates an important consideration of positive moral perspective. Expanding on moral identity theory (Zhu et al., 2011), a moral identity ensures that a leader's actions promote and protect the wellbeing of others too. Similarly, virtue is the contribution to common good and the excellence of an individual's character (Newstead et al., 2018), and can be developed (Newstead et al., 2019). Positive moral perspective incorporates not only the internal moral standards a leader has, but also their moral identity encompasses the consideration of others and their contribution to the common good.

Nascent entrepreneurship has wide reaching impacts and so those with positive moral perspective could operate within ethical and effective start-ups that contribute to broader economic, environmental and social good. At a micro level, positive moral perspective exhibited by entrepreneurs will encourage other individuals to follow suite, starting effective and ethical small businesses. Increasingly, consumers are voicing their desire for ethical business practices that have a social purpose (Washington State University, 2020). The more nascent entrepreneurs that prioritize purpose before profit, the more demand consumers will have for such providers. This creates a positive perpetual affect. At a macro level, countries have been found to hold characteristics of nascent entrepreneurs (Chuang, Yeh & Lin, 2019). Countries that demonstrate high levels of contribution to common good through their nascent entrepreneurs, become world leaders of entrepreneurship. For example, Chile has been named South America's most ethical country for business (Corporate Social Responsibility Wire, 2008). In areas such as common good, a nation's natural response can be to emulate other's achievements.

## **Balanced Processing**

Balanced processing allows nascent entrepreneurs to cater for the wider community by assessing the needs of the community and making decisions that benefit the collective. Australian entrepreneur George McEncroe turned her idea into a business in 2017 and successfully crowd funded three million dollars for her women only ride sharing start-up Shebah (Powell, 2019). Balanced processing enabled McEncroe to identify the need for an all women ride share service in the ride-sharing transport sector. The company believes that women drivers, women riders and children should always feel safe (Shebah, 2020). Not only is this a desired service within Australian communities, but also an employment opportunity for over one thousand women who currently drive with Shebah.

## **Informal Influence**

The authentic leader-follower relationship is such that authentic leaders empower and develop highly effective followers who then become leaders. Thus, an informal influencing leader can facilitate growth in followers to the point that they are able to lead themselves. These followers become the new informal influencers within their own context. However, followership theory lacks research and is comparatively

### ***Will They or Won't They?***

under studied by scholars (Baker, 2007). Therefore, it is important that authentic entrepreneurial leaders utilize informal influence in building up the next generation of entrepreneurs. For nascent entrepreneurs who demonstrate self-realization, innovation and independence (Carter et al., 2003), the likelihood of their new business becoming a long-term success will be dependent on whether they have a positive relationship with a leader who informally influences them.

## **FUTURE RESEARCH DIRECTIONS**

In this Chapter, the authors have explicated the need for conceptualizing the behaviors of nascent entrepreneurs and the antecedents to their emergence, along with the need to create new and novel evidence useful to developers and researchers of entrepreneurial development. This may influence the way individuals around the world view leadership, and that further research into authentic leadership will directly alter the way different cultures interpret leadership, and what is required to become a successful nascent entrepreneur. Additionally, the connectivity between the value of the nascent entrepreneur and the behaviors of the authentic leader include:

- Awareness of the market and need for innovative ideas.
- Sincere entrepreneurial emergence in followers.
- Authentic leader coalitions through informal influence and sincerity.
- Balanced processing enabling critical thinking and innovation.
- Relational transparency between leaders and followers.
- Fostering positive self-development.
- Positive moral perspective to ensures an alignment of values.
- Informal influence to further encourage entrepreneurial emergence in followers.

Through critical exploration of authentic leaders and authentic followers, this Chapter attempts to unpack the behaviors of the nascent entrepreneurs that share theoretical relevance with authentic leadership and authentic followership. There are several areas of future research that could be conducted. Specifically, assessing authentic leadership and its impact on nascent entrepreneurship in economic development, how authentic leadership can be practiced in conjunction with other styles of leadership theories to support nascent entrepreneurship, explication of the foundational groundwork for those who want to form community establishments and those who are aspiring to add value to the economy. Furthermore, educational content on authentic leadership for primary schools right through to tertiary education is another area of interest for scholars. This Chapter endeavors to inspire nascent entrepreneurs, authentic leaders and scholars in understanding the behaviors behind entrepreneurial emergence and provide theoretical foundations for future studies.

## **CONCLUSIONS**

This Chapter provided an explication of nascent entrepreneurship and how authentic leadership can provide a clearer understanding of ethical development within nascent entrepreneurship. The author's critical review examined entrepreneurship, authentic leadership and followership, while acknowledg-

ing the limitations of the pragmatic and theoretical application of entrepreneurship. Firstly, the chapter focused on the emergence of entrepreneurship, including laying the theoretical foundation of nascent entrepreneurship and exemplifying its potential. Then the authors reviewed entrepreneurial education and its importance in fostering individual growth, and the need for continual evaluations of behavior. Authentic leadership and followership theory are also explicated to provide the reader with the underpinnings of the synthesis that followed; this included a discussion on the importance of education in entrepreneurial emergence and the impact behavioral studies have on this significance. This Chapter concludes with a synthesis of theory, highlighting the potential relationship between the emergence of nascent entrepreneurs and authentic leadership behaviors.

## REFERENCES

- Acs, Z. J. (1999). The new American evolution. In S. Ackermann (Ed.), *Are small firms important? Their role and impact* (pp. 1–20). Springer. doi:10.1007/978-1-4615-5173-7\_1
- Acs, Z. J., & Audretsch, D. B. (2003). Innovation and technological change. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 55–79). Kluwer Academic Publishers. doi:10.1007/b105789
- Acs, Z. J., Braunerhjelm, P., Audretsch, D. B., & Carlsson, B. (2009). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 32(1), 15–30. doi:10.1007/11187-008-9157-3
- Acs, Z. J., & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small Business Economics*, 28(2-3), 109–122. doi:10.1007/11187-006-9012-3
- Agho, A. (2009). Perspectives of senior-level executives on effective followership and leadership. *Journal of Leadership & Organizational Studies*, 16(2), 159–166. doi:10.1177/1548051809335360
- Akpor-Robaro, M. (2012). The impact of socio-cultural environment on entrepreneurial emergence: An empirical analysis of Nigeria society. *Management Science and Engineering*, 6(4), 82–92.
- Azoulay, P., Jones, B. F., Kim, J. D., & Miranda, J. (2020). Age and high-growth entrepreneurship. *American Economic Review: Insights*, 2(1), 65–82.
- Baker, E. (2020). Tasmania's tough coronavirus controls have tourism and hospitality owners scrambling for solutions. *ABC News*. Retrieved March, 22, 2020, from <https://www.abc.net.au/news/2020-03-20/coronavirus-hits-tasmanias-tourism-industry/12074692>
- Baker, S. (2007). Followership: The theoretical foundation of a contemporary construct. *Journal of Leadership & Organizational Studies*, 14(1), 50–60. doi:10.1177/0002831207304343
- Baliga, B. R., Dachler, H. P., & Schriesheim, C. A. (1988). In J. G. Hunt (Ed.), *Emerging leadership vistas* (pp. 85–88). Lexington Books.
- Baumol, W. J. (1968). Entrepreneurship in economic theory. *The American Economic Review*, 58(2), 64–71.

## ***Will They or Won't They?***

Birch, D. L. (1979). *Program on neighborhood Massachusetts Institute of Technology (Cambridge, Change, R., & Mass.). The Job Generation Process* (Vol. 302). MIT Program on Neighborhood and Regional Change.

Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics*, 7(5), 471–505. doi:10.1016/S0927-5371(00)00011-7

Burgess, G. (2018). Bruny Island tourist influx a double-edged sword for those calling it home. *ABC News*. Retrieved March 12, 2020, from <https://www.abc.net.au/news/2018-12-20/bruny-island-off-tasmania-feels-growing-pains-of-tourism-boom/10582124>

Carsten, M., & Uhl-Bien, M. (2013). Ethical followership: An examination of followership beliefs and crimes of obedience. *Journal of Leadership & Organizational Studies*, 20(1), 49–61. doi:10.1177/1548051812465890

Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18(1), 13–39. doi:10.1016/S0883-9026(02)00078-2

Chuang, L. M., Yeh, C. C., & Lin, C. W. (2019). *Applying the self-organizing maps to analyze and interpret the clustering and characteristics of nascent entrepreneurs: A cross-country study*. Academic Press.

Churchill, N., & Lewis, V. (1986). Entrepreneurial research: Directions and methods. In D. Sexton & R. Smilor (Eds.), *The Art and Science of Entrepreneurship* (pp. 333–365). Balingen.

Corporate Social Responsibility Wire. (2008). Chile most ethical country for business. *CSR News*. Retrieved March 22, 2020, from [https://www.csrwire.com/press\\_releases/18950-Chile-Most-Ethical-Country-for-Business](https://www.csrwire.com/press_releases/18950-Chile-Most-Ethical-Country-for-Business)

Crawford, J., & Butler-Henderson, K. (2020). Digitally Empowered Workers and Authentic Leaders: The Capabilities Required for Digital Services. In K. Sandhu (Ed.), *Leadership, Management, and Adoption Techniques for Digital Service Innovation* (pp. 103–124). IGI Global. doi:10.4018/978-1-7998-2799-3.ch006

Crawford, J., Dawkins, S., Martin, A., & Lewis, G. (2018). Conceptualising authentic followers and developing a future research agenda. In D. Cotter-Lockard (Ed.), *Authentic Leadership and Followership: International Perspectives* (pp. 271–293). Palgrave Macmillan. doi:10.1007/978-3-319-65307-5\_11

Crawford, J., Kelder, J. A., & Knox, M. W. (2020b). What does it take to be a social entrepreneur?: Authentic leaders and their effect on innovation. In C. Dogru (Ed.), *Leadership Styles, Innovation, and Social Entrepreneurship in the Era of Digitalization* (pp. 282–310). IGI Global. doi:10.4018/978-1-7998-1108-4.ch011

Crawford, J., Young, S., & Knox, M. (2020c). Following Through the Good and the Bad? Building a Positive Change Culture with Authentic Followers. In S. Nawaz Khan (Ed.), *Leadership and Followership in an Organizational Change Context*. IGI Global.

Crawford, J. A., Dawkins, S., Martin, A., & Lewis, G. (2020a). Putting the leader back into authentic leadership: Reconceptualising and rethinking leaders. *Australian Journal of Management*, 45(1), 114–133. doi:10.1177/0312896219836460



- Cunningham, J. B., & Lischeron, J. (1991). Defining entrepreneurship. *Journal of Small Business Management*, 29(1), 45–61.
- Davidsson, P. (2006). Nascent entrepreneurship: Empirical studies and developments. *Foundations and Trends in Entrepreneurship*, 2(1), 1–76. doi:10.1561/0300000005
- Davidsson, P., Steffens, P., & Gordon, S. (2011). Comprehensive Australian Study of Entrepreneurial Emergence (CAUSEE): design, data collection and descriptive results. In K. Hindle & K. Klyver (Eds.), *Handbook of Research on New Venture Creation* (pp. 216–250). Edward Elgar Publishing. doi:10.4337/9780857933065.00020
- Delmar, F., & Davidsson, P. (2000). Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship and Regional Development*, 12(1), 1–23. doi:10.1080/089856200283063
- Devereaux, C. (2020). The Dirt in Autumn. *Sprout*. Retrieved March, 19, 2020, from [https://www.sprout.org.au/autumn\\_2020](https://www.sprout.org.au/autumn_2020)
- Driessen, M. P., & Zwart, P. S. (2007). *The entrepreneur scan measuring characteristics and traits of entrepreneurs*. <http://www.necarbo.eu/files/E-scan%20MAB%20Article.pdf/>
- Dyck, B., & Neubert, M. (2008). *Management: Current practices and new directions*. Cengage Learning.
- Edelman, L. F., Brush, C. G., Manolova, T. S., & Greene, P. G. (2010). Start-up motivations and growth intentions of minority nascent entrepreneurs. *Journal of Small Business Management*, 48(2), 174–196. doi:10.1111/j.1540-627X.2010.00291.x
- Edelman, L. F., Manolova, T. S., & Brush, C. G. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management Learning & Education*, 7(1), 56–70.
- Florida, R., & Kenney, M. (1988). Venture capital and high technology entrepreneurship. *Journal of Business Venturing*, 3(4), 301–319.
- Gardner, W., Avolio, B., Luthans, F., May, D., & Walumbwa, F. (2005). “Can you see the real me?” A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16(3), 343–372. doi:10.1016/j.leaqua.2005.03.003
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696–706. doi:10.5465/amr.1985.4279094
- Gartner, W. B., Gartner, W. C., Shaver, K. G., Carter, N. M., & Reynolds, P. D. (Eds.). (2004). *Handbook of entrepreneurial dynamics: The process of business creation*. SAGE Publications.
- Geroski, P. A. (1989). Entry, innovation and productivity growth. *The Review of Economics and Statistics*, 71(4), 572–578. doi:10.2307/1928098
- Global Entrepreneurship Monitor. (2020). Global Entrepreneurship Monitor Mission. *Gemconsortium.org*. Retrieved March 19, 2020, from <https://www.gemconsortium.org/about/gem/5>

### ***Will They or Won't They?***

Gramenz, E. (2016). Tasmania's popular lavender bear used to drive home road rules to tourists. *ABC News*. Retrieved March 22, 2020, from <https://www.abc.net.au/news/2016-05-10/bobbie-the-lavender-bear-driving-home-road-rules-to-tourists/7401100>

Heidegger, M., Macquarrie, J., & Robinson, E. (1962). Being and time.

Honig, B., Davidsson, P., & Karlsson, T. (2005). Learning strategies of nascent entrepreneurs. *Journal of Competence-based Management*, 1(3), 67–88.

Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16(3), 373–394. doi:10.1016/j.leaqua.2005.03.002

Jarvis, C. (2020). Global Shapers has launched in Launceston. *The Examiner*. Retrieved March 19, 2020, from <https://www.examiner.com.au/story/6482029/young-people-shaping-the-world-from-launceston/>

Karp, T. (2006). The inner entrepreneur: A constructivistic view of entrepreneurial reality construction. *Journal of Change Management*, 6(3), 291–304.

Kelley, R. E. (1998). Followership in a leadership world. In L. Spears (Ed.), *Insights on Leadership: Service, stewardship, spirit, and servant-leadership* (pp. 170–184). Wiley.

Kernis, M., & Goldman, B. (2004). A multicomponent conceptualization of authenticity: Theory and research. *Advances in Experimental Social Psychology*, 38, 283–357. doi:10.1016/S0065-2601(06)38006-9

Kinner, C. (2015). *Boosting High-Impact Entrepreneurship in Australia—A Role for Universities*. Australian Government: Office of the Chief Scientist.

Knox, M., Crawford, J., & Young, S. (2020). Ecotourism emergence in Tasmania through social entrepreneurs and authentic leaders. In D. Batabyal (Ed.), *Global Entrepreneurial Trends in the Tourism and Hospitality Industry* (pp. 84–111). IGI Global.

Knox, M. W., & Crawford, J. (2020). Authentic Leaders and Business Tourism: An Exploration of Authentic Relationships. In M. W. Bari, S. Shaheen, & M. Fanchen (Eds.), *Accelerating Knowledge Sharing, Creativity, and Innovation Through Business Tourism* (pp. 54–72). IGI Global. doi:10.4018/978-1-7998-3142-6.ch004

Laschinger, H., & Fida, R. (2014). New nurses' burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research*, 1(1), 19–28. doi:10.1016/j.burn.2014.03.002

Leroy, H., Anseel, F., Gardner, W. L., & Sels, L. (2015). Authentic leadership, authentic followership, basic need satisfaction, and work role performance: A cross-level study. *Journal of Management*, 41(6), 1677–1697.

Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695–706. doi:10.1002/job.165

Luthans, F., & Avolio, B. (2003). Authentic leadership development. In K. Cameron & J. Dutton (Eds.), *Positive Organizational Scholarship* (pp. 241–258). Berrett-Koehler Publishers.

- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33–47. doi:10.1111/j.1741-6248.2007.00082.x
- Newstead, T., Dawkins, S., Macklin, R., & Martin, A. (2019). The virtues project: An approach to developing good leaders. *Journal of Business Ethics*. Advance online publication. doi:10.1007/10551-019-04163-2
- Newstead, T., Macklin, R., Dawkins, S., & Martin, A. (2018). What is virtue? Advancing the conceptualization of virtue to inform positive organizational inquiry. *The Academy of Management Perspectives*, 32(4), 443–457. doi:10.5465/amp.2016.0162
- Nickell, S., Nicolitsas, D., & Dryden, N. (1997). What makes firms perform well? *European Economic Review*, 41(3-5), 783–796. doi:10.1016/S0014-2921(97)00037-8
- Oosterbeek, H., Van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), 442–454.
- Pennicott Wilderness Journeys. (2020). Community sustainability. *Pennicott Wilderness Journeys*. Retrieved March, 22, 2020, from <https://www.pennicottjourneys.com.au/about/community>
- Peterson, R. (1985). Raising risk-takers. *Metropolitan Toronto Business Journal*, 75(7), 30–34.
- Piotrowski, A. (2020). Aussie farm goes from brink of collapse to Chinese tourism hotspot. *Nine Now*. Retrieved March, 12, 2020, from <https://9now.nine.com.au/a-current-affair/bridestow-lavender-estate-online-tourist-hotspot-tasmania/fe3ffb14-0d5b-4f7a-9667-ed66f7361d31>
- Powell, D. (2019). Women-only ride –sharing startup Shebah bags \$3 million in biggest-ever equity crowdfunding raise. *Smart Company*. Retrieved March 22, 2020, from <https://www.smartcompany.com.au/startupsmart/news/shebah-3-million-equity-crowdfunding/>
- Reynolds, P. D., & Curtin, R. T. (2007). *Panel study of entrepreneurial dynamics program rationale and description*. Academic Press.
- Reynolds, P. D., Hay, M., Bygrave, W. D., Camp, S. M., & Autio, E. (1999). *Global Entrepreneurship Monitor: 2000 Executive Report*. Kauffman Center for Entrepreneurial Leadership.
- Reynolds, P. D., & White, S. B. (1992). Finding the nascent entrepreneur: Network sampling and entrepreneurship gestation. *Frontiers of Entrepreneurship Research*, 12, 199–209.
- Rowlands, J., Knox, M., De Jesus, L., Cui, Z.-Y., & Campbell, T. (in press). Leadership in tourism: authentic leaders as facilitators of sustainable development in Tasmanian tourism. In *Role of Tourism in Achieving the Sustainable Development Goals*. IGI Global.
- Salamzadeh, A., & Kawamorita Kesim, H. (2015). Startup companies: Life cycle and challenges. *4th International conference on employment, education and entrepreneurship (EEE)*.
- Salt, B. (2017). *The Launceston lifestylepreneur*. NBN Business.
- Schumpeter, J. A. (1934). *The theory of economic development*. Harvard University Press.

### **Will They or Won't They?**

Schumpeter, J. A. (1982). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle (1912/1934)*. Transaction Publishers.

Shebah. (2020). About Shebah All Women Rideshare. *Shebah*. Retrieved March 22, 2020, from <https://www.shebah.com.au/about>

Smith, B. R. (2007). *Entrepreneurial team formation: The effects of technological intensity and decision making on organizational emergence* (Doctoral dissertation). University of Cincinnati.

Van Stel, A., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics*, 24(3), 311–321.

Van Vugt, M. (2006). Evolutionary origins of leadership and followership. *Personality and Social Psychology Review*, 10(4), 354–371. PMID:17201593

Victorian Government. (2020, March 21). *Working for Victoria*. Retrieved from <https://www.vic.gov.au/workingforvictoria>

Vinall, F. (2018). Provenance Coffee founder's love for Launceston lifestyle. *The Examiner*. Retrieved March 19, 2020, from <https://www.examiner.com.au/story/5675748/provenance-coffee-founders-love-for-launcestons-lifestyle/>

Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship Theory and Practice*, 32(4), 635–657. doi:10.1111/j.1540-6520.2008.00246.x

Washington State University. (2020). Three reasons an ethical business leads to profits. *Carson College of Business*. Retrieved March 22, 2020, from <https://onlinemba.wsu.edu/blog/3-reasons-an-ethical-business-leads-to-profits/>

Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293–309. doi:10.1007/11187-005-1994-8

World Economic Forum. (2020). Global Shapers Launceston Hub. *Global Shapers Community*. Retrieved March 19, 2020, from <https://www.globalshapers.org/hubs/launceston-hub>

Zaccaro, S. J., & Klimoski, R. (2002). The interface of leadership and team processes

Zhu, W., Riggio, R. E., Avolio, B. J., & Sosik, J. J. (2011). The effect of leadership on follower moral identity: Does transformational/transactional style make a difference? *Journal of Leadership & Organizational Studies*, 18(2), 150–163. doi:10.1177/1548051810396714

### **ADDITIONAL READING**

Crawford, J. A., Dawkins, S., Martin, A., & Lewis, G. (2020a). Putting the leader back into authentic leadership: Reconceptualising and rethinking leaders. *Australian Journal of Management*, 45(1), 114–133.

Edelman, L. F., Manolova, T. S., & Brush, C. G. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management Learning & Education*, 7(1), 56–70. doi:10.5465/amle.2008.31413862

Knox, M., Crawford, J., & Kelder, J.-A. (in-press). Developing authentic leadership and fostering social entrepreneurial innovation. In A. Ayandibu (Ed.), *Reshaping entrepreneurship education with strategy and innovation*. IGI Global.

Knox, M. W., & Crawford, J. (2020). Authentic Leaders and Business Tourism: An Exploration of Authentic Relationships. In *Accelerating Knowledge Sharing, Creativity, and Innovation Through Business Tourism* (pp. 54-72). IGI Global.

Leroy, H., Anseel, F., Gardner, W. L., & Sels, L. (2015). Authentic leadership, authentic followership, basic need satisfaction, and work role performance: A cross-level study. *Journal of Management*, 41(6), 1677–1697. doi:10.1177/0149206312457822

## KEY TERMS AND DEFINITIONS

**Authentic Follower:** An authentic follower is an individual who, through their capacity for positive organizational engagement and authenticity, are self-managing and follow leaders with individuals which they share values.

**Authentic Leader:** An individual that is able to influence and motivate their followers, in order to achieve goals through their positive moral perspective and sincerity, while enabled through heightened awareness and balanced processing.

**Authenticity:** An individual's ability to think with an awareness of self, demonstration of honesty in relationship, while not considering bias.

**Entrepreneurial Education:** The teaching of skills and knowledge, with the aim to provide individuals with such skills and knowledge required for entrepreneurial success in any market.

**Entrepreneurial Emergence:** The development of the individual entrepreneur, not the entire entrepreneurial activity of a start-up.

**Entrepreneurs:** Individuals that create new products, introduce innovations, design different production processes, and increase productivity and competition within the market.

**Nascent Entrepreneurs:** An individual who starts a business independently of others.

# Chapter 7

## Knowledge Spillovers and Strategic Entrepreneurship Revisited: A Review

**Mohammad Bagheri**

 <https://orcid.org/0000-0002-9361-1200>

*IPAM, Portugal*

**Alexandra França**

*University of Vigo, Spain*

### **ABSTRACT**

*The new concepts of knowledge spillovers and strategic entrepreneurship have received attention from both academia and professionals alike. The association between the two and the impacts of one on another is of great interest to both segments due to the significant potentials of the knowledge spillovers on the economic growth of its surrounding regions. Thus, this chapter aims to uncover the theoretical and empirical research on knowledge spillovers and strategic entrepreneurship in the management context. The chapter follows a review approach to discover and extract the most relevant concepts in this conversation. This chapter is set forth to introduce a brief look at the background of the knowledge spillover theory of entrepreneurship and the relationship between knowledge spillovers and strategic entrepreneurship. It is finalized by the avenues of the research and conclusion.*

### **INTRODUCTION**

Knowledge spillovers have been recognized as a central component compelling growth, in the theory of growth, and have been studied by many scholars (Feser & Proeger, 2016). The progress of such knowledge development inherently has augmented the applicability of the external source of knowledge and increased the knowledge related to a firm and its strategic considerations (Feser & Proeger, 2016). There

DOI: 10.4018/978-1-7998-4826-4.ch007

are several entities with an orientation towards knowledge, such as universities, private institutions, and business services that are established as a medium for knowledge spillovers to inspire firms refining their innovative capacities (Feser & Proeger, 2016).

Taking the call from this ongoing trend, researchers initiate to scrutinize the factors and integration of knowledge management and the spillovers' effect as a strategic component in firms (Feser & Proeger, 2016). At the early stage, the main concentration was on sizable firms and their approach for uncovering innovative potentials that drives the knowledge spillovers. Nonetheless, the influential work of Audretsch in 1995 about the Knowledge Spillover Theory of Entrepreneurship (KSTE) unlocked a new sphere in the knowledge spillovers which opens the doors to a clearer understanding of small firms' contribution to the economy (Feser & Proeger, 2016).

Knowledge spillovers are one of the widespread research streams in strategic entrepreneurship (Tavassoli, Bengtsson, & Karlsson, 2017). Knowledge spillovers are defined as "the external benefits from the creation of knowledge that accrue to parties other than the creator, occur at multiple levels of analysis, be it within or across organizations and networks" (Agarwal, Audretsch, & Sarkar 2010, p. 271). The concept has widely been studied in various areas of literature, such as learning in organizations, transfer of technology, and movements of employees and entrepreneurship, to name a few. On the other hand, strategic entrepreneurship refers to the actions planned for seeking competitive advantage, which accelerates entering into new products, processes, technological advancements, and markets by new ventures and incumbents (Agarwal et al., 2010).

The convergence of these two concepts could offer a prevailing window to discover the issues pertinent to both strategy and entrepreneurship, such as creating new firms, the source of firm's know-how and its development process, refurbishing the strategies of incumbents, and innovations progress (Agarwal et al., 2010). Kotha (2010) argues that the new evolving concept of strategic entrepreneurship is concentrated on realizing the way of which firms mix entrepreneurial movements in search of new opportunities with strategic activities to harness the competitive advantages. According to Agrawal, Audretsch, and Sarkar (2007) a new engaging area of research appear that intends to expose the role of knowledge spillovers and its interaction with the competencies of the firms and generation of knowledge in enabling strategic entrepreneurship.

Knowledge spillovers create benefits that ensue to the external entities more than the creators of the knowledge (Kotha, 2010). Such factors can initiate not only new entry but also generate new opportunities for both new firms and incumbents, which is assumed as one of the principles of strategic entrepreneurship. The research on knowledge spillovers has a long history with one of the dominant works in this area being Arrow in 1962, claiming that as knowledge is a public good, knowledge spillovers are logically beyond the control of the entities that originated it (Kotha, 2010).

Accordingly, this chapter intends to look at the academic literature in knowledge spillovers and strategic entrepreneurship and answer questions, such as the way of which knowledge is spilled over to enable entrepreneurial opportunities and thus nascent entrepreneurship, and finally the role of knowledge spillovers in strategic entrepreneurship.

## **THE KNOWLEDGE SPILLOVER THEORY OF ENTREPRENEURSHIP**

The link between knowledge spillovers and entrepreneurship began to be addressed in the book of "Innovation and Industry Evolution" by Audretsch (1995). Audretsch starts a conducive discussion about

## ***Knowledge Spillovers and Strategic Entrepreneurship Revisited***

the importance of small new ventures creating innovations and promoting growth. In this book the author argues that entrepreneurship, starting new firm, is a response to under exploited and commercialized knowledge created by universities or incumbent firms. The author finds evidence that in industries with greater investment in new knowledge, entrepreneurial activity is higher, but it is lower in industries with low technology investment.

The traditional theoretical approach to entrepreneurship has been focused on the role of opportunities, recognized or created, and on differences across individuals to explain their cognitive ability to discover or create entrepreneurial opportunities. In this traditional perspective, the context external to the individual is given and constant. By contrast, the knowledge spillover theory of entrepreneurship does not focus on the heterogeneity of individuals, but the heterogeneity of contexts in which individuals are integrated. Contexts are breeding grounds for the creation of new knowledge and ideas. The entrepreneurial opportunity emerges from the creation of knowledge that has been left uncommercialized due to the uncertainty inherent in knowledge and new ideas (Acs, Audretsch, & Lehmann, 2013). The sources of knowledge producing the spillovers are firms engaging in research and development (R&D), research universities and public sector, such as government agencies and national laboratories (Audretsch & Link, 2019).

If the use of that knowledge by the entrepreneur does not entail payment of a license or royalty for example, then knowledge spillovers are underlying instruments for founding a new venture (Audretsch & Keilbach, 2007). Hence, entrepreneurial activity involves the exploitation of knowledge spillovers not fully appropriated by incumbent firms, and not merely the arbitrage of opportunities (Acs, Braunerhjelm, Audretsch, & Carlsson, 2009).

Whilst individuals are increasingly exposed to new knowledge, the deliberate process of commercialization of this new knowledge requires strategic and entrepreneurial capabilities. Only a few have these abilities to pass from latent (idea) to nascent (action) forms of entrepreneurship (Caiazza, Belitski, & Audretsch, 2020).

## **Knowledge Spillovers and Strategic Entrepreneurship**

The fundamental question that emerges from strategic entrepreneurship is “how firms combine entrepreneurial action that creates new opportunities with strategic action that generates competitive advantage” (Agarwal, Audretsch, & Sarkar, 2007, p.263). One key mechanism that addresses this question and underlies new venture formation and development is knowledge spillovers.

Knowledge spillovers have been defined as “any original valuable knowledge generated in the research process which becomes publicly accessible, whether it is a knowledge fully characterizing an innovation, or knowledge of a more intermediate nature.” (Cohen & Levinthal, 1989, p. 571 footnote no. 4).

Ko and Liu (2015) describe knowledge spillovers as the idiosyncratic flow of knowledge from the system of a body to another. This means that knowledge spillovers will have some external benefits to parties other than the creators of the knowledge.

Knowledge is assumed to be learned with no considerable intent; however, it requires transferring to have a spillover effect (Ferreira, Dana, & Ratten, 2017). It also might be lost in specific circumstances which have made technological firms to distinguish the cognitive distance between old and new knowledge forces. Knowledge, as Steen and Hansen (2014) define, is the know-why in terms of technology, the know-how in terms of operation, the capabilities in terms of organization, and the know-how in terms of the relational network. This is due to the fact that they are ingrained in the instruments, apparatus,



and infrastructure, which play an essential role in increasing the competitive advantage of a firm and creating extra income.

One of the key features that differentiate the knowledge spillovers from knowledge transfer is the fact that knowledge spillovers are uncompensated or under-compensated (free-willed) comparing to the knowledge transfer (Agarwal, Audretsch, & Sarkar, 2010). This entails a compensation rather than a positive association for the knowledge creator and recipient, which also flows from one setting to another, making it different from information as it is complicated to codify and illustrate (Ferreira et al., 2017).

Agarwal et al. (2010) argue that their research has three main implications regarding the previous work on knowledge spillovers and strategic entrepreneurship. First, as the assessment of knowledge is replete with the unpredictability and ambiguity, there are systematic differences between the two concepts of knowledge transfer and knowledge spillovers, which in knowledge transfer the source is sufficiently compensated. In contrast, in knowledge spillovers, the source is either uncompensated or under-compensated. Secondly, these variances in the estimation of knowledge occurred and resolved by strategically entrepreneurial efforts to exploit the present opportunities created by knowledge. Thirdly, investing in knowledge build the potential for having knowledge spillovers and knowledge spill-ins by a dynamic process and periodical process wherein the spillovers lead to spill-ins through a re-combinable procedure.

Firms have a shortcoming in recognizing the way of which to extract the broad capabilities of knowledge, making it a strategic consideration (Kotha, 2010). The high interest in the knowledge economy is the result of the latest evolution of technological innovations that have geared the appearance of knowledge-intensive industries and the stiff competition in creating entrepreneurial ventures competing based on introducing new technological innovations (Ferreira et al., 2017).

The effects of knowledge spillovers are twofold. First, agglomeration effects that are the outcome of related firms in congruent sector sharing the same location, which brings about constant cumulative innovation because of the collaboration of the same sector firms in a stable fashion. This constant and growing innovation implies that strategic entrepreneurship emerges upon the time knowledge spillovers strike to create new products, processes, or technologies. Second, the urbanization effects that are the co-location of various economic undertakings, which are also called diversity externalities. The urbanization effects bring together knowledge in a new approach in diverse economic institutions and make them different from agglomeration effects through their results that are more of radical innovation (Ferreira et al., 2017).

Steen and Hansen (2014) argue that the previous works on knowledge spillovers were mainly dedicated to the “how part of the phenomenon” instead of looking at the “components of the process”. The authors consider that knowledge spillovers include people, patents, equipment, standards, and business models, among others. One of the fundamental factors influencing the knowledge spillovers is the economic geography. It implies that the knowledge is exterior to the firm but located near its physical location, which makes it easier to obtain the knowledge and breed superior competitive performance. This phenomenon is due to a better diffusion of knowledge that is shared among the firms in close vicinity and adds more context to the knowledge (Ferreira et al., 2017).

In the same vein, Ko and Liu (2015) indicate that one of the several factors that have an impact on knowledge spillovers is the environmental context which can be implied as absorbing the disclosed knowledge and turning it into strategically oriented actions.

Caiazza et al.(2015) claim that the firm’s competitive and entrepreneurial efforts rely on two things: formulating knowledge by the internal investment and adopting external knowledge created by other

## ***Knowledge Spillovers and Strategic Entrepreneurship Revisited***

parties. However, the competitiveness of a region is dependent on the effects of knowledge on a firm's competitiveness and entrepreneurship. The authors indicate that based on the review of literature, "spatial proximity between innovators and adopters is a crucial issue in the knowledge diffusion process" (p. 901).

According to Ferreira et al. (2017), knowledge spillovers happen when it is simpler to collaborate among the innovators and the innovation process based on the geographical closeness. In international contexts, language and cultural differences would be barriers for knowledge transfer that lead to learning through doing and direct experience process of knowledge transfer. The authors argue that one of the contributing factors in knowledge spillovers, which leads to innovation, is sharing the source of knowledge. The similarity of the sectors and cognitive systems among them facilitate the knowledge spillovers.

Feser and Proeger (2016) studied German context for the efficiency consultant (EEC) sector and realized that knowledge spillovers are challenging in the non-transparent markets. The authors examine one of the very classical credence good markets, operating by knowledge-intensive experts, the medical sector, to reveal the ways of removing the structural issues barriers, and to advance the knowledge spillovers proficiently.

Knowledge spillovers can be intra-sectorial or cross-sectorial, subject to the industry and the region of which it is involved in. Some studies concentrate on the mixture of commercialization of knowledge and research in the university context and claim that there is a link between the research of the university and the innovation process by private firms. This connection has been influential in defining the impact of university and industry research on creating new inventions and innovations (Ferreira et al., 2017). In this context, Rodríguez-Gulías, Rodeiro-Pazos, and Fernández-López (2016) conducted a study on 531 Spanish University Spin-offs in 16 regions of Spain launched by 51 universities from 2001 to 2013. The findings reveal that the characteristics of firms are crucial for the growth of such spin-offs; however, the region's context plays a role, which makes the firms take the best out of locating their firms in particular areas.

Ferreira et al. (2017) argue that the geography and location of the firms influence entrepreneurial performance. Therefore, knowledge spillovers ensue in the context of a location through which firms from various industries in the same physical location cooperate and promote innovation. This suggests that networking organizations from different verticals of industries come together to share knowledge and increase cooperation among themselves and ultimately encourage innovation.

Audretsch (2003, p. 173) argue that "geographic space provides the platform not just for the creation of new knowledge but also, as a result of the spillover process, for the commercialization of that knowledge." The author claims that the spatial paradox in an innovative activity that the knowledge spills from the source of production over to the commercialization entity makes geographic location unrelated to the access of new knowledge. This paradox emerges because knowledge spillovers are localized and inclined to be deteriorated through the transmission across geographic location very quickly (Audretsch, 2003). Furthermore, the creativity manifested in an entrepreneur or inventor and the distinct working and living environment of creative people is influential in creating business opportunities.

To conclude, it can be declared that one of the attractive features of knowledge spillovers is the capability of commercializing the knowledge which intuitively generates income and is influential in linking the investment in knowledge to the development of economy and accelerating the growth of the regional innovation (Ferreira et al., 2017). The knowledge spillovers are due to strategic decisions and actions of the firms instead of unintentional happenings (Steen & Hansen, 2014). Therefore, new firms ride on knowledge spillovers to locate opportunities and seek the type of knowledge that empowers them commercially through proper integration (Ferreira et al., 2017).

## **FUTURE RESEARCH DIRECTIONS**

The knowledge spillover theory of entrepreneurship is in its empirical infancy stage (Hayter, 2013; Iftikhar, Ahmad, & Audretsch, 2020). In 2010, Agarwal et al. (p. 276), listed eleven questions to be studied by scholars and researchers to uncover the issues and challenges in knowledge spillovers and entrepreneurship. The authors raise questions such as, “what role does the institutional knowledge context have on subsequent spillovers of knowledge?” and “what factors have an impact on knowledge spillovers and strategic entrepreneurship within and across organizational contexts?” The connection between knowledge spillovers and strategic entrepreneurship is still somewhat understudied and some research opportunities are enumerated as follows.

Acs et al. (2009) posit that entrepreneurship contributes to economic growth. However, these authors found evidence that entrepreneurial activities decrease under greater regulation, bureaucratic constraints and government market intervention. Further research is needed to understand the role of intellectual property rights protection. In light of the knowledge spillover theory of entrepreneurship, if intellectual property becomes overly protected, and all rents are due to the producer of knowledge, it will reduce knowledge spillovers and consequently entrepreneurial activities and growth.

Qian and Acs (2013) introduce entrepreneurial absorptive capacity as a critical factor that affects the relationship between new knowledge, knowledge embodied in people (i.e., human capital), and entrepreneurship, which opens a new area of research in strategic entrepreneurship. This capacity allows entrepreneurs to “understand new knowledge, recognize its value, and commercialize it by creating a firm” (p.185). By the same token, Audretsch and Belitski (2013) argue that creativity, not only in ordinary human capital, is also a fundamental element behind knowledge spillovers-entrepreneurship nexus. Additionally, Hayter (2013) recognizes that social networks are essential drivers of information, resources and new knowledge. Accordingly, additional empirical work is needed to find other factors and capabilities that underly the link between knowledge spillovers and strategic entrepreneurship.

Steen and Hansen (2014) describe knowledge spillovers as a process that determines the transfer or dissemination of knowledge into a new setting or domain. Although this area has gained considerable attention from scholars, research about why this happens and how the process of transfer unfolds are still unclear and fuzzy.

Ferreira et al. (2016) argue that the size of knowledge spillovers can be the result of factors such as internationalization and culture. This opens new avenues of research in knowledge spillovers-based strategic entrepreneurship. Studying such factors can be interesting research areas as it can uncover various strategies that are employed by the firms to exploit the value of knowledge spillovers. It enables academia and practitioners to improve the realization of the complexity of the process of knowledge spillovers and how firms can extrapolate more applicable knowledge. Future research can look at the acquisition of global talent management and knowledge spillovers, and strategic entrepreneurship to unveil the critical function of human resources in capitalizing on new ventures.

Tavassoli et al. (2017) claim that knowledge spillovers can be both spatial, i.e. inter-firm knowledge spillovers within a same region, or aspatial, i.e. either inter-region or intra-firm, from one organizational unit to another within a firm or through alliance. However, the authors argue that the literature is highly concentrated on the spatial dimension. Consequently, future research efforts should be made on how knowledge is spilled over through firm units, alliances, networks and regions.

Ferreira et al. (2017) recommend having more research conducted on knowledge spillovers and strategic entrepreneurship to further develop the concepts in three main areas. First, uncovering the

## ***Knowledge Spillovers and Strategic Entrepreneurship Revisited***

impact of international collaboration on knowledge spillovers in various sectors. Secondly, analyzing the concept of knowledge spillovers further to create new theories related to strategic entrepreneurship. Thirdly, realizing the means that regulatory and policy determinants accelerate the knowledge spillovers.

An important finding in this conversation is that small firms are able to compensate their liability of size by harnessing knowledge created in other organizational contexts. The literature suggests that knowledge spillovers stem from two main sources: other firms and universities. Nonetheless, Audretsch and Link (2019) found that the public sector is also an additional source of knowledge for entrepreneurial firms. Accordingly, future research should consider the diversity of sources of knowledge.

Finally, it is critical to consider that developing countries generally have low knowledge-intensive entrepreneurship and thus far scholars have concentrated in empirically testing the knowledge spillovers in developed countries. However, a first attempt was made by Iftikhar et al. (2020). The authors found out that in Pakistan knowledge spillovers play a crucial role in the creation of new firms at the city level. Although knowledge may have higher commercial value in the developed world, this does not mean that knowledge spillover is negligible for entrepreneurship in developing countries. Hence, further scrutiny is needed in such contexts as there is relatively little empirical evidence on knowledge spillovers in developing countries.

## **CONCLUSION**

The above discussion covered the background of knowledge spillovers and strategic entrepreneurship and had a deep dive into the academic literature to reveal the link between these two concepts.

It can be concluded that it is critical for firms and regions competitiveness to use knowledge spillovers for strategic entrepreneurship. The reason is that knowledge can have an impact on the entrepreneurial potentials, serving as a way to accelerate the competitive advantage on a global scale. While previous studies were mainly concentrated on the role of knowledge spillovers and entrepreneurship concepts in general terms, this work focused on highlighting the intended strategic behavior. Hence, this study promotes a discussion that goes beyond the theory of knowledge spillover of entrepreneurship, linking knowledge spillovers to entrepreneurial opportunities and strategic entrepreneurship.

## **REFERENCES**

- Acs, Z., Audretsch, D. B., & Lehmann, E. E. (2013). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 41(4), 757–774. doi:10.1007/11187-013-9505-9
- Acs, Z. J., Braunerhjelm, P., Audretsch, D. B., & Carlsson, B. (2009). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 32(1), 15–30. doi:10.1007/11187-008-9157-3
- Agarwal, R., Audretsch, D., & Sarkar, M. B. (2007). The process of creative construction: Knowledge spillovers, entrepreneurship, and economic growth. *Strategic Entrepreneurship Journal*, 1(3-4), 263–286. doi:10.1002/ej.36
- Agarwal, R., Audretsch, D. B., & Sarkar, M. B. (2010). Knowledge spillovers and strategic entrepreneurship. *Strategic Entrepreneurship Journal*, 4(4), 271–283. doi:10.1002/ej.96

- Audretsch, D. B. (1995). *Innovation and Industry Evolution*. MIT Press.
- Audretsch, D. B. (2003). Innovation and spatial externalities. *International Regional Science Review*, 26(2), 167–174. doi:10.1177/0160017602250973
- Audretsch, D. B., & Belitski, M. (2013). The missing pillar: The creativity theory of knowledge spillover entrepreneurship. *Small Business Economics*, 41(4), 819–836. doi:10.1007/1187-013-9508-6
- Audretsch, D. B., & Keilbach, M. (2007). The theory of knowledge spillover entrepreneurship. *Journal of Management Studies*, 44(7), 1242–1254. doi:10.1111/j.1467-6486.2007.00722.x
- Audretsch, D. B., & Link, A. N. (2019). Entrepreneurship and knowledge spillovers from the public sector. *The International Entrepreneurship and Management Journal*, 15(1), 195–208. doi:10.1007/11365-018-0538-z
- Caiazza, R., Belitski, M., & Audretsch, D. B. (2020). From latent to emergent entrepreneurship: The knowledge spillover construction circle. *The Journal of Technology Transfer*, 45(3), 694–704. doi:10.1007/10961-019-09719-y
- Caiazza, R., Richardson, A., & Audretsch, D. (2015). Knowledge effects on competitiveness: From firms to regional advantage. *The Journal of Technology Transfer*, 40(6), 899–909. doi:10.1007/10961-015-9425-8
- Cohen, W. M., & Levinthal, D. A. (1989). Innovation and learning: The two faces of R&D. *Economic Journal (London)*, 99(397), 569–596. doi:10.2307/2233763
- Ferreira, J. J., Dana, L.-P., & Ratten, V. (2017). *Knowledge Spillover-based Strategic Entrepreneurship*. Routledge.
- Ferreira, J. J., Ratten, V., & Dana, L.-P. (2016). Knowledge spillover-based strategic entrepreneurship. *The International Entrepreneurship and Management Journal*, 1–7. doi:10.1007/11365-016-0415-6
- Feser, D., & Proeger, T. (2016). Asymmetric information as a barrier to knowledge spillovers in expert markets. *The International Entrepreneurship and Management Journal*, 1–22. doi:10.1007/11365-016-0404-9
- Hayter, C. S. (2013). Conceptualizing knowledge-based entrepreneurship networks: Perspectives from the literature. *Small Business Economics*, 41(4), 899–911. doi:10.1007/1187-013-9512-x
- Iftikhar, M. N., Ahmad, M., & Audretsch, D. B. (2020). The knowledge spillover theory of entrepreneurship: The developing country context. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-020-00667-w
- Ko, W. W., & Liu, G. (2015). Understanding the process of knowledge spillovers: Learning to become social enterprises. *Strategic Entrepreneurship Journal*, 9(3), 263–285. doi:10.1002/ej.1198
- Kotha, S. (2010). Spillovers, spill-ins, and strategic entrepreneurship: America's first commercial jet airplane and Boeing's ascendancy in commercial aviation. *Strategic Entrepreneurship Journal*, 4(4), 284–306. doi:10.1002/ej.97
- Qian, H., & Acs, Z. J. (2013). An absorptive capacity theory of knowledge spillover entrepreneurship. *Small Business Economics*, 40(2), 185–197. doi:10.1007/1187-011-9368-x

## ***Knowledge Spillovers and Strategic Entrepreneurship Revisited***

Rodríguez-Gulías, M. J., Rodeiro-Pazos, D., & Fernández-López, S. (2016). The effect of university and regional knowledge spillovers on firms' performance: An analysis of the Spanish USOs. *The International Entrepreneurship and Management Journal*, 13, 1–19. doi:10.1007/11365-016-0399-2

Steen, M., & Hansen, G. H. (2014). Same sea, different ponds: Cross-sectorial knowledge spillovers in the North Sea. *European Planning Studies*, 22(10), 2030–2049. doi:10.1080/09654313.2013.814622

Tavassoli, S., Bengtsson, L., & Karlsson, C. (2017). Strategic entrepreneurship and knowledge spillovers: Spatial and aspatial perspectives. *The International Entrepreneurship and Management Journal*, 13(1), 233–249. doi:10.1007/11365-016-0405-8

## **KEY TERMS AND DEFINITIONS**

**Competitive Advantage:** Favorable position an organization seeks in order to outperform its rivals.

**Growth:** Refers to company growth or economic growth. It denotes a positive development, highly beneficial for companies, investors, and the country's economy in general.

**Innovation:** A new idea, method, or device, the introduction of something new.

**Knowledge Spillover Theory of Entrepreneurship:** This theory posits that Knowledge created endogenously results in knowledge spillovers, which allow entrepreneurs to identify and exploit opportunities.

**Knowledge Spillovers:** The external benefits from the creation of knowledge that accrue to parties other than the creator, occur at multiple levels of analysis, be it within or across organizations and networks.

**Strategic Entrepreneurship:** Actions planned for seeking competitive advantage, which accelerates entering into new products, processes, technological advancements, and markets by new ventures and incumbents.

## Chapter 8

# Determinants of Nascent Entrepreneurship Development

**Albérico Travassos Rosário**

 <https://orcid.org/0000-0003-4793-4110>

*University of Aveiro, Portugal*

**Filipa Fernandes**

*IPAM, Portugal*

**Ricardo Gomes Raimundo**

 <https://orcid.org/0000-0002-7022-9447>

*IPAM, Portugal*

**Rui Nunes Cruz**

 <https://orcid.org/0000-0002-5773-6049>

*Universidade Europeia, Portugal*

### ABSTRACT

*The current international economic crisis, at the moment of writing, will affect global economy and will demand entrepreneurial attitude to seize business opportunities. Nascent entrepreneurship emerged as an important concept in the boundary between entrepreneurship and organizational contexts. Literature on nascent entrepreneurship has only gained attention recently, thus remaining diverse and limited, particularly concerning their interplay with contexts and varying entrepreneurial processes. This study reviews those themes on nascent entrepreneurship and it enhances the way contextual challenges are addressed by nascent entrepreneurs, through diverse entrepreneurial leaning and entrepreneurial capability.*

DOI: 10.4018/978-1-7998-4826-4.ch008

## INTRODUCTION

Recent developments have extended the very definition of entrepreneurship, intertwining discussions of innovation, risk assumption and policy changes into a multidimensional discussion in which the issue of nascent entrepreneurs, who have the ability to seize nascent business opportunities, is key (Johnson et al., 2006).

This article investigates the interplay between nascent entrepreneurship (NE in further text) context and other entrepreneurial themes such as entrepreneurial characteristics, learning trigger responses, learning outputs and entrepreneurial capability in different papers. Nascent entrepreneurship is significant because of its economic importance, especially within distinct contexts of specific learning triggers and the role of their owner manager on this (Van Stel et al., 2007). NE, entrepreneurial learning and entrepreneurial capability are at the core of entrepreneurial processes and economic growth. More insight is needed to understand that interplay (Obschonka et al., 2011).

This paper aims at contributing by reviewing literature on the subject across several topics. There is a need for theory-building that may address its major issues (Johnson et al., 2006). This study intends to shed light upon how NE interplays (Obschonka et al., 2011) on its diverse themes (e.g. entrepreneurial learning). It intends to bring additional insights upon the role of NE in the entrepreneurship research.

Our findings show how NE relates to context, entrepreneurial characteristics, entrepreneurial response triggers, entrepreneurial learning and entrepreneurial capability, by linking the various themes (Johnson et al., 2006).

Firstly, the study shows several studies on entrepreneurial characteristics that might influence NE. Secondly, it focuses on several papers on regional entrepreneurship, which is consistent with different contextual learning triggers. Thirdly, the study identifies different papers that discuss diverse combinations of learning modes among entrepreneurs, in creating knowledge (De Clercq & Arenius, 2006). Fourthly, it sheds light over the entrepreneurial capability addressed in distinct papers and the way it interplays with nascent entrepreneurship. Finally, the study concludes with the major findings on the addressed reviewed literature. NE is at the intersection of entrepreneurial capability, learning and context (Hörisch et al., 2019). Therefore, different contexts require distinct entrepreneurial learning, capabilities and NE. The contribution of this article lies in describing that interaction across 64 reviewed papers. Moreover, due to the scarce resources of nascent entrepreneurs, their knowledge is an intangible asset on which capabilities companies rely (Hechavarría et al., 2016).

In discussing the interplay between the aforementioned dimensions, we enhanced the differences / similarities within its literature. This paper investigates the major themes on NE while emphasizing the role of entrepreneurial capability and contexts. The following research question guided this study: What are the prevailing thematic strands of literature on the NE subject?

For this purpose, we compile a series of most the quoted the peer-reviewed literature on the topic. This compilation summarizes the current approach to capturing on-going nascent firms' efforts and opens up a promising avenue for entrepreneurship research. While many interesting results have already been accounted, and while substantial developments on both the method and theory sides of research have been achieved, there is still room and need for further improvements (Obschonka et al., 2011).



## **METHODOLOGICAL APPROACH**

We conducted a Literature Review (LR) of NE following the suggestions of Denyer and Tranfield (2009) and Rosário and Cuz (2019). A LR that enhances: (1) the validity of a review by providing a clear set of steps that can be followed if the study were to be replicated; (2) the rigor of a review by providing generated evidence supporting the arguments closely related to the research questions; and (3) the generalizability of the results by allowing the accumulated knowledge in the field to be synthesized and analyzed. Taking the above into account, we consider LR as a ‘guiding tool’, which allows us to shape the review according to our research objectives, rather than a methodology with a concrete set of rigid rules.

Thus, the literature review allows a comprehensive knowledge on the topic, as well as their evolution over time, identifying researchers, publications and the nature of the most relevant articles (Rosário & Cuz, 2019, Sacavém, et al., 2019). In the case, NE is the methodological object of analysis, on which we gathered, selected and synthesized information primarily based on academic databases and its comprehensive research engines.

As suggested by Denyer and Tranfield (2009) and Rosário and Cuz (2019), Sacavém, et al. (2019) allows a comprehensive knowledge, consisting of the identification, selection, analysis and synthesis of existing research on a given theme, with the presentation of the main issues and results that emerge from the research, which may be conceptual or empirical. This revision model is dedicated to the study of scientific documents with the purpose of previewing the theory, with its main limitation being the fact that it is necessary to remove and interpret the information from the documents. The study proceeds as follows: (i) definition of the research question; (ii) location of studies; (iii) selection and evaluation of studies; (iv) analysis and synthesis; (v) presentation of results; and (vi) discussion and conclusion of results. This methodology ensures that the review is comprehensive, auditable and replicable and responds to specific research questions, following the main procedures of the integrative literature review (Rosário & Cuz, 2019; Sacavém, et al., 2019).

This literature review (LR), was carried out in April 2020 through the SCOPUS database, using as key words “nascent entrepreneurship”, in a comprehensive way (title, abstract and keywords), and limited to peer-review literature on business, management and accounting topics. Our literature view aims at generating insights into recent developments in the field, analysis the research to date, and identify opportunities for future research. We intend to bring up an insightful, meticulous and transformative critical research of literature, by refining the definitions of the key constructs and identifying research development and clusters. This LR intends to ease the discussion for evidence informed policy and practice. We have obtained a set of 64 scientific articles cited, 3 open access articles and 61 other types of access.

## **LITERATURE ANALYSIS: THEMES AND TRENDS**

Peer-reviewed articles on the topic can be traced as back as 2003. With the exception of 2004 and 2008, there has been peer-reviewed literature on the topic in a consistent yearly basis. 2015 was the year with the largest amount of peer-reviewed articles on the topic, amounting to 9. Figure 1 summarizes the published peer-reviewed literature for the 2003–2020 period.

The publications were sorted out as follows: the Small Business Economics topped with 14 publications, followed by the Journal of Business Venturing Insights with 8; Journal of Developmental Entrepreneurship; International Small Business Journal (5); Journal of Business Venturing (4); International Journal

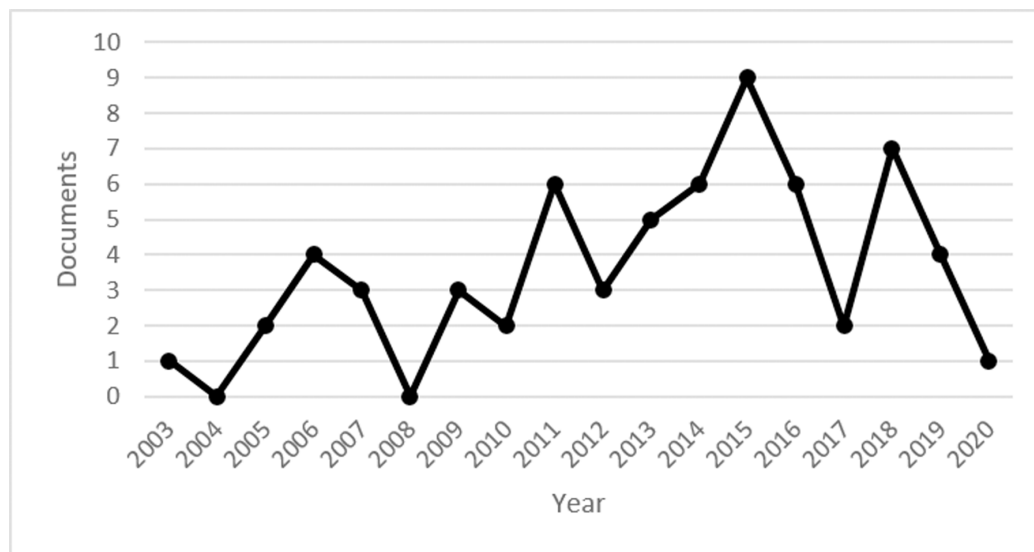
## Determinants of Nascent Entrepreneurship Development

of Business Behavior and Research; International Journal of Entrepreneurship and Small Business; with 3 each; o Entrepreneurship and Regional Development; Industry and Higher Education; International Journal of Entrepreneurship and Management with 2, the remaining journals with 1 publication each.

We can say that between 2012 and 2015 there was a growing interest in publications on nascent entrepreneurship.

Figure 1. Documents by year

Source: own elaboration



In Table 1 we analyze for the 2019 Scimago Journal & Country Rank (SJR), the best quartile and the H index by publication. The Journal of Business Venturing is the most quoted publication with 4.977 (SJR), Q1 and H index 170. There is a total of 15 journals on Q1, 6 journals on Q2 and 5 journals on Q3. Journals from best quartile Q1 represent 58% of the 64 journals titles; best quartile Q2 represents 23% and finally, best quartile Q3 represents 19% of the 64 journals titles.

As evident from Table 1, the significant majority of articles on nascent entrepreneurship rank on the Q1 best quartile index.

The subject areas covered by the 64 scientific articles were: Business, Management and Accounting (64); Economics, Econometrics and Finance (28); Social Sciences (7); Decision Sciences (3); Arts and Humanities (2); Engineering and Psychology (1).

The most quoted article was “The role of social and human capital among nascent entrepreneurs” from Davidsson and Honig (2003) with 1960 quotes published in the Journal of Business Venturing with 4.977 (SJR), the best quartile (Q1) and with H index (170). The published article focuses on the study of nascent entrepreneurship, comparing individuals involved in nascent activities.

In Figure 2 we can analyze the evolution of citations of articles published between 2003 and 2020. The number of citations shows a net positive growth with an R2 of 82% for the 2003–2020 period, with 2019 peaking at 714 citations.

*Table 1. Scimago journal & country rank impact factor*

<b>Title</b>	<b>SJR</b>	<b>Best Quartile</b>	<b>H index</b>
Journal of Business Venturing	4.977	Q1	170
Journal of Management Studies	4.608	Q1	172
Research Policy	3.246	Q1	224
Organization Studies	2.967	Q1	140
Journal of Vocational Behavior	2.210	Q1	141
Small Business Economics	1.929	Q1	120
International Small Business Journal	1.848	Q1	78
Journal of Technology Transfer	1.657	Q1	73
Journal of Business Venturing Insights	1.489	Q1	14
Entrepreneurship and Regional Development	1.368	Q1	83
International Entrepreneurship and Management Journal	1.164	Q1	50
International Journal of Entrepreneurial Behaviour and Research	0.967	Q1	62
Education and Training	0.752	Q1	62
International Journal of Arts Management	0.456	Q1	11
International Journal of Cross Cultural Management	0.350	Q1	45
Journal of Social Entrepreneurship	0.521	Q2	23
Evidence-Based HRM: A Global Forum for Empirical Scholarship	0.464	Q2	9
Industry and Higher Education	0.450	Q2	21
International Journal of Entrepreneurship and Small Business	0.407	Q2	29
International Journal of Entrepreneurial Venturing	0.372	Q2	14
Academia Revista Latinoamericana de Administracion	0.305	Q2	11
Journal of Developmental Entrepreneurship	0.273	Q3	23
Journal of East-West Business	0.266	Q3	16
International Journal of Entrepreneurship and Innovation Management	0.217	Q3	22
Global Business and Economics Review	0.188	Q3	11
International Journal of Management and Enterprise Development	0.174	Q3	25

Source: own elaboration

The h-index was used to ascertain the productivity and impact of the published work, based on the largest number of articles included that had at least the same number of citations. Of the documents considered for the h-index, 23 have been cited at least 23 times.

In Table 3, the citations of all scientific articles from the 2005 to 2020 period are analyzed; 5 documents were not cited until 2020, until 2005, 37; 2006, 42; 2007, 78; 2008, 138; 2009, 143; 2010, 198; 2011, 304; 2012, 274; 2013, 380; 2014, 416; 2015, 505; 2016, 577; 2017, 559; 2018, 578; 2019, 714; and 2020, 320, with a total of 5241 citations.

Of the 64 scientific papers, 5 have not been cited until the time of writing of this paper (Table 2) (two papers from the same Journal of Developmental Entrepreneurship). The direct, indirect and cross lagged article: *The effects of cultural policy on nascent cultural entrepreneurship* by Vecco and Srakar (2020), 0.456 (SJR), Best Quartile Q1 and Index H (11) was also not cited.

## Determinants of Nascent Entrepreneurship Development

Figure 2. evolution of citations between 2003 and 2020

Source: own elaboration

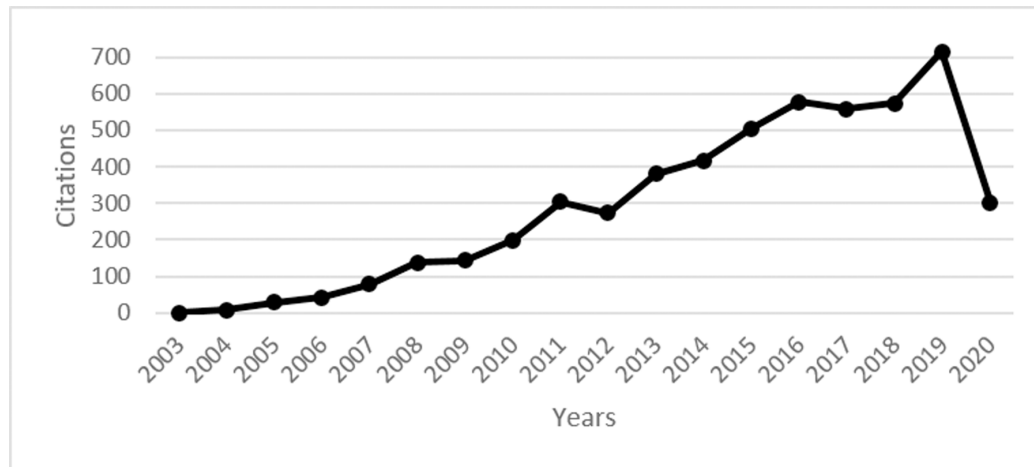


Table 2. Documents without quotes until 2020 (2003–2020 period)

Documents	Investigator	Title	SJR	Best Quartile	H index
Direct, indirect and cross-lagged: The effects of cultural p...	Vecco & Srakar (2020)	International Journal of Arts Management	0.456	Q1	11
Nonlinear evaluation of status and signal effects	Schneck (2013)	Evidence-Based HRM: A Global Forum for Empirical Scholarship	0.464	Q2	9
Nascent entrepreneurs in Caribbean small island developing s...	Mohan et al. (2018)	Journal of Developmental Entrepreneurship	0.273	Q3	23
Why are suboptimal contracts usually chosen in venture capit...	Cai (2014)	Journal of Developmental Entrepreneurship			
An examination of the impact of product and service quality ...	Dadzie et al. (2010)	<i>Global Business and Economics Review</i>	0.188	Q3	11

Source: own elaboration

## CHARACTERISTICS OF NASCENT ENTREPRENEURS

Nascent entrepreneurs presented significant characteristics (e.g. in terms of gender, race, psychological attributes) that generate continued debates on their influences upon the entrepreneurial process (e.g. Zampetakis et al., 2016). This remains a central issue; as a result, insights on this process remain limited (Minniti & Nardone, 2007). Among the most researched topics we can find cognitive-related or social-related themes. On one hand, the role of different cognitive factors in developing and sustaining a new business amidst a complex and uncertain process (Hird, 2012); goal and social cognitive theories in nascent entrepreneurial start-up outcomes should be considered (Hechavarria et al. 2012); expectancy theory, in assuming startup-specific valence and expectancy as key components of entrepreneurial motivation (Renko et al., 2012); self-efficacy, which is important for understanding why an attractive idea may lead an entrepreneur to develop passion for a particular project (Dalborg & Wincent, 2015);

and affective ambivalence that once anticipated constitutes a significant element in the entrepreneurial process, holding a central role in the realization of entrepreneurial intentions (Zampetakis et al., 2016).

On the other hand, the entrepreneurs' social identity, which is related to the type of opportunity they pursue, and which might explain different levels of entrepreneurial self-efficacy (Brändle, 2018); the gender, when estimating the role of inequality in individual and country attributes between man and woman in bridging the gender entrepreneurship gap (Honig & Samuelsson, 2015); or by analyzing the entrepreneurial choices of men and women put in identical economic environments and socioeconomic circumstances (Minniti & Nardone, 2007); as well as race, when studying the variables related to observed differences in the rate of entrepreneurial involvement between black and white Americans (Köllinger & Minniti, 2006).

## CONTEXT

The role of nascent entrepreneur as learning actor cannot be appreciated outside of contextual characteristics of their environments, in which they demonstrate distinct NE while exhibiting varying depths of change in their entrepreneurial outcomes (Stuetzer et al., 2014). NE is therefore relational while envisioning, exploring future opportunities and conducting, exploiting, daily management (Hill, 2018). This study emphasizes the role of nascent entrepreneurs' regional innovation milieus during their NE (Klyver et al., 2018). The majority of research on the topic addresses the links between national culture and entrepreneurial activity (Alon et al., 2016); the link between regional characteristics and individual entrepreneurship (Stuetzer et al., 2014); the relationship between a country's rate of entrepreneurial dynamics and its level of economic development (Wennekers et al., 2005); the demographic and economic variables that are significantly correlated with an individual's decision to become an entrepreneur (Arenius & Minniti, 2005); the regional factors that influence the decision to start (or not to start) a new business (Tamásy, 2010); culture as a significant factor in predicting opportunity and necessity entrepreneurship rates at the country level (Hechavarria & Reynolds, 2009); the effects of cultural policy, in terms of public budgets for culture, on NE (Vecco & Srakar, 2020); the social structure of the family in enabling young entrepreneurs to navigate the institutional voids and progress through the venturing process (Manolova et al., 2019); the underperforming of certain countries on benchmarks for nascent entrepreneurship and external startup funding (Swartz et al., 2019; Frid et al., 2016); the correlation of government regulation with nascent ventures' outcomes (Kwapisz, 2019; Van Stel et al., 2007); and the correlation between nascent and established entrepreneurs with regard to their ventures' environmental orientation (Hörisch et al., 2019). Also, it is considered the impact of individual culture orientations on the nascent entrepreneurship at the individual level (Alsaad, 2018); the effectiveness of support during the venture development process (Klyver et al., 2018); the transformation of capitals that mediate nascent entrepreneurs' social positioning (Hill, 2018).

Literature that examines less-favored or intermediate contexts is limited and different from the regions in which knowledge-based economic development theories have been primarily developed, endowed with innovative actors and related institutional support (Dadzie et al., 2010). Challenges that restrict NE in peripheral regions include limited internal resources and knowledge bases, heavy reliance on knowledge held tacitly in a firm, with little interactive learning and knowledge transfer, resulting from limited capabilities to shape and influence external environments (Kim, 2014). Consequently, this outlook raises the question of what entrepreneurial processes are involved in those businesses. Responses behind NE in

## ***Determinants of Nascent Entrepreneurship Development***

nascent entrepreneurs are equally diverse and complex, though most studies provide a conceptualization based on homogeneous advanced economies. Further investigation is required in developing or transition contexts (Kim, 2014). Most research addresses support schemes to entrepreneurs in less developed countries, for instance in commercial bank products/services (Dadzie et al., 2010; Kim, 2014); differences between nascent opportunity and necessity entrepreneurs (Mohan et al., 2018); the issue/value type of opportunity identified in less developed regions (Lanteri, 2015); and the notion of hidden entrepreneurs engaged in commercial entrepreneurship (Williams & Nadin, 2011).

## **LEARNING PROCESSES**

Although evidence regarding nascent entrepreneurship is incomplete, entrepreneurial learning theory draws from a variety of theoretical perspectives in relating to how individual entrepreneurs learn, accumulate and update knowledge principally by experiential learning (Hopp & Greene, 2018): learning in entrepreneurship research includes exploitative learning-by-doing, explorative trial-and-error, planning, imitation, acquiring (i.e., grafting), and searching, external learning, improvisation, and networking and learning how to learn in response to radical challenges to their existence and sustainability. The majority of studies on entrepreneurial learning and nascent entrepreneurs comprehend the temporal relationship between formal written business plans and the achievement of new venture viability (Hopp & Greene, 2018); the participation in business plan seminars and entrepreneurial learning outcomes through the development of competencies amongst nascent entrepreneurs (Watson et al., 2018); the outcomes of such entrepreneurial business planning to assess effectiveness (Honig & Samuelsson, 2014); the performance effects of heterogeneities in experience type – management, industry, and start-up experience – for nascent venture teams (Thiess et al., 2016); and the searching /networking for social capital as a robust predictor for nascent entrepreneurs and start-up process (Davidsson & Honig, 2003).

## **LEARNING TRIGGERS**

Learning and adaptation are stimulated through critical contextual events, sometimes mistakes and failures that prompt transformational learning paramount to entrepreneurial learning (e.g. Hill, 2018). Diverse learning triggers emerge as nascent entrepreneurs often operate in distinct contexts, of different constraints and opportunities. Different factors may lead individuals to create new ventures and predict nascent entrepreneurship (Nishimura & Tristán, 2011; Kessler and Frank, 2009). For instance, the influence of anticipated regret, a negative emotion, on the transformation of latent entrepreneurs into nascent entrepreneurs (Hatak & Snellman, 2017); the iterative processes that need to be strategically managed when entering a new field or changing a social position within a field (Hill, 2018); fear of failure as a responsive avoidance motive (Kollmann et al., 2017); the influence of creative, business and personal lives with nascent ventures (Hanage et al., 2016; Hulsink & Koek, 2014); and the interplay between work positions and future entrepreneurial careers (Schneck, 2013). Finally, the factors that determine whether new business opportunities are exploited by starting a new venture for an employer ('nascent intrapreneurship') or independently ('nascent entrepreneurship') (Parker, 2011).

## **ENTREPRENEURIAL CAPABILITY**

Research has assessed how entrepreneurs build entrepreneurial capability, defined as an entrepreneur's dynamic capability to sense, select, and shape opportunities, and synchronize resources (Lichtenstein et al., 2007). The research that emphasized the relationship of NE and entrepreneurial capability focuses on distinct subjects: it concludes that some entrepreneurs are able to start a new business more quickly than others in the venture creation process (Hechavarría et al., 2016; Lichtenstein et al., 2007); that some nascent entrepreneurs are successful in creating new businesses, through decision making processes of causation and effectuation, while others quit their projects (Schleinkofer & Schmude, 2013); that some experience and articulate their own 'learning' and development during the first year of a specific experientially-based program (Blackwood et al., 2015); that a balanced skills set influence nascent entrepreneurs and their inventive activity (Goel & Göktepe-Hultén, 2013; Stuetzer et al., 2013; Krabel & Mueller, 2009); along with economic characteristics (Parker & Belghitar, 2006; Davidsson, 2015; Delmar, 2015).

## **CONCEPTUALIZING THE NASCENT ENTREPRENEURSHIP**

### **Characteristics of Nascent Entrepreneurs**

By answering the question of the interplay between the characteristics of nascent entrepreneurs and NE, this study shows how nascent entrepreneurs' cognitive and social characteristics are central to assuming risks proactively and innovating, thus building and embedding knowledge from varied sources. Individual valence is a multidimensional construct, and various types of valence are related to different intent and entrepreneurial outcomes (Renko et al., 2012).

The study presents key findings on how certain individual characteristics of self-efficacy and replication-and-extension attempt are prerequisites for passion to grow (Blackwood et al., 2015; Dalborg & Wincent, 2015; Davidsson, 2015; Delmar, 2015).

It also concludes that cognitive style is highly influential in the process of founding a business, in which the process of business formation and survival developed in different ways (Hird, 2012). Motivation is also a central issue, as results suggest that motivational antecedents among nascent entrepreneurs significantly influence the likelihood of quitting the start-up process versus continuing nascent entrepreneurial start-up efforts (Hechavarría et al. 2012). Race (Köllinger & Minniti, 2006) and gender (Honig & Samuelsson, 2015) also show differences in subjective and often biased perceptions that are highly associated with entrepreneurial propensity to attempt starting a business.

## **CONTEXT**

By explaining the influences of context on NE, this study shows the way influence is addressed by literature. A given context is worsened by economic crises, shortage of investment sources, inefficient and restrictive regulations, and excessive taxation. In this way, both institutional voids and family support have a significant effect on startup activities, whereas family financial support helps absorb the negative influence of capital market voids (Manolova et al., 2019).

## ***Determinants of Nascent Entrepreneurship Development***

Less developed political and economic contexts affect entrepreneurship development (Swartz et al., 2019; Wennekers et al., 2005). State-level economic freedom interplay with startups' outcomes (Kwapisz, 2019) and mediation can play a role on the general performance of businesses (Vecco & Srakar, 2020).

Although environmental orientation is higher in nascent than in established entrepreneurs (Hörisch et al., 2019), who tend to need more emotional support during venture development (Klyver et al., 2018; Bergmann & Stephan, 2013), socioeconomic and perceptual factors still affecting nascent entrepreneurship with important policy implications for encouraging new business creation (Mohan et al., 2018; Stuetzer et al., 2014; Tamásy, 2010).

Diverse environmental issues do influence NE. Normative values of culture (Alon et al., 2016; Lanteri, 2015; Dadzie et al., 2010); the disparity between low-and high-wealth business founders to obtain outside financing during business formation (Frid et al., 2016); stable levels of income that are incompatible with startup dynamics (Hanage et al., 2016); external equity that impacts new firm emergence over time (Hechavarría et al., 2016); informal, normative social structures (Kim, 2014; Williams & Nadin, 2011; Hill, 2018); and labor market regulations (Van Stel et al., 2007).

## **LEARNING PROCESSES**

Nascent entrepreneurs respond to their context by combining internal and external knowledge through various entrepreneurial decisions, with disparate degrees of openness and emphasizing varying dimensions of learning. They combine learning, involving incremental improvements to existing products and processes and more explorative learning whereas knowledge-based factors have a strong impact on the decision to engage in business startup activity (De Clercq & Arenius, 2006).

Most literature on learning at NE focuses on planning, finding that is beneficial to plan early (Hopp & Greene, 2018) and the advantages of planning (Honig & Samuelsson, 2014) in particular in discussing the causation and effectuation steps along the decision making processes as a significant determinant of spin-off creation (Schleinkofer & Schmude, 2013).

Also the experiential learning is emphasized both in pursuit of the competencies needed (Watson et al., 2018) and through intrapreneurship (Hietanen, 2015); or the usefulness of experiential life path learning (Jayawarna et al., 2014), especially entrepreneurial competence in adolescence, which has a positive effect on making progress in the venture creation process (Obschonka et al., 2011).

Finally the positive relationships between pre-existing professional interactions for founding a business (Audretsch et al. 2011), in which learning by networking is central. Moreover, human capital predicts entry into nascent entrepreneurship (Davidsson & Honig, 2003) and further learning outputs, such as patenting (Goel & Göktepe-Hultén, 2013).

## **LEARNING TRIGGERS**

An array of learning triggers emerges in nascent entrepreneurs as they often lack business knowledge and experience difficulties in dealing with issues related to regulation (Zampetakis et al., 2016). So, it is of interest to understand by which responses these nascent entrepreneurs react (Arenius & Minniti, 2005). Some posit that entrepreneurial intention plays a role (Zampetakis et al., 2016); others suggest



that NE rely significantly on subjective and often biased perceptions rather than on objective expectations of success (Arenius & Minniti, 2005).

Important learning triggers could also assume the form of negative emotions that influence behavioral regulation in early-stage entrepreneurship, fostering the transition from latent to nascent entrepreneurship (Hatak & Snellman, 2017); the perception of obstacles activates fear of failure as well, which, in turn, has a detrimental impact on opportunity evaluation and exploitation (Kollmann et al., 2017). It should be noted that effectuation mechanisms are useful to young entrepreneurs to deal with constraints to accommodate financial capital constraints and mobilize social support from their parents and other entrepreneurial family members and friends (Hulsink & Koek, 2014).

Also central to respond to constraints and choose an entrepreneurship career is wage positions and job satisfaction (Schneck, 2013); general human capital and social ties to organize ventures (Parker, 2011); organizational efforts and the aim of a full-time startup (Kessler & Frank, 2009).

## **ENTREPRENEURIAL CAPABILITY**

Nascent entrepreneurs exhibit varying levels of entrepreneurial capability when it comes to sense and select opportunities and synchronize it with their limited resources as well. Hence, nascent entrepreneurs often resort to contract for new venture growth (Cai, 2014), but depend mostly on internal capabilities such as the capacity of waiting for the opportunity, a balanced skill set and prior managerial and entrepreneurial experience, significantly related with success in venture creation (Stuetzer et al., 2013; Parker & Belghitar, 2006) and increased early-stage performance (Thiess et al., 2016). Nascent entrepreneurs need capabilities in terms of high startup activities and over time (Lichtenstein et al., 2007).

Also, in the case of scientific knowledge, the entrepreneurial activities of scientists heavily depend on close personal ties to industry and a set of abilities in patenting activity, entrepreneurial experience, commercializing research (Kraabel & Mueller, 2009).

## **CONCLUSION**

This study highlights the interplay between characteristics, influential context, learning processes and entrepreneurial capability of nascent entrepreneurs based on a literature review of relevant articles. It enhances the way contextual challenges and opportunities are addressed through entrepreneurial learning and entrepreneurial capability. Nascent entrepreneurs play a central role, leading to distinct learning outcomes in terms of the businesses' advantages. In less developed contexts they experience contextual characteristics that contribute to a lack performance, comparing to endowed regions that enjoy supportive institutional contexts. Nascent entrepreneurs show to engage in trust-based networking and rely on entrepreneurial experience. These nascent entrepreneurs tend to rely on internal capabilities, while building in-house strengths related for instance to internal equity. Also, nascent entrepreneurs tend to engage in narrower and informal business ties. External knowledge, obtained through combinations of learning modes (e.g. networking, by doing), was deemed crucial.

This study shows that all nascent entrepreneurs were eventually driven to overcome constraints and explore new opportunities. While doing so, all nascent entrepreneurs engaged in learning behaviors to seize opportunities and coordinate business capabilities. They demonstrated planned learning behav-

## ***Determinants of Nascent Entrepreneurship Development***

iors, honing their businesses towards novelty. Findings suggest that responses were driven by important learning triggers related to external and individual major critical events. Disparate contexts, nascent entrepreneurs' learning behaviors, responses, and entrepreneurial capability interplay with one another.

## **ACKNOWLEDGMENT**

We would like to express our gratitude to the Editor and the Referees. They offered extremely valuable suggestions or improvements. The authors were supported by the GOVCOPP Research Center of Universidade de Aveiro and UNIDCOM, from the European University.

## **REFERENCES**

- Afandi, E., & Kermani, M. (2015). Bridging the gender gap in entrepreneurship: An empirical analysis. *Journal of Developmental Entrepreneurship*, 20(2), 1550008. Advance online publication. doi:10.1142/S1084946715500089
- Alon, I., Lerner, M., & Shoham, A. (2016). Cross-national cultural values and nascent entrepreneurship. *International Journal of Cross Cultural Management*, 16(3), 321–340. doi:10.1177/1470595816674744
- Alsaad, A. (2018). The individualistic view of culture and the nascent entrepreneurship: An examination of Schwartz's cultural values. *Journal of Developmental Entrepreneurship*, 23(4), 1850026. Advance online publication. doi:10.1142/S1084946718500267
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233–247. doi:10.1007/11187-005-1984-x
- Audretsch, D. B., Aldridge, T. T., & Sanders, M. (2011). Social capital building and new business formation: A case study in silicon valley. *International Small Business Journal*, 29(2), 152–169. doi:10.1177/0266242610391939
- Bergmann, H., & Stephan, U. (2013). Moving on from nascent entrepreneurship: Measuring cross-national differences in the transition to new business ownership. *Small Business Economics*, 41(4), 945–959. doi:10.1007/11187-012-9458-4
- Blackwood, T., Round, A., Pugalis, L., & Hatt, L. (2015). Making sense of learning: Insights from an experientially-based undergraduate entrepreneurship programme. *Industry and Higher Education*, 29(6), 445–457. doi:10.5367/ihe.2015.0278
- Brändle, L., Berger, E. S. C., Golla, S., & Kuckertz, A. (2018). I am what I am - how nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights*, 9, 17–23. doi:10.1016/j.jbvi.2017.12.001
- Cai, Y. (2014). Why are suboptimal contracts usually chosen in venture capital backed nascent entrepreneurship? *Journal of Developmental Entrepreneurship*, 19(4), 1450021. Advance online publication. doi:10.1142/S1084946714500216

- Dadzie, K., Evans, J., & Mack, R. (2010). An examination of the impact of product and service quality perceptions on customer loyalty in rural banks in Ghana: The importance of social networks for nascent entrepreneurs. *Global Business and Economics Review*, 12(1-2), 100–114. doi:10.1504/GBER.2010.032320
- Dalborg, C., & Wincent, J. (2015). The idea is not enough: The role of self-efficacy in mediating the relationship between pull entrepreneurship and founder passion – a research note. *International Small Business Journal: Researching Entrepreneurship*, 33(8), 974–984. doi:10.1177/0266242614543336
- Davidsson, P. (2015). Data replication and extension: A commentary. *Journal of Business Venturing Insights*, 3, 12–15. doi:10.1016/j.jbvi.2015.02.001
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. doi:10.1016/S0883-9026(02)00097-6
- De Clercq, D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal*, 24(4), 339–358. doi:10.1177/0266242606065507
- Delmar, F. (2015). A response to Honig and Samuelsson (2014). *Journal of Business Venturing Insights*, 3, 1–4. doi:10.1016/j.jbvi.2014.11.002
- Delmar, F. (2015). When the dust has settled: A final note on replication. *Journal of Business Venturing Insights*, 4, 20–21. doi:10.1016/j.jbvi.2015.07.001
- Denyer, D., & Tranfield, T. (2009). Producing a systematic review. In D. A. Buchanan & A. Bryman (Eds.), *The Sage Handbook of Organizational Research Methods*. Sage Publications Ltd.
- Frid, C. J., Wyman, D. M., Gartner, W. B., & Hechavarria, D. H. (2016). Low-wealth entrepreneurs and access to external financing. *International Journal of Entrepreneurial Behaviour & Research*, 22(4), 531–555. doi:10.1108/IJEBr-08-2015-0173
- Goel, R. K., & Göktepe-Hultén, D. (2013). Nascent entrepreneurship and inventive activity: A somewhat new perspective. *The Journal of Technology Transfer*, 38(4), 471–485. doi:10.1007/10961-012-9280-9
- Hanage, R., Scott, J. M., & Davies, M. A. P. (2016). From “great expectations” to “hard times”: A longitudinal study of creative graduate new ventures. *International Journal of Entrepreneurial Behaviour & Research*, 22(1), 17–38. doi:10.1108/IJEBr-07-2014-0135
- Hatak, I., & Snellman, K. (2017). The influence of anticipated regret on business start-up behaviour. *International Small Business Journal: Researching Entrepreneurship*, 35(3), 349–360. doi:10.1177/0266242616673421
- Hechavarría, D. M., Matthews, C. H., & Reynolds, P. D. (2016). Does start-up financing influence start-up speed? evidence from the panel study of entrepreneurial dynamics. *Small Business Economics*, 46(1), 137–167. doi:10.1007/11187-015-9680-y
- Hechavarria, D. M., Renko, M., & Matthews, C. H. (2012). The nascent entrepreneurship hub: Goals, entrepreneurial self-efficacy and start-up outcomes. *Small Business Economics*, 39(3), 685–701. doi:10.1007/11187-011-9355-2

## **Determinants of Nascent Entrepreneurship Development**

- Hechavarria, D. M., & Reynolds, P. D. (2009). Cultural norms & business start-ups: The impact of national values on opportunity and necessity entrepreneurs. *The International Entrepreneurship and Management Journal*, 5(4), 417–437. doi:10.1007/11365-009-0115-6
- Hietanen, L. (2015). Facilitating employees' and students' process towards nascent entrepreneurship. *Education + Training*, 57(8-9), 964–976. doi:10.1108/ET-04-2015-0028
- Hill, I. (2018). How did you get up and running? taking a Bourdieuan perspective towards a framework for negotiating strategic fit. *Entrepreneurship and Regional Development*, 30(5-6), 662–696. doi:10.1080/08985626.2018.1449015
- Hird, A. P. (2012). The impact of entrepreneurial cognition on the founding and survival of new small businesses. *Industry and Higher Education*, 26(6), 453–460. doi:10.5367/ihe.2012.0124
- Honig, B., & Samuelsson, M. (2014). Data replication and extension: A study of business planning and venture-level performance. *Journal of Business Venturing Insights*, 1(1-2), 18–25. doi:10.1016/j.jbvi.2014.09.006
- Honig, B., & Samuelsson, M. (2015). Replication in entrepreneurship research: A further response to Delmar. *Journal of Business Venturing Insights*, 3, 30–34. doi:10.1016/j.jbvi.2015.03.001
- Hopp, C., & Greene, F. J. (2018). In pursuit of time: Business plan sequencing, duration and intraentrainment effects on new venture viability. *Journal of Management Studies*, 55(2), 320–351. doi:10.1111/joms.12251
- Hörisch, J., Kollat, J., & Brieger, S. A. (2019). Environmental orientation among nascent and established entrepreneurs: An empirical analysis of differences and their causes. *International Journal of Entrepreneurial Venturing*, 11(4), 373–393. doi:10.1504/IJEV.2019.101623
- Hulsink, W., & Koek, D. (2014). The young, the fast and the furious: A study about the triggers and impediments of youth entrepreneurship. *International Journal of Entrepreneurship and Innovation Management*, 18(2-3), 182–209. doi:10.1504/IJEIM.2014.062876
- Jayawarna, D., Rouse, J., & Macpherson, A. (2014). Life course pathways to business start-up. *Entrepreneurship and Regional Development*, 26(3-4), 282–312. doi:10.1080/08985626.2014.901420
- Johnson, P. S., Parker, S. C., & Wijbenga, F. (2006). Nascent entrepreneurship research: Achievements and opportunities. *Small Business Economics*, 27(1), 1–4. doi:10.1007/11187-006-9004-3
- Kessler, A., & Frank, H. (2009). Nascent entrepreneurship in a longitudinal perspective: The impact of person, environment, resources and the founding process on the decision to start business activities. *International Small Business Journal*, 27(6), 720–742. doi:10.1177/0266242609344363
- Kim, P. H., & Li, M. (2014). Seeking assurances when taking action: Legal systems, social trust, and starting businesses in emerging economies. *Organization Studies*, 35(3), 359–391. doi:10.1177/0170840613499566
- Klyver, K., Honig, B., & Steffens, P. (2018). Social support timing and persistence in nascent entrepreneurship: Exploring when instrumental and emotional support is most effective. *Small Business Economics*, 51(3), 709–734. doi:10.1007/11187-017-9964-5

- Köllinger, P., & Minniti, M. (2006). Not for lack of trying: American entrepreneurship in black and white. *Small Business Economics*, 27(1), 59–79. doi:10.1007/11187-006-0019-6
- Kollmann, T., Stöckmann, C., & Kensbock, J. M. (2017). Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity—An experimental approach. *Journal of Business Venturing*, 32(3), 280–301. doi:10.1016/j.jbusvent.2017.02.002
- Krabel, S., & Mueller, P. (2009). What drives scientists to start their own company? an empirical investigation of Max Planck society scientists. *Research Policy*, 38(6), 947–956. doi:10.1016/j.respol.2009.02.005
- Kwapisz, A. (2019). Do government and legal barriers impede entrepreneurship in the U.S.? an exploratory study of perceived vs. actual barriers. *Journal of Business Venturing Insights*, 11, e00114. Advance online publication. doi:10.1016/j.jbvi.2019.e00114
- Lanteri, A. (2015). The creation of social enterprises: Some lessons from Lebanon. *Journal of Social Entrepreneurship*, 6(1), 42–69. doi:10.1080/19420676.2014.954256
- Lichtenstein, B. B., Carter, N. M., Dooley, K. J., & Gartner, W. B. (2007). Complexity dynamics of nascent entrepreneurship. *Journal of Business Venturing*, 22(2), 236–261. doi:10.1016/j.jbusvent.2006.06.001
- Manolova, T. S., Edelman, L. F., Shirokova, G., & Tsukanova, T. (2019). Youth entrepreneurship in emerging economies: Can family support help navigate institutional voids? *Journal of East-West Business*, 25(4), 363–395. doi:10.1080/10669868.2019.1624672
- Minniti, M., & Nardone, C. (2007). Being in someone else's shoes: The role of gender in nascent entrepreneurship. *Small Business Economics*, 28(2-3), 223–238. doi:10.1007/11187-006-9017-y
- Mohan, P., Watson, P., & Strobl, E. (2018). Nascent entrepreneurs in Caribbean small island developing states: Opportunity versus necessity. *Journal of Developmental Entrepreneurship*, 23(4), 1850022. Advance online publication. doi:10.1142/S108494671850022X
- Nishimura, J. S., & Tristán, O. M. (2011). Using the theory of planned behavior to predict nascent entrepreneurship [Utilizando la teoría del comportamiento planeado para predecir el emprendimiento naciente]. *Academia (Caracas)*, (46), 55–71. www.scopus.com
- Obschonka, M., Silbereisen, R. K., Schmitt-Rodermund, E., & Stuetzer, M. (2011). Nascent entrepreneurship and the developing individual: Early entrepreneurial competence in adolescence and venture creation success during the career. *Journal of Vocational Behavior*, 79(1), 121–133. doi:10.1016/j.jvb.2010.12.005
- Parker, S. C. (2011). Intrapreneurship or entrepreneurship? *Journal of Business Venturing*, 26(1), 19–34. doi:10.1016/j.jbusvent.2009.07.003
- Parker, S. C., & Belghitar, Y. (2006). What happens to nascent entrepreneurs? an econometric analysis of the PSED. *Small Business Economics*, 27(1), 81–101. doi:10.1007/11187-006-9003-4
- Renko, M., Kroeck, K. G., & Bullough, A. (2012). Expectancy theory and nascent entrepreneurship. *Small Business Economics*, 39(3), 667–684. doi:10.1007/11187-011-9354-3

## **Determinants of Nascent Entrepreneurship Development**

- Rosário, A., & Cruz, R. (2019). Determinants of Innovation in Digital Marketing, Innovation Policy and Trends in the Digital Age. *Journal of Reviews on Global Economics*, 8, 1722–1731. doi:10.6000/1929-7092.2019.08.154
- Sacavém, A., Cruz, R., Sousa, M., & Rosário, A. (2019). An integrative literature review on leadership models for innovative organizations, innovation policy and trends in the digital age. *Journal of Reviews on Global Economics*, 8, 1741–1751. doi:10.6000/1929-7092.2019.08.156
- Schleinkofer, M., & Schmude, J. (2013). Determining factors in founding university spin-offs. *International Journal of Entrepreneurship and Small Business*, 18(4), 400–427. doi:10.1504/IJESB.2013.053484
- Schneck, S. (2013). Nonlinear evaluation of status and signal effects. *Evidence-Based HRM: A Global Forum for Empirical Scholarship*, 1(2), 112–129. doi:10.1108/EBHRM-12-2012-0020
- Stuetzer, M., Obschonka, M., Brixy, U., Sternberg, R., & Cantner, U. (2014). Regional characteristics, opportunity perception and entrepreneurial activities. *Small Business Economics*, 42(2), 221–244. doi:10.1007/11187-013-9488-6
- Stuetzer, M., Obschonka, M., & Schmitt-Rodermund, E. (2013). Balanced skills among nascent entrepreneurs. *Small Business Economics*, 41(1), 93–114. doi:10.1007/11187-012-9423-2
- Swartz, E. M., Amatucci, F. M., & Marks, J. T. (2019). Contextual Embeddedness as Framework: The case of entrepreneurship in South Africa. *Journal of Developmental Entrepreneurship*, 24(3), 1950018. Advance online publication. doi:10.1142/S1084946719500183
- Tamásy, C. (2010). Nascent entrepreneurs and the regional context. *International Journal of Entrepreneurship and Small Business*, 10(2), 205–223. doi:10.1504/IJESB.2010.033109
- Thiess, D., Sirén, C., & Grichnik, D. (2016). How does heterogeneity in experience influence the performance of nascent venture teams?: Insights from the US PSED II study. *Journal of Business Venturing Insights*, 5, 55–62. doi:10.1016/j.jbvi.2016.04.001
- Van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, 28(2-3), 171–186. doi:10.1007/11187-006-9014-1
- Vecco, M., & Srakar, A. (2020). Direct, indirect and cross-lagged: The effects of cultural policy on nascent cultural entrepreneurship. *International Journal of Arts Management*, 22(2), 66–82. www.scopus.com
- Watson, K., McGowan, P., & Cunningham, J. A. (2018). An exploration of the business plan competition as a methodology for effective nascent entrepreneurial learning. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 121–146. doi:10.1108/IJEBR-05-2017-0158
- Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293–309. doi:10.1007/11187-005-1994-8
- Williams, C. C., & Nadin, S. (2011). Evaluating entrepreneurs in the shadow economy: Economic or social entrepreneurship? *International Journal of Management and Enterprise Development*, 11(1), 20–33. doi:10.1504/IJMED.2011.042970

Williams, C. C., & Nadin, S. (2011). Re-reading entrepreneurship in the hidden economy: Commercial or social entrepreneurs? *International Journal of Entrepreneurship and Small Business*, 14(4), 441–455. doi:10.1504/IJESB.2011.043469

Zampetakis, L. A., Lerakis, M., Kafetsios, K., & Moustakis, V. S. (2016). The moderating role of anticipated affective ambivalence in the formation of entrepreneurial intentions. *The International Entrepreneurship and Management Journal*, 12(3), 815–838. doi:10.1007/11365-015-0367-2

APPENDIX

Table 3. Overview of document citations period £ 2005 to 2020

Documents	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006	£ 2005	2018	Total
Direct, indirect and cross-lagged: The effects of cultural p ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2020	-
Youth entrepreneurship in emerging economies: can family sup...	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	1
Contextual Embeddedness as Framework: The case...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	1
Do government and legal barriers impede entrepreneurship in ...	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	3
Environmental orientation among nascent and established entr ...	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2019	5
Nascent entrepreneurs in caribbean small island developing s ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	-
The individualistic view of culture and the nascent entrepre ...	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	1
Social support timing and persistence in nascent entrepreneur ...	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	5
I am what iam - How nascent entrepreneurs' social identity ...	-	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	13
How did you get up and running? Taking a bourdieuan perspect ...	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	6
In Pursuit of Time: Business Plan Sequencing, Duration and...	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	5
An exploration of the Business Plan Competition as a methodo ...	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2018	6
The influence of anticipated regret on business start-up beh ...	-	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	2017	14

continues on following page



Table 3. Continued

Documents	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Fear of failure as a mediator of the relationship between ob ...	2017	-	-	-	-	-	-	-	-	-	-	-	-	5	12	3	20
Cross-national cultural values and nascent entrepreneurship	2016	-	-	-	-	-	-	-	-	-	-	-	-	1	2	1	4
The moderating role of anticipated affective ambivalence in ...	2016	-	-	-	-	-	-	-	-	-	-	1	2	1	1	2	7
Low-wealth entrepreneurs and access to external Financing	2016	-	-	-	-	-	-	-	-	-	-	-	-	2	4	-	6
How does heterogeneity in experience influence the performance ...	2016	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	4
From "great expectations" to "hard times": A longitudinal study ...	2016	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3
Does start-up financing influence start-up speed? Evidence f...	2016	-	-	-	-	-	-	-	-	-	-	-	3	6	4	5	18
Making Sense of Learning: Insights from an Experimentally-Ba ...	2015	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	3
The idea is not enough: The role of self-efficacy in mediati ...	2015	-	-	-	-	-	-	-	-	-	-	3	4	5	5	6	23
When the dust has settled: A final note on replication	2015	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	3
Data replication and extension: A commentary	2015	-	-	-	-	-	-	-	-	-	2	2	2	1	5	1	13
A response to Honig and Samuelsson (2014)	2015	-	-	-	-	-	-	-	-	-	2	3	2	1	2	-	10
Facilitating employees' and students' process towards nascent ...	2015	-	-	-	-	-	-	-	-	-	-	1	1	1	4	-	7

continues on following page

**Determinants of Nascent Entrepreneurship Development**

*Table 3. Continued*

Documents	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Replication in entrepreneurship research: A further response ...	-	-	-	-	-	-	-	-	-	-	1	3	-	1	3	-	8
Bridging the gender gap in entrepreneurship: An empirical an ...	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2
The Creation of Social Enterprises: Some Lessons...	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	3
Seeking Assurances When Taking Action: Legal Systems, Social. ..	-	-	-	-	-	-	-	-	1	1	1	5	4	7	5	4	28
Regional characteristics, opportunity perception and entrepr. ..	-	-	-	-	-	-	-	-	2	4	7	17	12	11	15	7	75
Why are suboptimal contracts usually chosen in venture capit ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Data replication and extension: A study of business planning ...	-	-	-	-	-	-	-	-	-	-	3	6	3	5	2	1	20
The young, the fast and the furious: A study about the trigg ...	-	-	-	-	-	-	-	-	-	-	1	3	6	3	4	1	18
Life course pathways to business start-up	-	-	-	-	-	-	-	-	-	-	-	3	4	2	9	3	21
Moving on from nascent entrepreneurship: Measuring cross- nat...	-	-	-	-	-	-	-	-	-	-	2	4	6	3	5	4	23
Nonlinear evaluation of status and signal effects	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nascent entrepreneurship and inventive activity: A somewhat ...	-	-	-	-	-	-	-	-	-	-	2	-	1	1	2	1	7
Balanced skills among nascententrepreneurs	-	-	-	-	-	-	-	1	1	3	9	8	7	5	6	2	42
Determining factors in founding university spin-offs	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	3

*continues on following page*

Table 3. Continued

Documents	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
The Impact of Entrepreneurial Cognition on the Founding and ...	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	3
The nascent entrepreneurship hub: Goals, entrepreneurial sel...	-	-	-	-	-	-	-	1	1	2	11	2	7	8	12	6	50
Expectancy theory and nascent entrepreneurship	-	-	-	-	-	-	-	1	1	1	5	7	9	16	13	6	58
Re-reading entrepreneurship in the hidden economy: Commercia...	-	-	-	-	-	-	-	1	1	2	3	3	1	1			12
Evaluating entrepreneurs in the shadow economy: Economic of ...	-	-	-	-	-	-	-	-	-	3	1	-	1	-	-	-	5
Nascent entrepreneurship and the developing individual: Earl...	-	-	-	-	-	-	-	5	1	4	6	8	4	3	5	2	38
Social capital building and new business formation: A case s...	-	-	-	-	-	-	-	2	4	3	5	4	4	5	8	3	38
Using the theory of planned behavior to predict nascent ent...	-	-	-	-	-	-	-	1	3	4	5	4	9	5	2	4	34
Intrapreneurship or entrepreneurship?	-	-	-	-	-	-	1	3	9	12	10	14	14	20	29	4	116
Nascent entrepreneurs and the regional context	-	-	-	-	-	1	-	1	2	-	-	-	-	1	1	-	6
An examination of the impact of product and service quality ...	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cultural norms &amp; business startups: The impact of natio...	-	-	-	-	-	1	10	6	11	14	14	20	24	16	13	10	139
Nascent entrepreneurship in a longitudinal perspective: The...	-	-	-	-	-	1	3	2	6	5	9	10	5	4	3	4	52

continues on following page

## Determinants of Nascent Entrepreneurship Development

Table 3. Continued

Documents	£ 2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
What drives scientists to start their own company?. An empir...	2009	-	-	-	-	2	5	7	9	14	16	14	9	17	14	6	113
The effect of business regulations on nascent and young busi...	2007	-	1	5	5	12	22	19	25	35	32	31	30	36	47	19	319
Being in someone else's shoes: The role of gender in nascent...	2007	-	-	1	8	9	12	11	16	12	27	29	33	22	27	15	222
Complexity dynamics of nascent entrepreneurship	2007	-	5	2	4	9	16	15	14	12	18	19	13	19	13	12	171
What happens to nascent entrepreneurs? An econometric analys...	2006	-	2	3	8	5	8	10	11	4	14	13	8	9	5	7	107
Not for lack of trying: American entrepreneurship in black a...	2006	-	-	6	4	4	9	7	14	9	5	4	7	5	9	1	84
Nascent entrepreneurship research: Achievements and opportun...	2006	-	1	2	3	3	2	1	3	3	-	2	2	2	4	-	28
The role of knowledge in business start-up activity	2006	-	2	7	7	9	16	10	14	13	14	15	10	12	18	6	153
Nascent entrepreneurship and the level of economic developme...	2005	1	3	12	24	13	37	26	42	57	45	52	58	56	68	25	544
Perceptual variables and nascent entrepreneurship	2005	2	9	9	16	27	33	33	37	36	51	64	64	58	71	27	558
The role of social and human capital among nascent entrepren...	2003	34	30	46	72	90	130	112	151	163	184	201	186	184	225	82	1960
	<b>Total</b>	<b>37</b>	<b>42</b>	<b>78</b>	<b>138</b>	<b>198</b>	<b>304</b>	<b>274</b>	<b>380</b>	<b>416</b>	<b>505</b>	<b>577</b>	<b>559</b>	<b>574</b>	<b>714</b>	<b>302</b>	<b>5241</b>

Source: own elaboration

## Chapter 9

# Challenges to Necessity–Driven Nascent Entrepreneurship

**Mufaro Dzingirai**

*Midlands State University, Zimbabwe*

### **ABSTRACT**

*Necessity-driven nascent entrepreneurship, which often associated with new firm creation and innovation, has emerged as a topical issue in entrepreneurship scholarship across the globe in recent times especially in developing countries. While the increase in necessity-driven nascent entrepreneurs appears to be widely regarded as a powerful tool for the reduction or elimination of unemployment and poverty worldwide, insufficient attention has been given to the challenges faced by necessity-driven nascent entrepreneurs. With this literature gap in mind, this chapter aims at providing a comprehensive understanding of challenges faced by necessity-driven nascent entrepreneurs. The research establishes six challenges, namely, personal or family problems, lack of entrepreneurial self-confidence, lack of information, lack of entrepreneurial mentorship, legal and regulatory issues, and lack of adequate personal funds. The recommendations to deal with these challenges are proffered and the suggestions for further study are captured.*

### **INTRODUCTION**

During the past decade, many governments of both developed and developing countries have witnessed the significance of nascent entrepreneurship when it comes to innovation and new firm creation. It is within this context that nascent entrepreneurship is hailed for economic development and growth around the world (Mohan, Strobl, & Watson, 2018). With this in mind, nascent entrepreneurship has received much attention from scholars and researchers in recent times. It appears to be most appropriate to extend our understanding of the concept of entrepreneurship through fine-grained analysis of nascent entrepreneurship. In this regard, it is deemed necessary to mention that business cycle movements have an effect on nascent entrepreneurship. Unfortunately, little is known about the challenges faced by necessity-driven nascent entrepreneurship.

DOI: 10.4018/978-1-7998-4826-4.ch009

### ***Challenges to Necessity-Driven Nascent Entrepreneurship***

Going forward, there is a great deal of entrepreneurship literature that captures the motivation for entrepreneurship. In this respect, the motivation for entrepreneurship can be categorized into two distinctive groups, namely, opportunity and necessity. More interestingly, González-Pernía, Guerrero, Jung, and Legazkue (2018) underscored that people can establish new ventures with different motivations in different contexts. Nonetheless, high unemployment levels can decrease or increase nascent entrepreneurship in different contexts. Notably, unemployed people are inclined to entrepreneurship provided that the opportunity cost of being employed is very low as compared to being an entrepreneur (Gonzalez-Pernia et al., 2018). It is within this context that Simón-Moya, Revuelto-Taboada, and Ribeiro-Soriano (2016) expressed that unemployment and entrepreneurship can be linked to the business cycle.

By definition, nascent entrepreneurship is closely linked to people that are actively engaged in co-owned ventures or creating new ventures and such ventures have not yet paid wages, salaries, or any other form of payments to the founders for more than three months (França, Frankenbach, Vilares, Vereb, & Moreira, 2017). Given this definition of nascent entrepreneurship, it is salient to observe that this concept has led to the emergence of necessity-driven nascent entrepreneurship in the academic literature as a new entrepreneurial concept given the high levels of poverty and unemployment. Practically, necessity-driven nascent entrepreneurship as a phenomenon has attracted attention from policymakers of both developed and developing countries as they are now supporting necessity-driven nascent entrepreneurs more aggressively than before. Following a thorough survey of recent entrepreneurship scholarship, it is necessary at this juncture to mention that individuals are motivated to start-up a business venture by two factors, that is, necessity-driven and opportunity-driven (Benz, 2009; Nasiri & Hamelin, 2018; Williams & Williams, 2014).

Drawing from the existing literature on entrepreneurship, the issue of how the business cycle can influence entrepreneurship is controversial. Nonetheless, a thorough examination of available entrepreneurship scholarship shows that two issues surround the explanation of the linkage between entrepreneurship and economic recessions. These two issues are counter-cyclical and pro-cyclical prediction (Gonzalez-Pernia et al., 2018). In the case of counter-cyclical prediction, it is accepted that a recessionary economic environment can positively affect entrepreneurial activity (Gonzalez-Pernia et al., 2018). This suggests that people can be pushed into entrepreneurship owing to the shrunk of the job market. On the other hand, the pro-cyclical prediction is based on the view that a recessionary economic environment negatively affects entrepreneurship activity (Gonzalez-Pernia et al., 2018). This implies that business opportunities are very difficult to locate during a recessionary economic environment due to contraction in demand. Accordingly, the debate on opportunity-driven and necessity-driven entrepreneurship is linked to the business cycle. To this end, entrepreneurship literature has yielded mixed results when it comes to the nexus between entrepreneurship and business cycle.

In light of the above analysis, it salient to observe that nascent entrepreneurs face many challenges in setting up businesses. Admittedly, nascent entrepreneurs face challenges such as limited resources limited information related to the market forces, government regulations, family or personal problems, poor inventory management, and lack of self-confidence (Vagesh, Thaddaeus, & Udhaya, 2017). Nonetheless, the author submits that the challenges that can be faced by opportunity-driven nascent entrepreneurs are not the same as those that can be encountered by necessity-driven nascent entrepreneurs. With this in mind, it appears to be the right time to unmask the challenges to necessity-driven nascent entrepreneurship in an attempt to inform practice and enrich entrepreneurship scholarship. Extensive literature review methodology was employed in this research with which journal articles published as from 2010 to 2020 were analysed.

## **BACKGROUND**

Nascent entrepreneurship is a topical phenomenon when it comes to economic development and growth in recent times but its concept is old since the concept has been researched from various lenses (França et al., 2017). In the existing body of knowledge on nascent entrepreneurship, four phases can be easily observed. Firstly, the distinctive traits and competencies of nascent entrepreneurs were identified by sociologists and psychologists. Secondly, research work has been published concerning the environment in which businesses of nascent entrepreneurs operate (Mason & Harvey, 2013). Thirdly, research studies inclined towards the identification and utilization of market opportunities were published (Shane & Venkataraman, 2000). Recently, the categorization of nascent entrepreneurship in two groups based on motivation, namely, necessity-driven nascent entrepreneurship and opportunity-driven nascent entrepreneurship is now at the epicenter of entrepreneurship scholarship (Mohan et al., 2018; Suchart, 2017; Rasel, 2014).

While there is a limited but growing literature on necessity-driven nascent entrepreneurship, there is no standard definition of this concept (Mohan et al., 2018; Franca et al., 2017; Suchart, 2017). Moreover, the issue of necessity-driven nascent entrepreneurship is debatable since some scholars argued that the dichotomizing of motives for entrepreneurship is complex (Mohan et al., 2018). In the context of Global Entrepreneurship Monitor (GEM), it is interesting to highlight that Reynolds, Camp, Bygrave, Autio, and Hay (2002) labeled necessity-driven entrepreneurs as persons that do not have better choices for work. In a similar vein, Mohan et al. (2018) clearly defined necessity-driven nascent entrepreneurs as individuals that are pushed to start firms in order to escape poverty or unemployment. This suggests that necessity-driven nascent entrepreneurs are forced to start businesses by push factors such as poverty and employment. Additionally, França et al. (2017) suggested that necessity-driven entrepreneurship is mainly concerned with a type of entrepreneurship that is motivated by self-employment or absent of work options which lead to low influence on economic growth.

On the other hand, Suchart (2017) defined an opportunity-driven entrepreneur as an individual who is motivated to start a firm by the existence of a unique opportunity in the market. This implies that opportunity-driven entrepreneurship is premised on voluntary engagement. It is interesting to mention that Fairlie and Fossen (2018) have underscored that opportunity-driven entrepreneurs include people who are employed, enrolled in college or school, or are not looking for a job. To this end, the distinction between necessity-driven entrepreneurs and opportunity-driven entrepreneurs can be based on the fact that necessity-driven entrepreneurs are counter-cyclical whereas opportunity-driven entrepreneurs are pro-cyclical.

It is worth mentioning that entrepreneurship activities vary from one country to another. It is within this context that countries such as Ecuador, Ghana, Malawi, and Nigeria are some of the countries with most entrepreneurial activities (Amoros & Bosma, 2014). Nonetheless, some developed countries such as France, Japan, and Italy are among the least entrepreneurial countries (Franca et al, 2017). Given this information, it is of great importance to note that necessity-driven entrepreneurship is mainly associated with developing countries while opportunity-driven nascent entrepreneurship is mainly associated with developed countries. However, United States (US) has also experienced a high level of necessity-driven nascent entrepreneurship during the Great Depression in which the US's unemployment exceeded 10% and a similar pattern was observed in the United Kingdom (UK) (Fairlie & Fossen, 2018).

In the context of Caribbean countries, there are more necessity-driven entrepreneurs globally like other developing countries (Kelley, Singer, & Herrington, 2016). This could be attributed to the fact that

## **Challenges to Necessity-Driven Nascent Entrepreneurship**

there are high levels of poverty and unemployment in developing countries. In the case of the MENA region, there is high youth unemployment, For instance, the youth unemployment rate for the Middle East was 28.2% and that of North Africa was 30.5% as of 2014 (Nasir & Hamelin, 2018). Given this worrisome state of affairs, it is observed that unemployment is widely recognized as a push factor to start a business. Therefore, there is a large number of necessity-driven entrepreneurs in the MENA region since entrepreneurship ensures self-employment. However, insufficient attention has been given to the challenges faced by necessity-driven nascent entrepreneurs.

There is a general consensus that nascent entrepreneurship can be linked to the business cycle. It is with this context that González-Pernía et al. (2018) stressed that European countries such as Italy, Greece, Spain, and Portugal were the most affected countries with the 2007-2009 financial crisis. The 2007-2009 financial crisis led to a decline in economic growth, an upsurge in the unemployment rate, and limited access to financial resources (Vegetti & Adăscăliței, 2017). On the positive side, a study carried out in Europe by Santos, Caetano, Spagnoli, Costa, and Neumeyer (2017) on the effect of economic recession on entrepreneurship found that Greece, Spain, and Portugal as Southern countries of Europe with lower-income had a higher entrepreneurial activity before the outbreak of the financial crisis as compared to Nordic counterparts, namely, Finland, Norway, and Sweden. Nonetheless, the opposite was true after the financial crisis. In a similar vein, Amoros, Ciravegna, Mandakovic, and Stenholm, (2019) found that state fragility positively influences necessity-driven entrepreneurship whilst negatively influence opportunity-driven entrepreneurship. More interestingly, Cotter (2018) underscored that necessity-driven nascent entrepreneurs are strongly counter-cyclical as they are pushed to start their businesses during recessions. On the other hand, opportunity-driven entrepreneurs are strongly pro-cyclical since they are more they main goal is business growth (Calderon, Iacovone, & Juarez, 2017).

It is worth mentioning at this juncture that necessity-driven entrepreneurship appears to be more witnessed in the less developed countries whilst opportunity-driven entrepreneurship is more evident in more developed countries (González-Pernía et al., 2018; Stuetzer, Obschonka, Brixy, Sternberg, & Cantner, 2014). Notably, Simón-Moya et al. (2016) found that necessity-driven entrepreneurship is more evident in contexts of lower levels of development than in developed contexts. Similarly, the results from the study that was carried out by Fairlie and Fossen (2018) in more developed countries showed that opportunity-driven entrepreneurship in countries such as Germany and the U.S was linked to a pro-cyclical trend whilst necessity-driven entrepreneurship was linked to counter-cyclical trend. This implies that a greater number of necessity-driven entrepreneurs can be found in the contexts associated with high levels of income inequality, poverty, and unemployment because people will be forced to engage in entrepreneurship in an attempt to survive.

## **The Need for Necessity-Driven Nascent Entrepreneurship**

It is deemed necessary to give an in-depth analysis of the benefits of necessity-driven entrepreneurship. In this regard, there are many benefits that emanate from necessity-driven entrepreneurship. These benefits are discussed as follows:

### **Survival of Poor People**

It is quite clear that necessity-driven entrepreneurship plays a fundamental role when it comes to the survival of poor people especially in developing countries like Zimbabwe. Necessity-driven entrepre-



neurs force themselves into entrepreneurship so as to survive (Masocha, 2016; Simón-Moya et al., 2016; Koster & Rai, 2008). It is common knowledge that many governments of developing countries are facing a big challenge of the contraction of the formal employment. Given this state of affairs, it appears to be prudent for people to engage in entrepreneurship in order to survive (Nhuta & Mukumba, 2017, Thebe & Ncube, 2015; Salami, 2011). In fact, most of the young people in developing countries are failing to secure jobs in the formal sector. Accordingly, entrepreneurship is the only lucrative opportunity to be exploited for them to survive. To this end, it is quite clear that necessity-driven entrepreneurs are motivated to engage in entrepreneurship with the main purpose of survival in the face of contraction of the formal employment (Garba, Djafar, & Mansor, 2013).

### **Poverty Reduction**

Necessity-driven entrepreneurship can be utilized as a powerful tool for poverty reduction. It is with this context that Garba et al. (2013) accentuated that poor people are forced to engage in entrepreneurship so as to get out of poverty. This suggests that necessity-driven entrepreneurs can generate streams of income that can sustain their lives especially during times of economic recession. High levels of poverty are witnessed in many developing countries since more than 50% of people in developing countries are living below the poverty datum line (Masocha, 2016; Nyanga, Zirima, Mupani, Chifamba, & Mashavira, 2013). Given this troublesome state of affairs, it is not surprising to observe an increase in the number of necessity-driven nascent entrepreneurs in developing countries. This implies that necessity-driven entrepreneurs are not growth-oriented but they focus on poverty reduction. This is in harmony with the view of Gunhidzirai, and Pius, Tanga (2017) and Chigwenya and Mudzengerere (2013) who suggested that many people in Zimbabwe are engaging in entrepreneurship with the sole purpose of hedging extreme poverty.

### **Reduce Unemployment**

It is worth mentioning that necessity-driven entrepreneurship is hailed for reducing unemployment. In this respect, entrepreneurship becomes the best option especially for the poor given that formal employment is not readily available (Kwaramba, 2017; Masocha, 2016; Garba et al., 2013; Gries & Naude, 2011; Banerjee & Duflo, 2007). The governments of many developing countries like Zimbabwe are working very hard to support necessity-driven entrepreneurs in an attempt to promote self-employment (Nyoni, 2018; Thebe & Ncube, 2015; Nyanga et al., 2013). Although unemployment is a global issue, high levels of unemployment are evident in developing countries especially in Zimbabwe (Zvavahera, Chigora, & Tandi, 2018). Therefore, the Zimbabwean government is trying so hard to come up with policies and programs to assist necessity-driven entrepreneurs. To this end, necessity-driven entrepreneurs are pushed into entrepreneurship owing to a lack of formal employment.

## **NECESSITY-DRIVEN ENTREPRENEURSHIP IN ZIMBABWE**

It is common knowledge that Zimbabwe is currently facing a multiplicity of economic challenges. According to Zimbabwe National Statistics Agency (ZIMSTATS) (2019), these challenges include hyperinflation, upsurge in the unemployment rate, an upward trend in the budget deficit, the balance of

## Challenges to Necessity-Driven Nascent Entrepreneurship

payments deficits, cash shortages, limited foreign currency, fuel shortages, and low economic growth. Armed with this information, it is quite clear that Zimbabwean entrepreneurs are in a survival mode or hand to mouth scenario. Therefore, there is a mushrooming of necessity-driven entrepreneurs in Zimbabwe. Notably, Thebe and Ncube (2015) underscored that the street entrepreneurs in Bulawayo Metropolitan Province are survivalist-oriented. This illuminates that the economic turmoil in Zimbabwe is forcing people to engage in entrepreneurship for survival. It is within this context that Nyoni (2018) stressed that the economic collapse in Zimbabwe has pushed Zimbabweans to open small businesses primarily as a strategy for survival.

It is worth mentioning that two formidable problems are forcing Zimbabweans to engage in necessity-driven entrepreneurship, that is, high levels of unemployment and poverty. Firstly, the issue of high levels of poverty in Zimbabwe is an open secret. In this respect, Mupetsi, Francis, and Gomo (2015) highlighted that poverty rates in Zimbabwe have worsened for the past 20 years. Notably, it is now in the public domain that Zimbabwe has experienced extreme poverty levels in the SADCC region. The evidence of high levels of poverty in Zimbabwe is captured in Table 1.

*Table 1. Household measured prevalence of poverty, for selected years*

Residence	Measured prevalence of		Poverty indices	
	Poverty	Extreme poverty	Poverty gap index	Poverty severity index
<b>PICES 2017</b>				
Rural	76.9	31.9	36.6	20.6
Urban	30.4	3.3	9.0	3.7
<b>All Zimbabwe</b>	<b>60.6</b>	<b>21.9</b>	<b>26.9</b>	<b>14.7</b>
<b>PICES 2011/12</b>				
Rural	76.0	22.9	36.1	20.6
Urban	38.2	4.0	12.3	5.6
<b>All Zimbabwe</b>	<b>62.6</b>	<b>16.2</b>	<b>27.7</b>	<b>15.2</b>
<b>ICES 2001</b>				
Rural	73.0	42.3	36.1	21.6
Urban	33.8	10.5	11.7	5.5
<b>All Zimbabwe</b>	<b>60.6</b>	<b>32.2</b>	<b>28.3</b>	<b>16.5</b>
<b>ICES 1995</b>				
Rural	76.2	50.4	50.6	30.5
Urban	41.1	10.2	35.4	16.9
<b>All Zimbabwe</b>	<b>63.3</b>	<b>35.7</b>	<b>47.0</b>	<b>27.3</b>

Source: ZIMSTATS, (2019).

As shown in Table 1, Zimbabwe's rate of poverty is at 60.6% as for 2017 which was slightly lower than 62.6% as for 2011/12. Moreover, the poverty gap is 26.9% for 2017 which was slightly lower than 27.7% in 2011/12. Worryingly, there is an upsurge of extreme household poverty from 16.2% in 2011/12 to 21.9% in 2017. This state of affairs is attributed to the deteriorating conditions in rural areas as sub-

stantiated by an upsurge in rural household poverty from 22.9% in 2011/12 to 31.9% in 2017. Armed with this information, there is no doubt that Zimbabwean entrepreneurs are pushed into entrepreneurship owing to extreme poverty in Zimbabwe in an effort to survive (Nyoni, 2018; Mupetesi, Francis, & Gomo, 2015; Nyanga et al., 2013; Thebe & Ncube, 2015; Mboko & Hunter-Smith, 2009).

In light of the above, it is necessary at this juncture to analyse the level of poverty according to provinces in Zimbabwe. Mashonaland Centra Province was associated with the highest percentage of extreme poverty of 49.5% followed by Matebeleland North Province that registered 45.1% and then Harare Province with 5.2% (ZIMSTATS, 2019). Notably, Manicaland Province had the highest percentage of poor people with 16.4% followed by Masvingo Province with 13.3%. There is doubt that poor households in Zimbabwe are linked to high dependency ratios and large families. With this in mind, such households are pushed into entrepreneurship in order to survive. Therefore, people from poor households in Zimbabwe are more likely to become necessity entrepreneurs than those from rich households.

Secondly, the issue of high levels of unemployment is another driving force for necessity-driven nascent entrepreneurship in Zimbabwe. It is an open secret that Zimbabwe is experiencing high levels of unemployment provided that it has experienced massive company closures (Zvavahera et al., 2018; Kwaramba, 2017; Masocha, 2016; Njaya, 2015). Despite high levels of unemployment, institutions of higher learning are currently churning out thousands of graduates who cannot secure formal employment. This situation has triggered high levels of graduate unemployment in Zimbabwe. Worryingly, Nyoni (2018) lamented that the graduate unemployment rate in Zimbabwe is about 74%. Accordingly, unemployed graduates have no other options save necessity-driven entrepreneurship.

Going forward, it is widely acknowledged that youth unemployment is a major economic problem in Zimbabwe that is increasing rapidly. In this regard, Bhebhe, Bhebhe, and Bhebhe (2016) lamented that educated youths in Zimbabwe such as holders of “O” level certificates, “A” level certificates and diploma as well as degrees are unemployed. Specifically, Mafumbate, Gondo, and Mutekwe (2014) document that Zimbabwe Open University (ZOU) has churned out a greater proportion of Zimbabwean graduates at a time when the Zimbabwean economy is collapsing. It is discouraging to note that unemployed youth has found it difficult to marry as they are still relying on parental support (Bhebhe, Sulochana, Muranda, Sifile, & Chavunduka, 2020). This suggests that the self-esteem of educated youth has been negatively affected. Despite the fact some educated youths are starting their own businesses in the informal sector, it appears that the informal sector cannot absorb all the university graduates in Zimbabwe (Mwenje, 2016). Worryingly, Kuwaza (2016) lamented that about 2000 university graduates have become street vendors in Bulawayo and Harare. This suggests that youth unemployment has become an issue of great concern in Zimbabwe (Moyo, 2016; Masekesa & Chibaya, 2014). Notably, unemployed youths have no other option save necessity-driven entrepreneurship.

Based on the above fine-grained analysis of necessity-driven entrepreneurship in Zimbabwe, it is deemed necessary to mention that Zimbabwean entrepreneurs are left with no option to earn a living save entrepreneurship. This is the reason why the streets of the various cities in Zimbabwe are flooded with street entrepreneurs who are trying to earn a living through street entrepreneurship. Unfortunately, the businesses owned by these entrepreneurs are failing at the embryonic stage (Nyoni, 2018). The issue of COVID 19 is currently accelerating the rate of business failure in Zimbabwe since all unregistered businesses are no longer allowed to operate in the Central Business Unit (CBD). It is discouraging to note that most of the businesses of necessity-driven entrepreneurs are closed. This implies that poverty levels are going to increase in the next coming years if nothing is done to assist necessity-driven entrepreneurs in Zimbabwe.

## ***Challenges to Necessity-Driven Nascent Entrepreneurship***

Given that much attention has been paid to traditional areas of entrepreneurship, there is a paucity of research on nascent entrepreneurship (Fairlie & Fossen, 2018; Suchart, 2017). To cover this literature gap, a comprehensive understanding of challenges to necessity-driven entrepreneurship is required. The following section covers the challenges faced by necessity-driven nascent entrepreneurs:

## **CHALLENGES TO NECESSITY-DRIVEN NASCENT ENTREPRENEURSHIP**

Drawing from the existing literature on entrepreneurship, it is clear that there is fragmented and scant literature when it comes to necessity-driven nascent entrepreneurship. Admittedly, there is an urgent need to comprehensively analyse the challenges associated with necessity-driven entrepreneurship in an attempt to advance and enrich entrepreneurship scholarship. Consequently, it is the main aim of this study to fill in this literature gap by unpacking the formidable challenges that are faced with necessity-driven nascent entrepreneurs as follows.

### **Six Key Challenges Faced by Necessity-Driven Entrepreneurs**

It is worth mentioning that necessity-driven nascent entrepreneurs face a multiplicity challenges. Notably, women and minority groups are often necessity-driven entrepreneurs (Buheji, 2018). A comprehensive analysis of the available literature revealed the following major challenges:

#### **Lack of Entrepreneurial Self-Confidence**

This is one of the major challenges that is faced by necessity-driven nascent entrepreneurs. Entrepreneurial self-confidence is a determinant of the establishment of a new business venture (Martins, Monsalve, & Martinez, 2018; Imarhiagbe, Saridakis, & Mohammed, 2017; Vagesh, Thaddaeus, & Udhaya, 2017). In this respect, individuals with low entrepreneurial self-confidence have the greatest chance of business failure. It is within this context that a lack of entrepreneurial self-confidence is a big challenge that can be faced by necessity-driven entrepreneurs. In fact, it is not surprising to note that poor people have low entrepreneurial self-confidence because these people are marginalized in society. It is widely acknowledged that necessity-driven nascent entrepreneurs are dominated by women. Given this information, many scholars underscored that women have lower self-confidence than men. It is within this context that Imarhiagbe et al. (2017) underscored that issue of self-confidence is linked to entrepreneurial behaviour and outcomes. Notably, low self-confidence affects negatively the decision of the entrepreneurs to start a business and their ongoing business decisions especially when it comes to poor people. Consequently, it acts as a challenge that can be encountered by necessity-driven nascent entrepreneurs.

#### **Lack of Information**

Lack of information is another biggest challenge that can be faced by necessity-driven nascent entrepreneurs. With this in mind, it necessary to note that Sharifi and Hossein (2015) stressed that owners of new business ventures have inadequate information pertaining to tax issues, entrepreneurial culture, social issues, and regulatory issues as well as issues related to market structure. In a similar vein, Chawla and

Sujatha (2016) underscored that limited information is a challenge faced by entrepreneurs especially when it comes to information relating to finance or the flow of credit. This implies that information asymmetry is a formidable challenge that can inhibit the success of necessity-driven nascent entrepreneurs given that they are coming from poor backgrounds. Specifically, Katrodia and Sibanda (2018) clearly expressed that young entrepreneurs do not have adequate information about how to start a small business. This is consistent with the view of Manyani (2013) echoed that entrepreneurs are failing owing to limited information about how start-up a successful venture.

### **Lack of Entrepreneurial Mentorship**

Most of the necessity-driven nascent entrepreneurs face a lack of entrepreneurial mentorship as a formidable challenge that inhibits their success. In this regard, it is widely acknowledged that novice entrepreneurs that do not receive entrepreneurial mentorship are more likely to fail as compared to those who received entrepreneurial mentorship (Legas, 2015). This is the reason why the relationship between the mentor (experienced entrepreneur) and mentee (novice entrepreneur) is of great importance when it comes to necessity-driven nascent entrepreneurs. It is very hard for a nascent entrepreneur to succeed in business without authentic business experience or exposure (Katrodia & Sibanda, 2018; Legas, 2015). Nonetheless, it does not necessarily mean that mentored entrepreneurs are guaranteed to be successful in business since there are many issues linked to entrepreneurial success.

### **Legal and Regulatory Issues**

Most of the necessity-driven entrepreneurs are faced with the challenge of restraining legal and regulatory issues, especially in developing countries. Notably, the long process that is involved in complying with the regulatory frameworks may be very cumbersome for novice entrepreneurs (Vagesh et al., 2017). It is within this context that Legas (2015) lamented that entrepreneurial success in Sub-Saharan Africa is hindered through the use of tightest laws that are not conducive for fostering an entrepreneurial spirit. In a similar vein, Thebe and Ncube (2015) documented that entrepreneurs are subject to tight laws that are being enforced by police and local authorities. Given the fact that necessity-driven entrepreneurs are engaging in entrepreneurial mainly for survival, it is not surprising that many of them can not comply with various laws that are associated with starting a new business venture. Notably, there are many constraining legal issues when it comes to necessity-driven nascent entrepreneurship such as administrative heavy burdens on start-ups, complex license and permit systems, high costs of regulatory compliance, and complexity of regulatory procedures.

### **Lack of Adequate Personal Funds**

Given that most of the necessity-driven nascent entrepreneurs are poor individuals, there is no doubt that they normally set up their businesses using limited personal funds that can be a huge obstacle for entrepreneurial success. It is within this context that Katrodia and Sibanda (2018) conducted a study on challenges faced by entrepreneurs in India and found that lack of personal savings was one of the biggest challenges faced by young entrepreneurial in the Rajkot region. This is not surprising since most of the necessity-driven entrepreneurial aimed at survival. Admittedly, necessity entrepreneurs have less

## ***Challenges to Necessity-Driven Nascent Entrepreneurship***

capital which hinders entrepreneurial success (Warnecke, 2013). Therefore, they cannot have enough financial resources that are needed for the business to flourish. Unfortunately, the government of Zimbabwe is faced with funding challenges owing to the negative effects of a fragile economy (Ndiweni & Verhoeven, 2013).

### **Personal or Family Problems**

This is another challenge that can be encountered by necessity-driven nascent entrepreneurs. It is within this context that Vagesh et al. (2017) accentuated that family problems act as a setback when it comes to the success of new entrepreneurial ventures. Similarly, Katrodia and Sibanda (2018) stressed that young entrepreneurs are faced with a challenge of family commitments. This suggests that family commitments can consume more time that should be spent on a business start-up. Moreover, issues like divorce may also negatively affect the business success of necessity-driven entrepreneurs. Admittedly, women necessity-driven nascent entrepreneurs are constrained with various family responsibilities as compared to their male counterparts (Cotter, 2018; Mauchi, Mutengezanwa, & Damiyano, 2014).

## **SOLUTIONS AND RECOMMENDATIONS**

Provided that preceding part captured the challenges faced by necessity-driven nascent entrepreneurship, this part covers the solutions to such mentioned challenges as indicated below:

**Formation of Self-Help Groups:** Given limited personal funds as a challenge associated with necessity-driven nascent entrepreneurship, it is prudent to recommend that necessity entrepreneurs must create organized self-help groups. This is a powerful tool for promoting necessity-driven nascent entrepreneurship, especially for women necessity entrepreneurs. This could accelerate social transformation through necessity-driven entrepreneurship since women are at the epicentre of the development process.

**Implementation of E-Mentoring:** In order to address a lack of entrepreneurial mentorship as a challenge faced by necessity entrepreneurs, the policymakers and Non-Governmental Organisations (NGOs) should develop and support electronic mentoring programs for necessity entrepreneurs. This could help necessity entrepreneurs to acquire knowledge and skills that are necessary for the effective and efficient utilization of resources. More interestingly, e-mentoring platforms could help necessity entrepreneurs to gain positive business aptitude in the current digital epoch.

**Establishment of National Entrepreneurs Hub (NEH):** In order to address the challenge of lack of information, policymakers should establish national entrepreneurs hubs so that necessity-driven nascent entrepreneurs can access business information, share information, gain support and encouragement, and get business contacts. With this recommendation in mind, it is of great importance to mention that formal and informal entrepreneurial networks could help necessity entrepreneurs to interact with renowned entrepreneurial people.

**Entrepreneur-Friendly Regulatory Framework:** It is recommended that policymakers should come up with an entrepreneur-friendly framework that addresses the complexity of law that governs start-ups. For necessity entrepreneurs to thrive, they should be supported by entrepreneur-friendly regulatory frameworks that encompass four primary principles, namely, accountability, simplicity, fairness, and transparency.

## **FUTURE RESEARCH DIRECTIONS**

Necessity-driven nascent entrepreneurship has become the hottest topic in entrepreneurship mainstream literature. Nevertheless, the paucity of research work linked to challenges faced by necessity-driven nascent entrepreneurs is quite clear. The current comprehensive review of the extant literature pertaining to challenges faced by necessity-driven entrepreneurship has opened research opportunities for further research work. As illustrated in Table 2, there is a multiplicity of research gaps.

*Table 2. Knowledge gaps and agenda for future research*

<b>Knowledge Gaps</b>	<b>Directions for Future Research</b>
Limited studies on necessity-driven nascent entrepreneurship in African countries	Empirical studies to capture evidence on how necessity-driven nascent entrepreneurship is contingent on contextual differences?
Paucity of empirical studies on the challenges to necessity-driven nascent entrepreneurship in developing countries	Empirical studies to explore the challenges to necessity-driven nascent entrepreneurship in the context of developing countries
Dearth of quantitative empirical studies on challenges to necessity-driven entrepreneurship	Robust quantitative studies to analyse the challenges to necessity-driven entrepreneurship
Assessment of the effectiveness of the government policies formulated to support necessity-driven nascent entrepreneurs	Empirical studies to assess the effectiveness of government policies formulated to support necessity-driven nascent entrepreneurship
Paucity of comparative studies on necessity-driven nascent entrepreneurship	Comparative studies on necessity-driven nascent entrepreneurship

Firstly, it would be interesting for future studies to focus on necessity-driven nascent entrepreneurship with the context of African countries. Notably, such studies can expand our understanding of necessity-driven nascent entrepreneurship given that necessity (survival) entrepreneurs are often found in Africa. Secondly, future empirical studies should explore the challenges to necessity-driven nascent entrepreneurship in the context of developing countries. Thirdly, it would be interesting for future research work to focus on robust quantitative studies on the challenges to necessity-driven entrepreneurship. This could offer insights into the overall conclusion about challenges to necessity-driven nascent entrepreneurship since large samples would be used. Fourthly, future empirical studies to assess the effectiveness of government policies formulated to support necessity-driven nascent entrepreneurship are recommended. This would provide deep insights into how different governments are supporting necessity entrepreneurs worldwide. Fifthly, it would be interesting for future research work to concentrate on comparative studies on necessity-driven nascent entrepreneurship. This could provide evidence on whether similar results can be yielded or not.

## **CONCLUSION**

This chapter compressively consolidates the available literature with respect to the challenges to necessity-driven nascent entrepreneurship. In this regard, six key challenges have been identified: personal or family problems, lack of entrepreneurial self-confidence, lack of information, lack of entrepreneurial mentorship, legal and regulatory issues, and lack of adequate personal funds. With these challenges in

## **Challenges to Necessity-Driven Nascent Entrepreneurship**

mind, the suggested solutions have been provided, namely, the formation of self-help groups, implementation of e-mentoring, the establishment of NEH, and entrepreneur-friendly regulatory framework. Three key contributions to the existing literature on entrepreneurship are made by this research. Firstly, it consolidates the challenges of necessity-driven entrepreneurship. Secondly, avenues of research opportunities are opened by this research as it captures the research gaps. Thirdly, directions for further research when it comes to necessity-driven entrepreneurship are provided. In this regard, it would be interesting for scholars who are interested in necessity-driven entrepreneurship to address these research gaps in the future. More interestingly, this research offers deep insights into the challenges to necessity-driven nascent entrepreneurship which can help policymakers and practitioners to make sound decisions. It is, therefore, most appropriate to conclude that necessity-driven entrepreneurs encounter a plethora of challenges that are different from opportunity-driven entrepreneurs.

## **REFERENCES**

- Amorós, J. E., & Bosma, N. (2014). *Global Entrepreneurship Monitor 2013 Global Report*. Global Entrepreneurship Research Association.
- Amoros, J. E., Ciravegna, L., Mandakovic, V., & Stenholm, P. (2019). Necessity or opportunity? The effects of state fragility and economic development on entrepreneurial efforts. *Entrepreneurship Theory and Practice*, 43(4), 725–750. doi:10.1177/1042258717736857
- Banerjee, V., & Duflo, E. (2007). The economic lives of the poor. *The Journal of Economic Perspectives*, 21(1), 141–167. doi:10.1257/jep.21.1.141 PMID:19212450
- Benz, M. (2009). Entrepreneurship as a non-profit-seeking activity. *The International Entrepreneurship and Management Journal*, 5(1), 23–44. doi:10.1007/11365-006-0031-y
- Bhebhe, T. B., Bhebhe, R. K., & Bhebhe, B. S. (2016). An investigation into the causes of unemployment among youths in the City of Harare. *Global Journal of Arts, Humanities and Social Sciences*, 4(2), 90–102.
- Bhebhe, T. B., Sulochana, N., Muranda, Z., Sifile, O., & Chavunduka, M. D. (2020). Effects of the educated youth unemployment nexus in Zimbabwe. *Journal of the Humanities and Social Sciences*, 20(10), 1–11.
- Block, J., & Wagner, M. (2010). Necessity and opportunity entrepreneurs in Germany: Characteristics and earnings differentials. *Schmalenbach Business Review*, 62(2), 154–174. doi:10.1007/BF03396803
- Buheji, M. (2018). Understanding necessity entrepreneurship. *Issues in Social Science*, 6(1), 1–7. doi:10.5296/iss.v6i1.13298
- Calderon, G., Iacovone, L., & Juarez, L. (2017). Opportunity versus necessity: Understanding the heterogeneity of female micro-entrepreneurs. *The World Bank Economic Review*, 30(1), S86–S96.
- Chawla, A., & Sujatha, R. (2016). *Women entrepreneurship: Culture and norms: An Indian perspective*. Retrieved May 27, 2020, from <https://www.semanticscholar.org/paper/Women-Entrepreneurship%3A-Culture-and-Norms-%E2%80%93-An-Chawla-Sujatha/b8eba4e83f5fe3a19f582e8d154410e50ae01df2>



Chigwenya, A., & Mudzengerere, F. H. (2013). The small and medium enterprises policy in Zimbabwe: A narrative of strides taken to mainstream the informal sector activities in urban local authorities in Zimbabwe. *International Journal of Politics and Good Governance*, 4(4), 1–18.

Cotter, T. (2018). *Necessity vs. innovation-based entrepreneurs*. Retrieved June 1, 2020, from <https://entrepreneurship.mit.edu/necessity-vs-innovation-based-entrepreneurs/>

Fairlie, R. W., & Fossen, F. M. (2018). *Opportunity versus necessity entrepreneurship: Two components of business creation*. IZA Discussion Paper 11258. IZA Institute of Labor Economics.

Fairlie, R. W., & Fossen, F. M. (2018). *Opportunity versus necessity entrepreneurship: two components of business creation*. Discussion Paper Series-IZA DP No. 11258.

França, A., Frankenbach, S., Vilares, A., Vereb, V., & Moreira, A. C. (2017). The challenging dynamics of nascent entrepreneurship. In *Nascent entrepreneurship and successful new and successful new* (pp 1–28), Hershey, PA: IGI Global.

Garba, A. S., Djafar, F., & Mansor, S. A. (2013). Evidence of opportunity and necessity driven entrepreneurship in Nigeria. *Journal of Entrepreneurship. Management and Innovation*, 9(3), 57–78.

González-Perníaa, J. L., Guerrero, M., Jung, A., & Legazkue, P. (2018). Economic recession shake-out and entrepreneurship: Evidence from Spain. *BRQ Business Research Quarterly*, 21(3), 153–167. doi:10.1016/j.brq.2018.06.001

Gries, T., & Naude, W. (2011). Entrepreneurship and human development: A capability approach. *Journal of Public Economics*, 95(3/4), 216–224. doi:10.1016/j.jpubeco.2010.11.008

Gunhidzirai, C., Pius, T., & Tanga, P. T. (2017). Informal entrepreneurship as a poverty alleviation mechanism in Zimbabwe: Challenges and prospects. *Journal of Economics and Behavioral Studies*, 9(4), 132–143. doi:10.22610/jebs.v9i4.1828

Imarhiagbe, B. O., Saridakis, G., & Mohammed, A. M. (2017). Do bank credit rejection and financial education affect financial self-confidence? *International Journal of Entrepreneurial Behaviour & Research*, 23(6), 1033–1051. doi:10.1108/IJEER-05-2016-0168

Katrodia, A., & Sibanda, R. (2018). Challenges experienced by young entrepreneurs entering the Small and Medium Enterprise sector (SME) in Rajkot region, Gujarat-India. *Academy of Entrepreneurship Journal*, 24(4), 1–14.

Kelley, D., Singer, S., & Herrington, M. (2016). *GEM 2015/16 global report: GEM Global Entrepreneurship Monitor*. Global Entrepreneurship Research Association.

Kuwaza, K. (2016). *Graduate vendors: A clear sign of failed government policies*. Retrieved June 1, 2020, from <https://www.theindependent.co.zw/2016/06/03/graduate-vendors-clear-sign-failed-govt-policies/>

Kwaramba, N. (2017). *The role and importance of key entrepreneurship development*. The Zimbabwe Independent. Retrieved May 28, 2020, from <https://www.theindependent.co.zw/2017/05/26/role-importance-key-entrepreneurship-development/>

### **Challenges to Necessity-Driven Nascent Entrepreneurship**

- Legas, H. (2015). Challenges to entrepreneurial success in Sub-Saharan Africa: A comparative perspective. *European Journal of Business and Management*, 7(11), 23–35.
- Mafumbate, R., Gondo, T., & Mutekwe, E. (2014). Graduate employment challenges in Zimbabwe: A case of Zimbabwe Open University graduates. *Journal of Education and Practice*, 5(20), 57–63.
- Martins, I., Monsalve, J. P. P., & Martinez, A. V. (2018). Self-confidence and fear of failure among university students and their relationship with entrepreneurial orientation: Evidence from Colombia. *Academia (Caracas)*, 31(3), 471–485. doi:10.1108/ARLA-01-2018-0018
- Masekesa, C., & Chibaya, M. (2014). *Unemployment turns graduates into vendors*. Retrieved May 27, 2020, from <https://www.thestandard.co.zw/2014/02/09/unemployment-turns-graduates-vendors/>
- Masocha, K. C. (2016). *Can entrepreneurship be the answer to Zimbabwe's unemployment crisis: A case study of Epworth* (Bachelor's Thesis). Midlands State University, Zimbabwe.
- Mason, C., & Harvey, C. (2013). Entrepreneurship: Contexts, opportunities, and processes. *Business History*, 55(1), 1–8. doi:10.1080/00076791.2012.687542
- Mauchi, F. N., Mutengezanwa, M., & Damiyano, D. (2014). Challenges faced by women entrepreneurs: A case study of Mashonaland Central Province. *International Journal of Development and Sustainability*, 3(3), 466–480.
- Mboko, S., & Hunter-Smith, P. (2009). Applying theories of entrepreneurship to a comparative analysis of white and minority women business owners. *Women in Management Review*, 19(2), 20–21.
- Mohan, P., Watson, P., & Strobl, E. (2018). Nascent entrepreneurs in Caribbean small Island developing states: Opportunity versus necessity. *Journal of Developmental Entrepreneurship*, 23(4), 1–33. doi:10.1142/S108494671850022X
- Moyo, J. (2016). *Graduates living in Poverty*. Retrieved June 1, 2020, from <https://www.dandc.eu/en/article/many-university-graduates-zimbabwe-are-unemployed>
- Munyanyi, W. (2013). Agriculture infrastructure development imperative for sustainable food production: A Zimbabwe perspective. *Russian Journal of Agricultural and Socio-Economic Sciences*, 24(12), 13–21. doi:10.18551/rjoas.2013-12.02
- Mwenje, S. (2016). The challenge of graduate unemployment: A case of university graduates in the City of Mutare-Zimbabwe. *International Journal of Innovative Social Sciences and Humanities Research*, 4(4), 50–57.
- Nasiri, N., & Hamelin, N. (2018). Entrepreneurship driven by opportunity and necessity: Effects of educations, gender, and occupation in MENA. *Asian Journal of Business Research*, 8(2), 57–71. doi:10.14707/ajbr.180049
- Ndiweni, E., & Verhoeven, H. A. L. (2013). The rise of informal entrepreneurs in Zimbabwe: Evidence of economic growth or failure of economic policies? *African Journal of Accounting, Auditing and Finance*, 2(3), 260–276.

- Nhuta, S., & Mukumba, E. (2017). Empowerment of Zimbabwean women through entrepreneurship an economic and social perspective. *International Journal of Management and Social Sciences*, 7(3), 373–409. doi:10.21013/jmss.v7.n3.p1
- Njaya, T. (2015). Informal sector, panacea to the high unemployment in Zimbabwe? Case of informal sector enterprises of Harare Metropolitan. *International Journal of Research in Humanities and Social Studies*, 2(2), 97–106.
- Nyoni, T. (2018). *The entrepreneurship miracle: A desperate move to rectify Zimbabwe's socio-economic herculean?* Retrieved June 1, 2020, from [https://mpr.ub.uni-muenchen.de/87735/1/MPRA\\_paper\\_87735.pdf](https://mpr.ub.uni-muenchen.de/87735/1/MPRA_paper_87735.pdf)
- Rasel, B. U. A. (2014). *Opportunity-driven immigrant entrepreneurship: A comparative case study of immigrant entrepreneurship in the Norwegian-host country context* (Master thesis). University of Oslo, Norway.
- Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. (2002). *Global Entrepreneurship Monitor: 2001 summary report*. London Business School.
- Salami, C. G. E. (2011). Entrepreneurial interventionism and challenges of youth unemployment in Nigeria. *Global Journal of Management and Business Research*, 11(7), 16–24.
- Santos, S. C., Caetano, A., Spagnoli, P., Costa, S. F., & Neumeyer, X. (2017). Predictors of entrepreneurial activity before and during the European economic crisis. *The International Entrepreneurship and Management Journal*, 13(4), 1263–1288. doi:10.1007/11365-017-0453-8
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. doi:10.5465/amr.2000.2791611
- Sharifi, O., & Hossein, B. K. (2015). Understanding the financing challenges faced by start-ups in India. *International Journal of Science Technology and Management*, 4, 115–120.
- Simón-Moya, V., Revuelto-Taboada, L., & Ribeiro-Soriano, D. (2016). Influence of economic crisis on new SME survival: Reality or fiction? *Entrepreneurship and Regional Development*, 28(1–2), 157–176. doi:10.1080/08985626.2015.1118560
- Stuetzer, M., Obschonka, U., Brixy, R., Sternberg, U., & Cantner, U. (2014). Cantner Regional characteristics, opportunity perception and entrepreneurial activities. *Small Business Economics*, 42(2), 221–224. doi:10.1007/11187-013-9488-6
- Suchart, T. (2017). Factors influencing opportunity-driven nascent entrepreneurs in Europe and Asia. *European Research Studies Journal*, 20(3), 774–782. doi:10.35808/ersj/745
- Thebe, P., & Ncube, G. (2015). Street entrepreneurship in Zimbabwe: Survivalist or growth-oriented? A case of Bulawayo city centre. *International Journal of Development and Sustainability*, 49(2), 126–144.
- Vagesh, M. V., Thaddaeus, S., & Udhaya, K. D. (2017). Nascent entrepreneur: Challenges and Issues. *Journal of Business and Management*, 19(10), 1–4.

## **Challenges to Necessity-Driven Nascent Entrepreneurship**

Vegetti, F., & Adăscăliței, D. (2017). The impact of the economic crisis on latent and early entrepreneurship in Europe. *The International Entrepreneurship and Management Journal*, 13(4), 1289–1314. doi:10.1007/11365-017-0456-5

Warnecke, T. (2013). *Can female entrepreneurship programs support social and solidarity economy? Insights from China and India*. United Nations Research Institute for Social Development. Retrieved May 28, 2020, from <http://www.unrisd.org/80256B3C005BE6B5/search/8C7D189297B145E1C1257B3A00504F17?OpenDocument>

Williams, N., & Williams, C. C. (2014). Beyond necessity versus opportunity entrepreneurship: Some lessons from English deprived urban neighborhoods. *The International Entrepreneurship and Management Journal*, 10(1), 23–40. doi:10.1007/11365-011-0190-3

Zimbabwe National Statistics Agency. (2019). *Zimbabwe Poverty Report 2017*. Retrieved June 1, 2020, from [http://www.zimstat.co.zw/sites/default/files/img/publications/Prices/Poverty\\_Report\\_2017.pdf](http://www.zimstat.co.zw/sites/default/files/img/publications/Prices/Poverty_Report_2017.pdf)

Zvavahera, P., Chigora, F., & Tandi, R. (2018). Entrepreneurship: An engine for economic growth. *International Journal of Academic Research in Business and Social Sciences*, 8(11), 55–66. doi:10.6007/IJARBS/v8-i11/4884

## **ADDITIONAL READING**

Amit, R., & Muller, E. (1995). “Push” and “pull” entrepreneurship. *Journal of Small Business and Entrepreneurship*, 12(4), 64–80. doi:10.1080/08276331.1995.10600505

Block, J. H., Kohn, K., Miller, D., & Ullrich, K. (2015). Necessity entrepreneurship and competitive strategy. *Small Business Economics*, 44(1), 37–54. doi:10.1007/11187-014-9589-x

Block, J. H., & Wagner, M. (2007). Opportunity recognition and exploitation by necessity and opportunity entrepreneurs: Empirical evidence from earnings equations. *Academy of Management Proceedings*, 2(1), 1–6. doi:10.5465/ambpp.2007.26523855

Caliendo, M., Fossen, F. M., & Kritikos, A. S. (2009). Risk attitudes of nascent entrepreneurs: New evidence from an experimentally validated survey. *Small Business Economics*, 32(2), 153–167. doi:10.1007/11187-007-9078-6

Congregado, E., Golpe, A. A., & Parker, S. C. (2012). The dynamics of entrepreneurship: Hysteresis, business cycles and government policy. *Empirical Economics*, 43(3), 1239–1261. doi:10.1007/00181-011-0516-6

Dawson, C., & Henley, A. (2012). “Push” versus “pull” entrepreneurship: An ambiguous distinction? *International Journal of Entrepreneurial Behaviour & Research*, 18(6), 697–711. doi:10.1108/13552551211268139

Fritsch, M., Kritikos, A., & Pijnenburg, K. (2015). Business cycles, unemployment and entrepreneurial entry: Evidence from Germany. *The International Entrepreneurship and Management Journal*, 11(2), 267–286. doi:10.1007/11365-014-0326-3

Kautonen, T., & Palmroos, J. (2010). The impact of necessity-based start-up on subsequent entrepreneurial satisfaction. *The International Entrepreneurship and Management Journal*, 6(3), 285–300. doi:10.1007/11365-008-0104-1

Ritsilä, J., & Tervo, H. (2002). Effects of unemployment on new firm formation: Microlevel panel data evidence from Finland. *Small Business Economics*, 19(1), 31–40. doi:10.1023/A:1015734424259

Williams, N., & Williams, C. C. (2014). Beyond necessity versus opportunity entrepreneurship: Some lessons from English deprived urban neighborhoods. *The International Entrepreneurship and Management Journal*, 10(1), 23–40. doi:10.1007/11365-011-0190-3

## KEY TERMS AND DEFINITIONS

**Challenge:** It is a strategic, human resource, procedural structural, and contextual factor that inhibits entrepreneurial success.

**Entrepreneurship:** Is a process that involves discovery, appraisal, and utilization of avenues of opportunities that exist in the market in an attempt to introduce new services, goods, markets, raw materials, and processes profitably. It is widely acknowledged that entrepreneurship is about risk-taking.

**Nascent Entrepreneur:** Refers to an individual who tried to establish a new business venture in the past 12 months and the new business venture did not generate positive net cash flow for more than three months. Nascent entrepreneurs can have full-time or part-time engagement in the business.

**Necessity Entrepreneur:** Defined as a person who was unemployed before creating a new business venture. The main purpose of necessity entrepreneurs in business is survival. In this regard, they can be called survival entrepreneurs.

**New Venture Creation:** Defined as a process that involves an establishment of a new business venture from scratch, growing the venture and then effectively harvesting the business venture.

**Opportunity Entrepreneur:** Is a person who is motivated to start a new business with the availability of unexploited entrepreneurial opportunity in the market. Opportunity entrepreneur aimed at business growth and economic development rather than survival.

**Poverty:** Is generally defined as a proxy of deprivation of the basic needs that a person, household or community necessitates to have as a basic standard of living. The poverty rate can be used to proxy the number of persons living below the poverty datum line.

**Push Factors:** These are factors that force individuals to engage in entrepreneurship. These factors include unemployment and poverty.

**Unemployment:** Defined as the number of persons who can be employable and looking for a job but are not finding a job. The unemployment rate is used to measure the level of unemployment in a county. Unemployment is equal to the total number of people who are unemployed divided by the total number of people in the workforce.


## Chapter 10

# Women Entrepreneurs and Microfinance Institutions: A Way to Create New Ventures

**Waseem Ul Hameed**

 <https://orcid.org/0000-0002-3409-563X>  
School of Business, Management, and  
Administrative Sciences (SBM&AS), Department  
of Islamic and Conventional Banking (ICB),  
The Islamia University of Bahawalpur (IUB),  
Pakistan

**Muhammad Farhan Basheer**

 <https://orcid.org/0000-0001-8622-9866>  
School of Economics, Finance, and Banking  
(SEFB), College of Business (COB), Universiti  
Utara Malaysia, Malaysia

**Jawad Iqbal**

School of Business, Management and  
Administrative Sciences (SBM&AS), The Islamia  
University of Bahawalpur (IUB), Pakistan

**Qasim Ali Nisar**

Superior University, Lahore, Pakistan

**Muhammad Saeed Meo**

Superior University, Lahore, Pakistan

**Shazma Razzaq**

Awang Had Salleh Graduate School of Art and  
Sciences, Universiti Utara Malaysia, Malaysia

### ABSTRACT

*The objective of this chapter is to highlight the important relationship between microfinance institutions and women entrepreneurs in new venture creation. This chapter is proposed because women-empowerment is one of the crucial issues worldwide. In certain parts of the world, women are bound to customs, norms, beliefs, which are unique. These issues are found to promote social problems and hinder the economic contribution from women. In this direction, microfinance institutions are playing a vital role to promote women-empowerment through providing various opportunities to create new ventures. New venture creation increases the women social and economic empowerment through income generation. Various microfinance factors such as micro-credit, micro-saving, micro-insurance, and micro-training/skill development have a significant positive contribution to create new ventures. Finally, this chapter could be beneficial for microfinance institutes, state bank and government in making the strategies to enhance women-empowerment through new venture creation.*

DOI: 10.4018/978-1-7998-4826-4.ch010

## **INTRODUCTION**

New venture creation is the most significant phenomenon in businesses which has central importance in business industry (Bucciari, Javalgi, & Cavusgil, 2020). New venture creation is most significant for poor people. As new venture creation is one of the ways to decrease the level of poverty. Particularly, it is more helpful for women community as the poverty rate is high in women community. Especially, in Pakistan, the level of poverty among women is high as compared to the men. Total 70% of worldwide poverty belong to the women and in Pakistan, 30 to 40% women are economically and socially poor (Hameed, Nisar, Abbas, Waqas, & Meo, 2019). However, venture creation in Pakistan is very low, particularly, the venture creation among the poor people is not sufficient to come out from poverty (Ali, Alam, & Lodhi, 2014). The venture creation among the women community of Pakistan is at very initial level. Various institutions such as microfinance finance institutions and non-profits organizations are trying to increase venture creation, however, it is at very initial level. That is the reason women empowerment is very low in Pakistan. Less involvement of women in income generating activities (Hameed et al., 2019) causes to decrease in venture creation which has negative role in women empowerment. Hence, venture creation among the Pakistani women community is quite important.

To empower the women community, new venture creation is most important, as it reduces the poverty and increases the women empowerment. However, new venture creation requires resources. Most people in the poor community venture into micro-enterprises, however, find it hard to achieve success due to lacking in resources (Hameed, 2019). Most Pakistani women have lack of resources to start their businesses. Women in business, on the other hand have lack of credit, savings, training and insurance which drives them to seek loan from microfinance institutions (Kithae, Nyaga, & Kimani, 2013). Most of the time, women are granted less credit as compared to men (Brana, 2013; Fletschner, 2009). Due to lack of credit, saving and insurance activities, women cannot start their businesses (Bernard, Kevin, & Khin, 2016). Women that have access to credit cannot run their micro-enterprises due to lack of training opportunities. Lack of credit, saving, insurance and training push women to take part in microfinance institutions.

Microfinance institutions provides the opportunity for women to participate in income generating activities which increases the women social and economic empowerment (Hameed, Mohammad & Shahar, 2018) through new venture creation. Thus, this study examined the effect of the microfinance services, namely; financial capital (micro-credit, micro-savings, micro-insurance) and non-financial capital (micro-training/skill development), contributing factors towards women-empowerment in Pakistan. The term microfinance is defined as the provision of savings, deposits, loans, payment services, money transfer and insurance services to the very poor and low-income households (Nasir & Farooqi, 2016). Microfinance institutions are those that take deposits, lend a very small amount to poor people, and provide non-financial services such as training to those who are unable to access traditional banking institutions (Nasir & Farooqi, 2016). These services are excluded from the traditional banking system (Iqbal, Iqbal, & Mushtaq, 2015). Microfinance institutions play an important role in strategies related to gender and development due to their active involvement in women-empowerment and poverty alleviation (Iftikhar, Khadim, Munir, & Amir, 2018; Sinha, Mahapatra, Dutta, & Sengupta, 2019).

Microfinance has evolved into a thriving global industry, and it is one of the fastest growing industries worldwide (Dichter, 2007; Garikipati, 2008; Ghalib, Malki, & Imai, 2015; Roy, 2011). It is an idea through which low-income people acquire financial services that enable them to come out of poverty (Ahlawat, 2016) after starting income generating activities like new ventures. Microfinance consists of

## ***Women Entrepreneurs and Microfinance Institutions***

various ideas and by using these ideas, low-income people gain the ability to reduce poverty by taking advantage of the financial services offered by the microfinance institutions (Ahlawat, 2016). These financial services are provided to the poor to enable them to meet their basic financial needs for daily use and other economic opportunities (Gupta & Rao, 2005).

Therefore, this book chapter is an attempt to highlight the important relationship between microfinance institutions and women entrepreneurs in new venture creation. This book chapter has vital contribution to the body of literature by examining the role of microfinance institutions and women entrepreneurs in new venture creation. The valuable relationship between microfinance institutions and new venture creation by the women has several benefits to the community. For instance, it decreases the level of poverty and it has significant effect on the national level because it promotes business industry which creates new jobs and livelihood opportunities. Finally, the objective of this book chapter is to highlight the important relationship between microfinance institutions and women entrepreneurs in new venture creation. Therefore, this book chapter has significant practical implications for the community and at national level.

## **REVIEW OF LITERATURE**

### **Microfinance Institutions**

Microfinance is one of the ideas through which low-income people receive financial services that would enable them to reduce their level of poverty (Ahlawat, 2016). These financial services may include savings, insurance, credit, leasing, equity transaction, money transfer or any other type of financial services which enable the customers to fulfill their daily financial needs as well as to gain economic opportunity (Gupta & Rao, 2005). Microfinance is deemed as a poverty reduction tool and is primarily focused on women entrepreneurs (Evelyn & Osifo, 2018) because women have been identified to be inflicted by poverty more than man (Kapila, Singla, & Gupta, 2016).

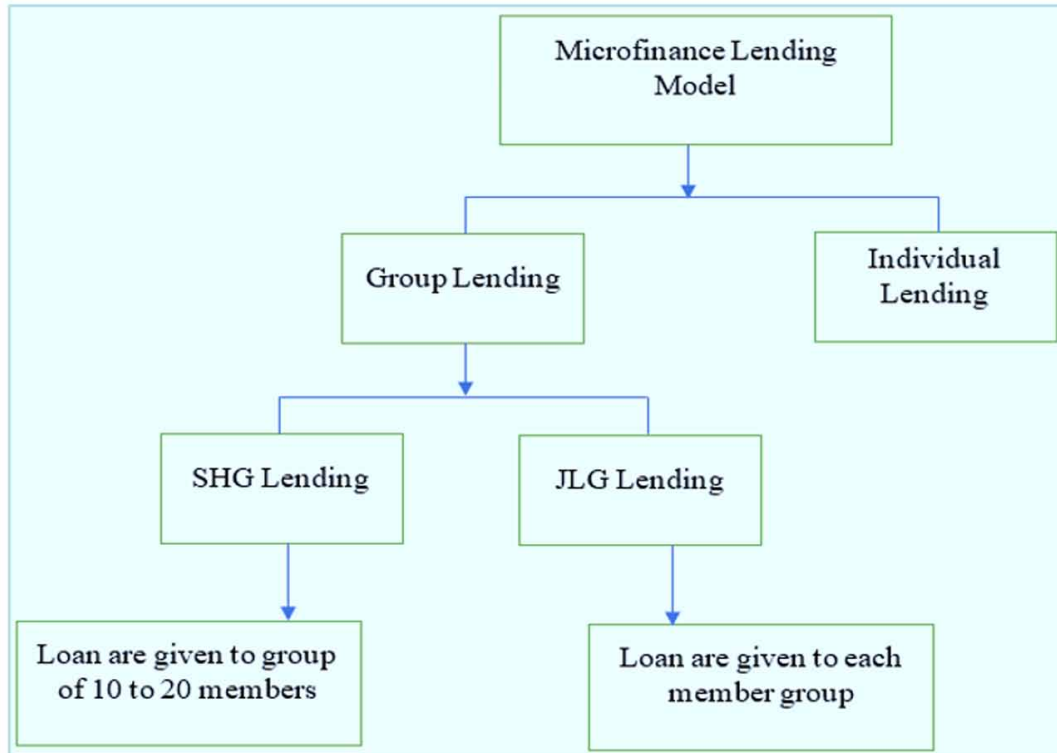
The lending concept of these microfinance institutions consists of group lending and individual lending. There are two types of group lending namely joint liability group (JLG) and self-help group (SHG) (WUL Hameed, Mohammad, & Shahr, 2018; Singh & Padhi, 2017). In JLG, a group of people consisting of 5 to 10 members will get together to apply for a loan (Nasir, 2013). The loan could be in group form and individual form against a mutual guarantee. Meanwhile, SHG comprises a group of 10 to 20 members from a homogeneous class who come together voluntarily to achieve a particular goal which can be social or economic in nature (Nasir, 2013). This concept is normally used by poor people who pool their savings, and then mobilize this saving among the group members with the aim of taking care of each other's welfare, especially in the case of women. The procedure begins with the members making internal transactions via their bank accounts to support each other i.e. a move that increases their credibility. NGOs will then start to support this group by linking with banks for financial support. Figure 1 illustrates the microfinance lending model.

The number of microfinance institutions have been increasing significantly for the past few years. According to the World Bank, there is a total of 7,000 microfinance institutions operating worldwide and allocating \$2.5 billion credits among poor people, with a total number of borrowers of approximately 16 million (Ayuub, 2013).



Figure 1. Microfinance Lending Model

Source: Nasir and Farooqi (2016)



## Microfinance Institutions in Pakistan

Pakistan started a movement in the sector of microfinance with two programs namely Agha Khan Rural Support Program (AKRSP) and Orangi Pilot Project (OPP) (Pokhriyal, Rani, & Uniyal, 2014). Pakistan is one of many developing countries with a high poverty rate, which renders the vital importance of microfinance there. Pakistan has a total population of 200 million people where 44% are living below the poverty line, earning only US\$2 for their daily income (Global Monitoring Report, 2015). The Pakistan Microfinance Review reveals that microfinance institutions are serving only 4-7% of the total population (Pakistan Microfinance Network, 2014). Therefore, massive micro financing is required in Pakistan and the Pakistani Government is now paying attention towards developing microfinance institutions. The Pakistan microfinance bank ordinance was passed in 2001, and now microfinance has become the primary tool for reducing poverty in Pakistan. Since then, the Pakistani Government has started to support the development of other private microfinance institutions in its effort to alleviate poverty (Ayuub, 2013). Since the number of microfinance institutions in Pakistan has been well documented to be insufficient in serving poor people, the step to undertake more microfinance research in the country is well justified. Table 1 shows the profile of Pakistani microfinance institutions in general.

## **Women Entrepreneurs and Microfinance Institutions**

*Table 1. Profile of Microfinance Institutions in Pakistan*

	<b>2016 – Q-2</b>
<b>Number of Branches/Units</b>	3,130
<b>Number of Districts Covered</b>	99
<b>Penetration Rate (%)</b>	20.3
<b>Active Borrowers</b>	4,161,247
<b>Gross Loan Portfolio (PKR Millions)</b>	108,881
<b>Number of Loans Disbursed</b>	1,227,858
<b>Disbursements (PKR Millions)</b>	46,069
<b>Average Loan Size (PKR)</b>	37,520
<b>Number of Savers</b>	15,755,451
<b>Value of Savings (PKR Millions)</b>	77,311
<b>Average Saving Balance (PKR)</b>	4,907
<b>Number of Policy Holders</b>	5,530,894
<b>Sum Insured (PKR Millions)</b>	128,886

Source: Pakistan Microfinance Review (2016) [PKR = Pakistani Rupee, 1 USD\$ = 135 PKR]

According to the Pakistan Microfinance Review (2017), there are 3,533 branches of microfinance institutions operating in Pakistan with 5.5 million active borrowers, 15.7 million savings account holders, approximately 5.5 million policyholders. However, as mentioned above, out of the population of 200 million, 44% or 88 million are living below the poverty line. The aforementioned Table 1 of the number of active borrowers and policyholders give the perspective that microfinance institutions in the country are only serving a small part of the entire population.

### **Services of Microfinance Institutions, Women Empowerment and New Venture Creation**

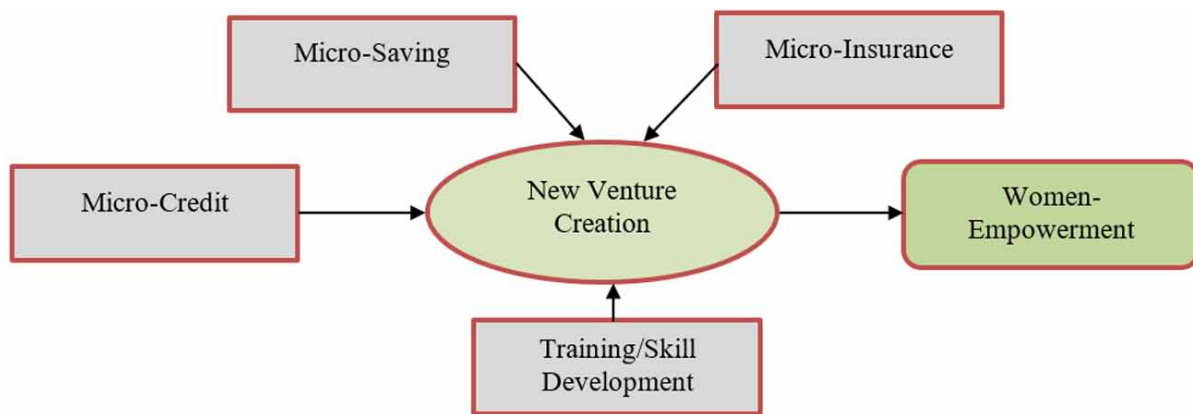
Microfinance consists of different services such as micro-credit, micro-saving, micro-insurance and micro-training/skill development. These services have a significant relationship with women-empowerment by creating new ventures. The major resources for new venture creation is credit, provided by the microfinance institutions. Other opportunities are provided through saving account opportunities in microfinance banks. Insurance protect the new venture from any disaster. Finally, training services from microfinance institution enhances the skills of women to run new venture. The connection between microfinance institutions, new venture creation and women empowerment is given in Figure 2.

### **Micro-Credit, New Venture Creation and Women Empowerment**

Microcredit is one of the key microfinance services which offer small loans to poor people to improve their existing small-scale businesses or to establish new ventures (Kessy, Msuya, Mushi, Stray-Pedersen, & Botten, 2016). It has a positive relationship with women-empowerment (Al-shami, Razali, & Rashid, 2018). It is a provision of cash and a smaller amount of loan to self-employed people to improve their

small businesses (Asiama & Osei, 2007) although it is possible for self-employed people to start their business by using their own savings or by borrowing from their relatives. There is also the need for business expansion or for proper business maintenance. The loans are primarily given to poor people who are unable to manage initial capital and routine-wise operations to run a microenterprise. Thus, microcredit has emerged as a solution to the chronic problem of poverty and for empowering their beneficiaries, especially women.

*Figure 2. Theoretical framework of the chapter showing the relationship between microfinance institutions, new venture creation and women empowerment*



Microcredit institutions are mainly focusing on women new venture creation. As cited by Yasmeen (2015), according to the Microcredit Summit Campaign Report (2010), out of the total 100% borrowers worldwide, approximately 60% are made up of women. These numbers are increasing day by day. Women are facing more problems as compared to men, a reason that justifies the focus given to them by the microfinance institutions. Females in most developing countries like Pakistan face various problems such as socio-cultural behaviour and a high ratio of illiteracy (Yasmeen, 2015). Socio-cultural behaviour includes denied equal access to resources and cultural restrictions on their physical mobility (Kabeer, 2005). In terms of family culture, the women are often expected to take care of children and fulfil maternal duties while the men are required to provide financial assistance to the family (Syed, Özbilgin, Torunoglu, & Ali, 2009).

As discussed by Nasir and Farooqi (2016), microcredit is provided through two methods which are Self-Help Groups (SHGs) and Joint Liability Groups (JLGs). Through these two groups, poor people are granted access to microcredit as well as to other microfinance services as discussed above with the help of the microfinance lending model. Microcredit is one of the critical components of women-empowerment. Different researchers have studied women-empowerment and discussed the importance of microcredit in empowering women. Mahmood (2011) examined the impact of microfinance on women empowerment in Pakistan.

## **Micro-Saving, New Venture Creation and Women Empowerment**

Saving of poor women in saving accounts of microfinance institutions has vital importance to start new ventures. Poor people find it hard to have savings because of resource shortage and behavioural biases such as irregularity of time (Laureti & Szafarz, 2016). Additional threats such as emergency expenditures affect the savings of poor people (Cozarenco, Hudon, & Szafarz, 2016). In contrast to this belief, poor people can actively save (Collins, Wambach, David, & Rankin, 2009) because access to saving has a significant positive impact on the savings of poor people. Savings accounts increase savings (Ashraf, Karlan, & Yin, 2006) as well as household expenditures (Brune, Giné, Goldberg, & Yang, 2016). Furthermore, savings accounts increase women's investment in business (Dupas & Robinson, 2013). Savings enable people to save their assets through weekly savings as well as group savings which are further utilized by microfinance institutions in their lending decisions for their clients (Mkpado & Arene, 2007). Therefore, microfinance provides the ability to save.

Micro-savings are considered as the “forgotten half” of microfinance (Armendáriz & Morduch, 2010). Although many studies had presented the success of microcredit, very few studies had focused on micro-saving. Vogel (1984) outlined the characteristics of savings mobilization as the “forgotten half of rural finance” and found that it is due to the misperception that poor people cannot save. According to Hulme, Moore, and Barrientos (2009), regulations against mobilizing deposits among non-members in developing countries had restricted microfinance institutions. However, subsidized grants as well as credit from different donors cut the pressure to mobilize savings. Due to these factors, there was a historical shift in the early 20th century, and micro-saving became the foundation of finance for poor people. The role of savings in women empowerment cannot be neglected because savings is very helpful in starting small businesses. The analysis of nine randomized field experiments in different countries based on various regions (Kenya, Nepal, Philippines) showed that savings is a promising way to increase the productivity of rural women (Knowles, 2013) through venture creation.

## **Micro-Insurance, New Venture Creation and Women Empowerment**

Micro-insurance is the protection of low-income people against specific hazards in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved (Churchill, 2006). Particularly, insurance is important to protect new ventures due to any uncertain condition. It is a powerful tool to empower poor people (Adhana & Saxena, 2017). Microfinance institutions provide various financial services including business insurance facility to protect poor people in vulnerable economic situations. It also enables them to purchase assets, a facility that is frequently ignored by commercial banks (Najmi, Bashir, & Zia, 2015).

In low-income countries, most of the people use informal insurance to cope with economic hardships through the arrangements of finance between individuals and communities on a personalized basis such as diversifying different income-generating activities and selling physical assets, rather than through market or state (Cohen, McCord, & Sebstad, 2005). Self-insurance entails one's fund management to cope with a risk rather than purchasing an insurance policy. Formal insurance including life insurance and other business insurance is offered through proper mechanisms by microfinance institutions.

The absence of insurance and credit causes capital constraints and serves as a mechanism for spreading risk (Duvendack, 2011; Razaq, Maqbool, & Hameed, 2019; Ul-Hameed, Mohammad, & Shahar, 2018). A study by Garikipati (2008) conducted in India found that women-empowerment can

be achieved when microcredit is provided in an integrated pack with another service such as insurance, welfare-related activities and enterprise development. This argument is also supported by other studies (Holvoet, 2005; Mayoux, 2005). Therefore, insurance acts as an instrument to avoid risk and to enhance women-empowerment. Insurance is also better for the welfare of SHGs members. A study performed by Amudha, Selvabaskar, and Motha (2014) on Indian women in Tiruchirappalli town found that micro-insurance reduces the vulnerability of poor people. The decrease in vulnerability means an increase in women-empowerment. Micro-insurance is one of the mechanisms of social security, and it uplifts the standard of living of poor people (Kishor, Prahalad, & Loster, 2013). According to Gaurav, Acosta, and Ballesteros (2012), micro insurance is the only instrument that can improve the living standards of the rural poor, a statement which is supported by (Rao, 2008). Micro insurance is a form of social security to handle different types of shocks to improve living standards, which automatically enhances women-empowerment.

### **Training/Skill Development, Women Empowerment and New Venture Creation**

Sufficient skills are always required to start new venture in which training has key importance. Training is another important microfinance factor (Abeysekera, Patton, & Mullineux, 2017) which provides skills and experience to women entrepreneurs (Cheston & Kuhn, 2002; Kuzilwa, 2005) for new venture creation. It is a non-financial service provided by microfinance institutions. It is a process of teaching particular skills, or any other type of behaviour needed for business prospectus; but in most developing countries, women are required due to their low level of education (Harrison & Mason, 2007; IBRU, 2009). Training helps a self-employed person to acquire knowledge, skills as well as abilities to identify entrepreneurial opportunities (Stomeyer, 2007).

Most developing countries put significant efforts to promote entrepreneurial activities (Glaub & Frese, 2011). A frequently used approach for entrepreneurial promotion is the implementation, development, and distribution of entrepreneurial training as explained by Coduras Martínez, Levie, Kelley, Sæmundsson, and Schøtt (2010). However, women entrepreneurs in most developing countries do not have proper training facilities (IFC, 2007). Training provides confidence, skills, self-esteem, and ability to participate in decision making among women at the household level (Hermes & Lensink, 2011). Literature has proven that most of the clients of microfinance institutions do not have specified skills causing them to be unable to better utilize microfinance services (Karnani, 2007). Literature also showed that training has a significant positive influence on the performance of the enterprise (Cheston & Kuhn, 2002). However, women are lacking in this type of skills, especially in most developing countries.

### **HYPOTHESES DEVELOPMENT**

- Hypothesis 1.** Micro-credit has positive effect on venture creation.
- Hypothesis 2.** Micro-saving has positive effect on venture creation.
- Hypothesis 3.** Micro-insurance has positive effect on venture creation.
- Hypothesis 4.** Training/skill development has positive effect on venture creation.
- Hypothesis 5.** Venture creation has positive effect on women empowerment.

## RESEARCH METHODOLOGY

The current study examined the relationship between microfinance institutions, new venture creation and women empowerment. To measure this relationship, the current study designed a questionnaire. Therefore, a questionnaire survey was used in this study. Data were collected from the female clients of microfinance institutions in Pakistan. Furthermore, the current study followed cross-sectional research design.

300 questionnaires were distributed among the female clients of microfinance institutions in Pakistan. Area cluster sampling was used in this study because it is suitable technique to collect the data from wide-spread population (W. U. Hameed et al., 2019; Ul-Hameed et al., 2018). Cluster sampling was applied by following the below steps;

1. Pakistan was divided in to five clusters based on provinces.
2. Three clusters were selected randomly.
3. The sample size for each cluster was obtained by using below formula;

$$nz = (Nz/N) * n$$

Where,  $nz$  = required sample size for each cluster,  $Nz$  = total population of each cluster,  $N$  = total population size in all clusters,  $n$  = total sample size

From 300 distributed questionnaires, 219 questionnaires were returned. However, four questionnaires were incomplete and deleted from the survey. Hence, this study used 215 questionnaires for data analysis.

## EMPIRICAL FINDINGS

Findings of the study obtained with the help of Partial Least Square (PLS) which is recommended by number of previous studies (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; Hair, Ringle, & Sarstedt, 2013; Henseler et al., 2014). First step of PLS is based on confirmatory factor analysis (CFA) which is shown in Figure 3. Refer to Figure 3 and Table 2, factor loadings exceeded the recommended value of 0.70 for all items. Similarly, all values of composite reliability (CR) and average variance extracted (AVE) exceeded the recommended value of 0.50 (Ul-Hameed, Mohammad, Shahar, Aljumah, & Azizan, 2019). Table 3 shows the discriminant validity through Heterotrait-Monotrait Ratio (HTMT).

Structural model was also assessed after the evaluation of measurement model. For this purpose, the significance of the model assessed on the basis of path coefficients, t-values, and standard errors. The hypotheses were tested for the main effects through the bootstrapping procedure in Smart PLS 3 which is shown in Figure 4. All the five relationships have t-value above 1.96. Hence, all the hypotheses are supported. The results are given in Table 4 which shows that micro-credit, micro-saving, micro-insurance and training/skill development has positive influence on new venture creation. Finally, new venture creation has positive effect on women empowerment.

Figure 3. Confirmatory Factor Analysis (CFA)

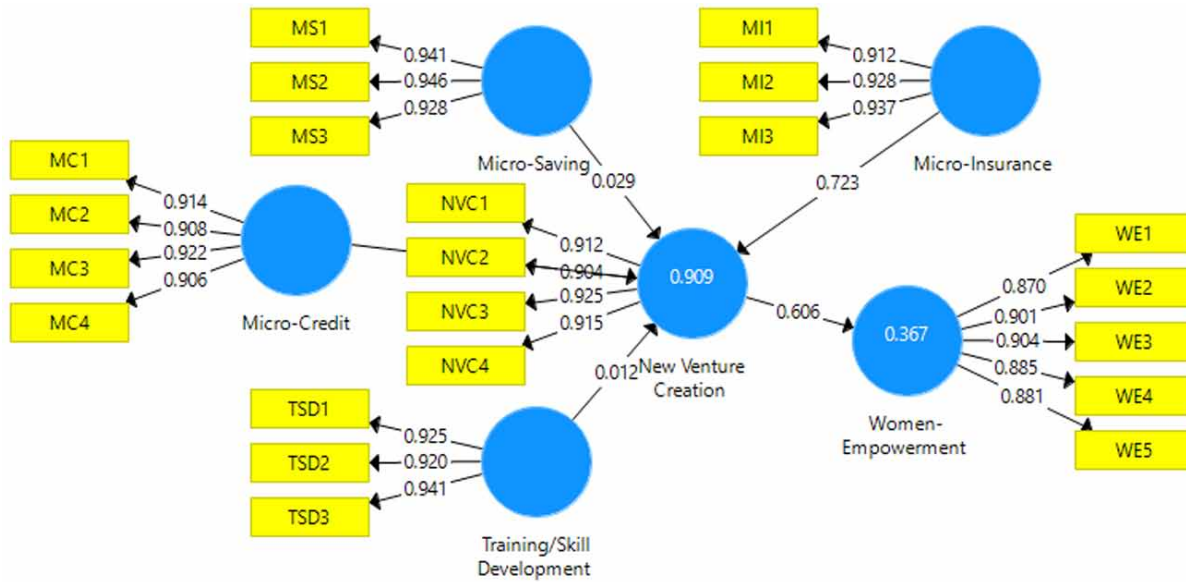


Table 2. Alpha, CR and AVE

	Alpha	rho_A	CR	AVE
Micro-Credit	0.933	0.933	0.952	0.833
Micro-Insurance	0.916	0.916	0.947	0.857
Micro-Saving	0.932	0.932	0.957	0.88
New Venture Creation	0.934	0.935	0.953	0.835
Training/Skill Development	0.921	0.921	0.95	0.863
Women-Empowerment	0.933	0.934	0.949	0.79

Table 3. Heterotrait-Monotrait Ratio (HTMT)

	Micro-Credit	Micro-Insurance	Micro-Saving	New Venture Creation	Training/Skill Development	Women-Empowerment
Micro-Credit						
Micro-Insurance	0.87					
Micro-Saving	0.845	0.776				
New Venture Creation	0.86	0.723	0.808			
Training/Skill Development	0.75	0.51	0.829	0.759		
Women-Empowerment	0.695	0.646	0.692	0.847	0.657	

## Women Entrepreneurs and Microfinance Institutions

Figure 4. Structural Model

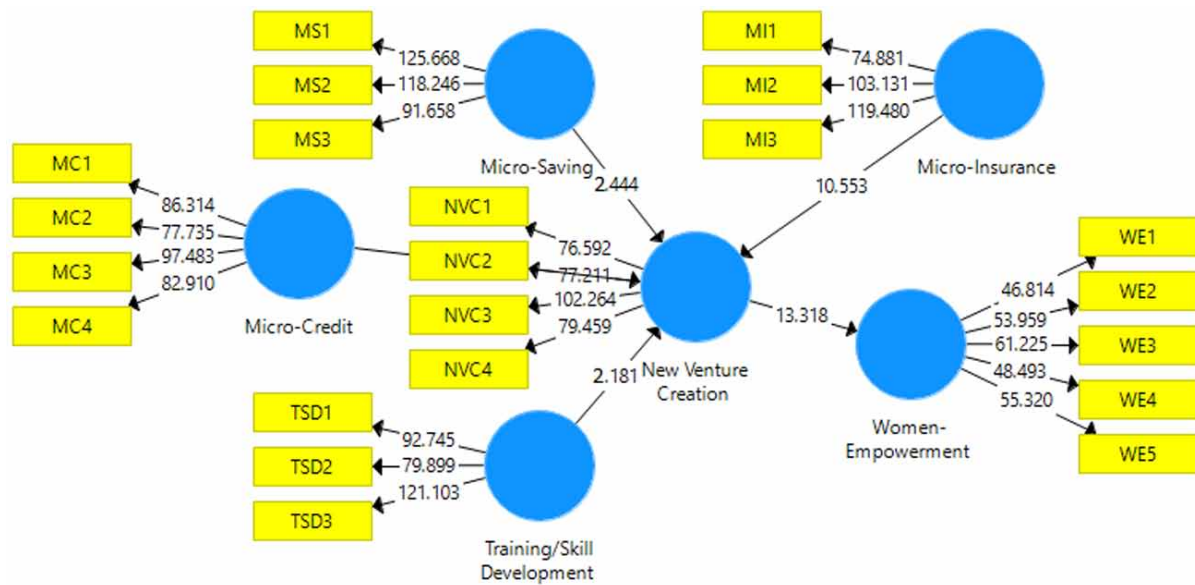


Table 4. Hypotheses Results

	$\beta$	M	SD	T Statistics	P Values
Micro-Credit -> New Venture Creation	0.234	0.231	0.052	4.487	0
Micro-Insurance -> New Venture Creation	0.723	0.722	0.068	10.553	0
Micro-Saving -> New Venture Creation	0.029	0.031	0.012	2.444	0.015
New Venture Creation -> Women-Empowerment	0.606	0.608	0.045	13.318	0
Training/Skill Development -> New Venture Creation	0.012	0.011	0.006	2.181	0.039

## CONCLUSION

The aforementioned evidences highlighted that microfinance institutions have major role in new venture creation. Microcredit as one of the major services of microfinance institutions has a positive contribution to enhance women empowerment through new venture creation. Moreover, savings is an essential element of microfinance institutions and is very crucial for women-empowerment and new venture creation. As savings has an important role in the startup of a new venters which is a major source of financing for poor women. Micro-savings therefore has a positive relationship with women-empowerment through new venture creation. Further, from the discussion above, it can be concluded that micro insurance is also crucial for new venture creation. It reduces the vulnerability of poor women and enhances women-empowerment by protecting new venture creation. Hence, micro-insurance has a positive relationship with new venture creation and women-empowerment. Finally, it can be concluded that training is very crucial for the success of new venture and for developing confidence, self-esteem, courage and decision-



making power among women which automatically enhances women-empowerment. It provides the skills to start new venture which ultimately causes to increase women-empowerment.

## **LIMITATIONS AND FUTURE RESEARCH DIRECTIONS**

Although the current study has covered the all key points in the concerned field, however, there are few limitations which could be the future directions. First, the current study is comprised of only four services of microfinance institutions, the future studies should include the other services. Second, microfinance institutions also help to create social capital which is most important in venture creation. Therefore, future study should also include social capital in the current model. Third, in Pakistan, most of the poor women are illiterate, that is why they cannot respond to the survey questionnaire. Hence, in this direction, future studies should include interviews along with the questionnaire survey. Fourth, the current study results are only applicable to the developing countries, therefore, future studies should include developed countries and compare the results with the current study.

## **ACKNOWLEDGMENT**

We would like to acknowledge Saira Ghulam Hassan for giving us the valuable instructions and make us capable to produce good research.

## **REFERENCES**

- Abeysekera, R., Patton, D., & Mullineux, A. (2017). Co-production in business training in microfinance institutions: A conceptual approach. *World Review of Entrepreneurship, Management and Sustainable Development*, 13(1), 52–68. doi:10.1504/WREMSD.2017.080741
- Adhana, D. K., & Saxena, M. (2017). *Micro insurance in India: a powerful tool to empower poor*. Academic Press.
- Ahlawat, S. (2016). Financial Performance of Group Based Microfinance Model in Haryana. *Integrated Journal of Social Sciences*, 3(1), 9–12.
- Al-shami, S. S. A., Razali, R., & Rashid, N. (2018). The effect of microcredit on women empowerment in welfare and decisions making in Malaysia. *Social Indicators Research*, 137(3), 1073–1090. doi:10.1007/11205-017-1632-2
- Ali, A., Alam, K., & Lodhi, N. A. (2014). Students intentions towards entrepreneurship: Pakistani perspective. *NICE Research Journal*, 7(2), 154–176.
- Amudha, R., Selvabaskar, S., & Motha, L. C. S. (2014). *Micro-insurance: A mechanism for women empowerment through self help group linked LIC*. Paper presented at the Science Engineering and Management Research (ICSEMR), 2014 International Conference on. 10.1109/ICSEMR.2014.7043613
- Armendáriz, B., & Morduch, J. (2010). *The economics of microfinance*. Academic Press.

## **Women Entrepreneurs and Microfinance Institutions**

Ashraf, N., Karlan, D., & Yin, W. (2006). Tying Odysseus to the mast: Evidence from a commitment savings product in the Philippines. *The Quarterly Journal of Economics*, *121*(2), 635–672. doi:10.1162/qjec.2006.121.2.635

Asiama, J. P., & Osei, V. (2007). *Microfinance in Ghana: an overview*. Research Department, Bank of Ghana.

Ayuub, S. (2013). Impact of microfinance on poverty alleviation: A case study of NRSP in Bahawalpur of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, *3*(1), 119–135.

Bernard, D. K., Kevin, L. L. T., & Khin, A. A. (2016). Entrepreneurial success through microfinance services among women entrepreneurs in Sri Lanka: A pilot study and overview of the findings. *International Journal of Economics and Financial Issues*, *6*(3), 1144–1150.

Brana, S. (2013). Microcredit: An answer to the gender problem in funding? *Small Business Economics*, *40*(1), 87–100. doi:10.1007/11187-011-9346-3

Brune, L., Giné, X., Goldberg, J., & Yang, D. (2016). Facilitating savings for agriculture: Field experimental evidence from Malawi. *Economic Development and Cultural Change*, *64*(2), 187–220. doi:10.1086/684014

Buccieri, D., Javalgi, R. G., & Cavusgil, E. (2020). International new venture performance: Role of international entrepreneurial culture, ambidextrous innovation, and dynamic marketing capabilities. *International Business Review*, *29*(2), 101639. doi:10.1016/j.ibusrev.2019.101639

Cheston, S., & Kuhn, L. (2002). Empowering women through microfinance. *Draft, Opportunity International*, *64*.

Churchill, L. J. (2006). Is There a Woman in This Textbook? Feminist Pedagogy and Elementary Latin. *When Dead Tongues Speak: Teaching Beginning Greek and Latin*, 86-109.

Coduras Martínez, A., Levie, J., Kelley, D. J., Sæmundsson, R. J., & Schøtt, T. (2010). *Global Entrepreneurship Monitor special report: A global perspective on entrepreneurship education and training*. Academic Press.

Cohen, M., McCord, M. J., & Sebstad, J. (2005). Reducing vulnerability: Demand for and supply of microinsurance in East Africa. *Journal of International Development: The Journal of the Development Studies Association*, *17*(3), 319–325. doi:10.1002/jid.1192

Collins, J. W. Jr, Wambach, J., David, R. J., & Rankin, K. M. (2009). Women's lifelong exposure to neighborhood poverty and low birth weight: A population-based study. *Maternal and Child Health Journal*, *13*(3), 326. doi:10.1007/10995-008-0354-0 PMID:18459039

Cozarenco, A., Hudon, M., & Szafarz, A. (2016). What type of microfinance institutions supply savings products? *Economics Letters*, *140*, 57–59. doi:10.1016/j.econlet.2016.01.013

Dichter, T. (2007). Can microcredit make an already slippery slope more slippery? Some lessons from the social meaning of debt. In *What's wrong with microfinance?* (Vol. 7, pp. 7-18). Practical Action Publishing in association with GSE Research.

Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal. Applied Economics*, 5(1), 163–192. doi:10.1257/app.5.1.163

Duvendack, M. (2011). *What is the evidence of the impact of microfinance on the well-being of poor people?* Academic Press.

Evelyn, U., & Osifo, S. J. (2018). Microfinance and female entrepreneurship in Nigeria. *DBA Africa Management Review*, 8(1).

Fletschner, D. (2009). Rural women's access to credit: Market imperfections and intrahousehold dynamics. *World Development*, 37(3), 618–631. doi:10.1016/j.worlddev.2008.08.005

Garikipati, S. (2008). The impact of lending to women on household vulnerability and women's empowerment: Evidence from India. *World Development*, 36(12), 2620–2642. doi:10.1016/j.worlddev.2007.11.008

Gaurav, S., Acosta, A. P. G., & Ballesteros, L. F. (2012). *Innovating at the BoP: Delivering Microinsurance in Kalahandi, and Beyond*. Academic Press.

Ghalib, A. K., Malki, I., & Imai, K. S. (2015). Microfinance and household poverty reduction: Empirical evidence from rural Pakistan. *Oxford Development Studies*, 43(1), 84–104. doi:10.1080/13600818.2014.980228

Glaub, M., & Frese, M. (2011). A critical review of the effects of entrepreneurship training in developing countries. *Enterprise Development & Microfinance*, 22(4), 335–353. doi:10.3362/1755-1986.2011.035

Gupta, D., & Rao, D. K. (2005). Micro Finance in India. *Economic and Political Weekly*, 40(12), 1229–1237.

Hair Jr, Sarstedt, Hopkins, & Kuppelwieser. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106–121. doi:10.1108/EBR-10-2013-0128

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance*. <https://ssrn.com/abstract=2233795>

Hameed, U.-W., Mohammad, H., & Shahar, H. (2018). Microfinance institute's non-financial services and women-empowerment: The role of vulnerability. *Management Science Letters*, 8(10), 1103–1116. doi:10.5267/j.msl.2018.7.001

Hameed, U.-W., Mohammad, H., Shahar, H., Aljumah, A., & Azizan, S. (2019). The effect of integration between audit and leadership on supply chain performance: Evidence from UK based supply chain companies. *Uncertain Supply Chain Management*, 7(2), 311–328. doi:10.5267/j.uscm.2018.8.001

Hameed, W. (2019). *Is Vulnerability Factors Discourages Women-Empowerment? The moderating role of Environmental, Health, Economic and Political Vulnerability between Microfinance Institutions and Women-Empowerment*. Academic Press.

Hameed, W., Mohammad, H., & Shahar, H. (2018). Pursuing Goal of Self-Sustainability but Leads towards More Instability: Challenges and Way Forward of Self-Help Groups (SHGs). *International Journal of Business and Tehnopreneurship*, 8(1), 67–76.

## **Women Entrepreneurs and Microfinance Institutions**

Hameed, W. U., Nisar, Q. A., Abbas, A., Waqas, A., & Meo, M. S. (2019). Microfinance Institutions as a Strategic Tool to Enhance Women's Career Development in Pakistan. *Asian Women*, 35(2), 93–128. doi:10.14431/aw.2019.06.35.2.93

Harrison, R. T., & Mason, C. M. (2007). Does gender matter? Women business angels and the supply of entrepreneurial finance. *Entrepreneurship Theory and Practice*, 31(3), 445–472. doi:10.1111/j.1540-6520.2007.00182.x

Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J. Jr, Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, 17(2), 182–209. doi:10.1177/1094428114526928

Hermes, N., & Lensink, R. (2011). Microfinance: Its impact, outreach, and sustainability. *World Development*, 39(6), 875–881. doi:10.1016/j.worlddev.2009.10.021

Holvoet, N. (2005). The impact of microfinance on decision-making agency: Evidence from South India. *Development and Change*, 36(1), 75–102. doi:10.1111/j.0012-155X.2005.00403.x

Hulme, D., Moore, K., & Barrientos, A. (2009). *Assessing the insurance role of microsavings*. Academic Press.

IBRU. (2009). *D. M. C. Growing Microfinance Through Hew Technologies*.

Iftikhar, S., Khadim, Z., Munir, S., & Amir, H. (2018). Role of Microfinance in Women Empowerment and Alleviating Poverty: An Overview. *Journal of Socio-Economics*, 4(2), 48–53.

Iqbal, Z., Iqbal, S., & Mushtaq, M. A. (2015). Impact of microfinance on poverty alleviation: The study of District Bahawal Nagar, Punjab, Pakistan. *Management and Administrative Sciences Review*, 4(3), 487–503.

Kabeer, N. (2005). Is microfinance a 'magic bullet' for women's empowerment? Analysis of findings from South Asia. *Economic and Political Weekly*, 4709–4718.

Kapila, M., Singla, A., & Gupta, M. (2016). Impact of Microcredit on Women Empowerment in India: An Empirical Study of Punjab State. *Proceedings of the World Congress on Engineering*.

Karnani, A. (2007). *Microfinance misses its mark*. Academic Press.

Kessy, J., Msuya, S., Mushi, D., Stray-Pedersen, B., & Botten, G. (2016). Integration of microfinance institutions and health programs in northern Tanzania. *PARIPEX-Indian Journal of Research*, 5(1).

Kishor, N. R., Prahalad, C., & Loster, T. (2013). Micro insurance in India-Protecting the poor. *Journal of Business Management & Social Sciences Research*, 2(3), 39–44.

Kithae, P. P., Nyaga, J. G., & Kimani, J. G. (2013). Role of microfinance factors on the sustainability of women managed micro and small enterprises (MSEs) in Kenya. *International NGO Journal*, 8(4), 94–99.

Knowles, J. (2013). *Increasing the Productivity and Earnings of Rural Women: What Works? A Roadmap for Promoting Women's Economic Empowerment*. Available at: [www.womeneconroadmap.org](http://www.womeneconroadmap.org)

- Kuzilwa, J. A. (2005). The role of credit for small business success: A study of the National Entrepreneurship Development Fund in Tanzania. *The Journal of Entrepreneurship, 14*(2), 131–161. doi:10.1177/097135570501400204
- Laureti, C., & Szafarz, A. (2016). The price of deposit liquidity: Banks versus microfinance institutions. *Applied Economics Letters, 23*(17), 1244–1249. doi:10.1080/13504851.2016.1148249
- Mahmood, S. (2011). *Politics of piety: The Islamic revival and the feminist subject*. Princeton University Press.
- Mayoux, L. (2005). *Women's Empowerment through Sustainable Microfinance*. Rethinking Best.
- Mkpado, M., & Arene, C. (2007). Effects of democratization of group administration on the sustainability of agricultural micro credit groups in Nigeria. *International Journal of Rural Studies, 14*(2).
- Najmi, H. S., Bashir, D., & Zia, M. (2015). *Socioeconomic Impact of Microfinance on Borrowers: A Case Study of NRSP Bank Minchanabad*. Academic Press.
- Nasir, S. (2013). Microfinance in India: Contemporary issues and challenges. *Middle East Journal of Scientific Research, 15*(2), 191–199.
- Nasir, S., & Farooqi, S. (2016). Impact of Microfinance on Women Empowerment with Special Reference to District Aligarh (India). *Middle East Journal of Scientific Research, 24*(3), 491–497.
- Pokhriyal, A. K., Rani, R., & Uniyal, J. (2014). Role of micro-finance in the empowerment of the women. *Journal of Business and Finance, 2*(1), 21–31.
- Rao, P. H. (2008). *Greening the supply chain: A guide for Asian managers*. SAGE Publications India.
- Razzaq, S., Maqbool, N., & Hameed, W. U. (2019). Factors Effecting The Elasticity Of Micro Credit Demand In Southern Punjab, Pakistan. *International Journal of Social Sciences and Economic Review, 1*(2), 46–53. doi:10.36923/ijsser.v1i2.34
- Roy, A. (2011). Inclusive Growth through MFIs' Outreach in Assam. *Asia Pacific Business Review, 7*(3), 47–62. doi:10.1177/097324701100700305
- Singh, V., & Padhi, P. (2017). Dynamic incentives and microfinance borrowers: A comparative study of self-help groups and joint liability groups: A case study of Mirzapur District in India. *Journal of Land and Rural Studies, 5*(1), 67–92. doi:10.1177/2321024916677609
- Sinha, M., Mahapatra, S. S., Dutta, A., & Sengupta, P. P. (2019). *Microfinance and Women Empowerment: An Empirical Analysis*. In *Handbook of Research on Microfinancial Impacts on Women Empowerment, Poverty, and Inequality*. IGI Global.
- Stomeyer, R. (2007). *Gender gap and segregation in self-employment: On the role of field of study and apprenticeship training*. Academic Press.
- Syed, J., Özbilgin, M., Torunoglu, D., & Ali, F. (2009). *Rescuing gender equality from the false dichotomies of secularism versus shariah in Muslim majority countries*. Paper presented at the Women's Studies International Forum. 10.1016/j.wsif.2009.03.007

## **Women Entrepreneurs and Microfinance Institutions**

Vogel, R. C. (1984). *Savings mobilization: the forgotten half of rural finance*. Academic Press.

Yasmeen, K. (2015). *The impact of microfinance loan on women's empowerment and happiness in Pakistan*. Universiti Utara Malaysia.

## **ADDITIONAL READING**

Hameed, W., Nawaz, M., Basheer, M. F., & Waseem, M. (1819). The Effect of Amanah Ikhtiar Malaysia (AIM) on Microenterprise Success in Sabah State Malaysia. *Dialogue*, 6462(14), 2.

Hameed, W. U., Hussin, T., Azeem, M., Arif, M., & Basheer, M. F. (2017). Combination of microcredit and micro-training with mediating role of formal education: A micro-enterprise success formula. *Journal of Business and Social Review in Emerging Economies*, 3(2), 285–291. doi:10.26710/jbsee.v3i2.191

Imran, M., Ślusarczyk, B., & Haque, A. U. (2019). The Moderating Role of Malaysian Government in Microcredit organization and Quality of Women Self-Sustainability. *Calitatea*, 20(S1), 481.

## **KEY TERMS AND DEFINITIONS**

**Micro-Insurance:** Micro-insurance is the protection of low-income people against specific hazards in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved.

**Micro-Credit:** Microcredit is one of the key microfinance services which offer small loans to poor people to improve their existing small-scale businesses or to establish new ventures.

**Micro-Saving:** It is the amount saved by the poor people in the microfinance bank account.

**Microfinance:** The provision of savings, deposits, loans, payment services, money transfer and insurance services to the very poor and low-income households.


**New Venture Creation:** The process of turning a new idea or technology into a business that can succeed and will attract investors: Potential entrepreneurs trying to identify a possible business idea, pay attention to everything in the media.

**Training/Skill Development:** Training/skills development is the process of (1) identifying your skill gaps, and (2) developing and honing these skills. It is important because your skills determine your ability to execute your plans with success.


# Chapter 11

## Financing Nascent Entrepreneurs by Reward- Based Crowdfunding: Lessons From Indiegogo Campaigns

**Susana Bernardino**

 <https://orcid.org/0000-0002-1639-3553>  
CEOS, ISCAP, Polytechnic of Porto, Portugal

**J. Freitas Santos**

 <https://orcid.org/0000-0001-8233-5039>  
CEOS, ISCAP, Polytechnic of Porto, Portugal

**Silvie Oliveira**

ISCAP, Polytechnic of Porto, Portugal

### ABSTRACT

*A problem faced by nascent entrepreneurs is to attract outside capital to finance a new venture. A new promising funding mechanism created outside the banking system is crowdfunding (CF). The reward-based model of CF allows nascent entrepreneurs to capture funds from a large group of small investors through a campaign on the Internet. In return for the contribution of the backers, crowdfundees provide rewards (tangible items or services) or other types of incentives. However, in order to be successful a campaign must be designed according to a strategy that encompasses important steps. This study collects data from projects posted in the Indiegogo platform to identify the critical factors of a successful reward-based campaign. The results indicate that it is possible to find an explanation for the different levels of success of reward CF campaigns based on the analysis of the characteristics of the project (depth of the description, updates, and type) and its founders (own presentation, number of backers, team involved, and previous experience).*

DOI: 10.4018/978-1-7998-4826-4.ch011

## INTRODUCTION

Crowdfunding (CF) has experienced an impressive growth in recent years (Di Pietro & Buttice, 2020; Yu, Johnson, Lai, Cricelli, & Fleming, 2017). The development of internet and information technologies apparently increased the awareness and the participation of the “crowd” to fund entrepreneurial projects (Agrawal, Catalini & Goldfarb, 2010; Baumgardner, Neufeld, Huang, Sondhi, Mursalin, & Talha, 2017; Gajda & Mason, 2013).

CF online platforms may be clustered in four main models, depending on the reward scheme design of the call (André, Bureau, Gautier, & Rubel, 2017; Cho & Kim, 2017; Mollick, 2014). The donation or patronage CF is more common in philanthropy, where a donation occurs without any expected direct reward. The lending CF involves the concession of small loans that were made available by the “crowd”, expecting to be repaid plus an interest rate. The reward-based CF is a model where crowdfunders are seen as early customers that buy products previously to entering the market (André *et al.*, 2017). In the equity CF model the crowdfunders acquire equity stakes if they support a crowdfunding call and are treated as an (equity) investor. These different models of CF are suitable for the project’s promoters according to their needs and the different characteristics of the entrepreneurial projects (Paschen, 2017).

Compared with other funding options, CF offers some advantages either for entrepreneurs’ calling for funds (crowdfundees) and investors searching for new business opportunities (crowdfunders). However, CF also involves some risks, especially for crowdfunders, as the default risk will not be borne by any intermediary (Moritz & Block, 2016).

Despite all the potential that CF is able to offer as a fundraising tool, not all campaigns are really successful in attract potential investors and fail to collect the expected funds. Other projects, in turn, have been able to exceed far the financial objective they have initially proposed. As an example, existing statistics indicate that in 2019 the success rate of the Kickstarter CF platform is just about 37.4% (Statista, 2020).

Therefore, it is important to understand how the funders make decisions for a project as unlike business angels or venture capital funds, crowdfunders might not have any specialised knowledge about the industry nor the project to be funded (Belleflamme, Lambert, & Schwienbacher, 2014). Further, in CF the relationships established between founders and funders are mainly based on the interaction facilitated by the online environment of the platforms or other social media.

The objective of this chapter is to understand why some CF campaigns are more successful than others in attracting funds. By analyzing the strategies used by different CF campaigns in Indiegogo, the second international leading reward-based CF platform, we aim to get new insights about the most relevant factors that contribute to the success of a fundraising campaign. The drivers of success will be grouped into project-related and entrepreneur-related factors.

The identification of the critical success factors of a CF campaign will provide practical recommendations for crowdfundees and platform operators, helping them raise the attention of the investors for support a project.

The paper is organized as follows. The next section presents the concept and models of CF, explaining in more detail the reward-based CF model. After that, we analyze the main drivers of the success of a CF campaign. Then, we present the methodology used in the investigation. In the following section, the results attained are presented and discussed. The paper ends with the main conclusions, limitations and future research directions.



## THE IMPORTANCE OF CROWDFUNDING AND REWARD-BASED CROWDFUNDING FOR NASCENT ENTREPRENEURS

The two most cited definitions of CF have been given by Belleflamme *et al.* (2014) and Mollick (2014). According to the first authors, CF are “open calls, mostly through the Internet, for the provision of financial resources either in the form of donation or in exchange for the future product or some form of reward to support initiatives for specific purposes” (Belleflamme *et al.*, 2014, p. 588). For the second author, CF can be defined as “efforts by individual entrepreneurs or groups to fund their ventures by drawing small contributions from large groups of individuals over the Internet without using standard financial intermediaries” (Mollick, 2014, p.1). As more recently pointed out by André *et al.* (2017, p. 314), CF “allows entrepreneurs and founders of a wide array of projects to directly raise relatively small contributions from a large number of individuals (the “crowd”) through an open call of a certain duration (the “campaign”) on the Internet”. At the heart of its principles, CF appeals to a large number of people, seen as unknown crowds (crowdfunders), to collectively support a given entrepreneurial project (crowdfundees) (Belleflamme, Omrani, & Peitz, 2015; Cho & Kim, 2017; Hossain & Oparaocha, 2017; Schwienbacher & Larralde, 2012; Yu *et al.*, 2017).

Table 1 presents the four major business models of CF platforms (Parhankangas, Mason, & Landström, 2019) briefly. In the donation model, individuals contribute without expecting any return to support a given project or cause, such as disaster relief, famine, health and other charity-related programs. In the reward-based model, individuals are treated as early customers or ‘prosumers’ and receive a product reward or a token of appreciation, such as a thank-you note in return for their monetary contribution (Giudici, Massimiliano, & Rossi-Lamastra, 2017). In the lending-based model, the individuals directly lend to and borrow from each other on an Internet-based platform, without the involvement of traditional financial intermediaries (Guo, Zhou, Luo, Liu, & Xiong, 2016). In the equity-based model (Ahlers, Cumming, Gunther, & Schweizer, 2015; Deffains-Crapsky & Sudolska, 2014), the individuals purchase the equity of new firms or enter into some sort of profit-sharing agreement.

Table 1. Brief description of the main business models of CF platforms

CF Business Model	Description	Example
Donation	Contributions are made without expecting any return to support a given project or cause	Justgiving.com Gofundme.com
Reward	Contributions are made expecting to receive a product reward or a token of appreciation, such as a thank-you note	Indiegogo.com Kickstarter.com
Lending	Individuals directly lend to and borrow from other persons	Kiva.org Fundingcircle.com
Equity	Individuals purchase the equity of new firms or enter into some sort of profit-sharing agreement	Wefunder.com Localstake.com

Source: Adapted from Parhankangas *et al.* (2019)

Typically, CF involves three main actors: (i) intermediaries (the CF platform), (ii) fundraisers, and (iii) investors or donors (Cho & Kim, 2017). In fact, CF platforms act as intermediaries, and its mission is to facilitate the matching of investors with fundraisers (Cho & Kim, 2017). Within the main activities

## ***Financing Nascent Entrepreneurs by Reward-Based Crowdfunding***

performed by platforms, we could refer the provision of means of transactions, the establishment of the legal groundwork for the operations, as well as helping to process the financial transactions and to make a pre-selection of ventures to be included in the CF platform (Löher, 2017).

The peer-to-peer match promoted by CF platforms could provide several benefits both for crowdfundees and for crowdfunders (Stack et al., 2017). Through CF, entrepreneurs could have access to funds at lower costs (Malekipirbazari & Aksakalli, 2015; Stack *et al.*, 2017), especially for recent ventures, which have a short credit history (Mezei, 2018). CF could also be particularly attractive for small-scale borrowers, since CF does not involve financial intermediaries and typically does not require collateral for the loans (Mezei, 2018).

Investors or donors, in turn, could have access to a broader range of investment opportunities and good return on investment (Stack et al., 2017), that could provide access to better interest rates than those they could obtain in a traditional financial application (Malekipirbazari & Aksakalli, 2015). In addition to extrinsic motivations (Bretschneider, Knaub, & Wieck, 2014), where the expected reward itself drives each individual to invest, intrinsic motivations also play an important role, and are related with the satisfaction to participate and support a new venture, mainly due to sympathy toward founders (André et al., 2017).

Despite all the benefits that have been assigned to the use of CF, there are also some significant challenges related to this fundraising tool. The major constraints derives mainly from the information asymmetry theory.

Information asymmetry describes a situation in which one of the parties involved in a transaction has access to privileged information, as he/she holds quantitatively or qualitatively more information than the other elements involved (Committee Nobel Prize, 2001), and opportunistically could take advantage of the informational advantage he/she has (Vlassopoulos, 2009). In CF the distribution of risk is especially unfavorable to the investor compared to entrepreneurs asking for funding (Hommerová, 2020).

According to the European Commission (2015, p. 22), an intrinsic characteristic of CF is information asymmetry that refers to “investors lacking information about the risks and/or expected returns of their investments”. These risks result from the fact that “investors are likely to be less informed than entrepreneurs or borrowers about the quality of the project” (European Commission, 2015, p. 25). The information asymmetry derives from the disadvantageous position that the crowdfunder (investor) has about the crowdfundee (entrepreneur) that could lead to the risk of moral hazard (such as fraud) (André *et al.*, 2017) and deter some people from putting their money into a given project. Notwithstanding, as reported by the European Commission (2015), with the impressive growth of CF, both on the number of existing platforms and the volume of operations hold, many platforms have reinforced the information available to potential investors related to investment risks.

In addition, another challenge to CF could derive from the incapacity of some crowdfunders to analyze the information made available on CF platforms which could undermine the investment decision-making process.

The breakdown into the different funding types of CF, by 2015, shows that most money was collected via lending-based CF (25,1 billion USD) followed by donations (2,85 billion USD), rewards (2,68 billion USD) and equity-based CF(2,56 billion USD) (www.crowdexpert.com). Although many studies focus on the lending-based CF the reward model seems more appropriate to nascent entrepreneurs that want to invest in new ventures. Therefore, we proceed to the analysis in more detail of the reward model.

The reward-based model allows fundraisers to attract a group of funders who essentially receive a reward for backing a project. The reward can include being credited in a movie, having creative input into

a product under development, or being given an opportunity to meet the creators of a project (Mollick & Kuppuswamy, 2014). Alternately, the funders could be treated as early customers allowing them access to the products produced by funded projects at an earlier date, better price, or with some other special benefit. The pre-purchasing of products by early customers, such as software, hardware, or consumer products, is a common feature of those projects (Mollick & Kuppuswamy, 2014). This scheme reduces the risks for crowdfundees as the potential losses are minimal while the main question to crowdfunders is whether the product will satisfy his/her tastes.

From a market research point of view, the amount of funding and backers could be seen as a predictor of future demand for the product. On the other hand, the success of the campaign may serve as a signal for future funding rounds, possibly through more traditional funding channels (e.g., venture capital or bank loans). From a marketing point of view, the backers can be converted into ambassadors by helping to promote the product in social media (e.g. Facebook, Instagram). As CF is heavily based on social media and online communication, the sharing of information about a project is very simple across country borders. Viral marketing strategies can be used by backers to promote projects as forwarding information to friends and other interested parties are very easy and much faster than using offline techniques due to decreased transaction costs. Also, because the financial involvement of backers in the supported projects leads them to make use of the available communication tools to create awareness for the projects among the social media community (Gierczak, Bretschneider, Haas, Blohm, & Leimeister, 2015).

Reward-based CF proposals cannot be measured in monetary terms as funders receive tangible, but non-financial benefits for their contributions (Belleflamme et al., 2015). Gerber, Hui and Kuo (2012) provide examples illustrating that funders indeed see receiving rewards as an important motivation for participating in CF communities. Also, taste heterogeneity among crowdfunders seems to play a prominent role as a particular creative project may appear to be of high importance for some funders while entirely irrelevant for others (Belleflamme et al., 2015).

## **CRITICAL SUCCESS FACTORS OF A REWARD-BASED CF CAMPAIGN**

A CF campaign is considered successful when “it reaches a monetary goal in specified timeframe” (Cho and Kim (2017, p. 313). Similarly, for André et al. (2017, p. 321), success is defined as “the capacity for a project to reach or go beyond the amount of money initially targeted by the entrepreneur for its campaign”. Recently, several researchers have studied which factors influence the success of a crowdfunding campaign. The main components of a CF campaign are the pitch, the funding goal, the time frame, the reward-tiers and the communication (Young, 2013). The pitch is the first contact point of the idea to the audience and includes the introduction to the project that could be displayed in written and/or video format. The funding goal is the total amount of money that is needed to make the project work. The time frame begins when the campaign is launched and ends when it finishes independently of the required funding goal is attained or not. The reward-tiers are defined according to the strategy of the founder with multiple options in varying price ranges attracting more people. The communication plan for the campaign is based on digital marketing (social media) for reaching out to the online crowd.

In the context of high information asymmetries that characterize rewarding CF, it is critical to understand the different aspects that investors (crowdfunders) include in their decision to support or not a given project (Löher, 2017). Identifying the success factors of project-specific and founder-specific aspects is a challenging task. Several researchers (e.g. Koch & Siering, 2015; Kraus, Richter, Brem, Cheng, &

Chang, 2016) have sought to understand the main factors that influence the success of a CF campaign. In this study, we focus on project-related and promoter related factors. Specifically, the project-related factors include the length of the video pitch, the depth of the project description approximated by the displayed information about the product on the platform (e.g. prototype, pictures, drawings), the availability of project updates, the typology of the project, and the amount of pledging goal. The promoter related factors encompass the way promoters present themselves on the website of the project, the number of backers, the gender, the team and the previous experience of projects on the CF platform.

## **Campaign Related Factors**

### **Length of the video pitch**

In a literature review, Park and Hopkins (1993) present findings of different studies indicating that dynamic visual display of information is more effective than the static visual display of information. Also, Jiang and Benbasat (2007) developed an empirical analysis to demonstrate that websites with video content are perceived as more useful by the visitor compared to websites with static-picture formats only. Molllick (2014) found that the lack of a video was negatively related to crowdfunding success. Young (2013) states that campaigns with videos are 100% more successful than the ones that don't have a video. A group of researchers (Kraus et al., 2016) found that videos, pictures, blogs, and other online elements play an important role. However, the relationship to the crowdfunding campaigns' success is sometimes positive, neutral or even negative. Also, a previous study by Koch and Siering (2015) concludes that videos may increase project acceptance as the visitor might feel more familiar with the project contents after the video presentation. In brief, the inclusion of a video pitch in the page that describes the project seems to have a positive influence on the success of a campaign (Colombo, Franzoni & Rossi-Lamastra, 2015; Hobbs, Grigore, & Molesworth, 2016; Kaartemo, 2017; Bi, Liu, & Usman, 2017; Courtney, Dutta, & Li, 2017; Zhou, Lu, Fan, & Wang, 2018; Koch & Siering, 2019).

As a video pitch became a standard in terms of a crowdfunding campaign we hypothesize that:

H1: The length of the video pitch has a positive impact on the success of a CF campaign.

### **Depth of the project description (e.g. prototypes)**

To inform potential investors, entrepreneurs have to provide a description of the project. Indeed, a brief outline is also required for the application to the CF platform (De Buysere, Gajda, Kleverlaan, & Marom, 2012).

The presentation of prototypes of the future product on the website or the insertion of detailed text descriptions, pictures, graphics and other relevant features of the products offered gives to potential funders the possibility to better evaluate the project. This strategy enhances the transparency of the project and can reduce the risk of a wrong investment decision. Empirical evidence (Hobbs et al., 2016; Hossain & Oparaocha, 2017; Kaartemo, 2017; Koch & Siering, 2015; 2019), show that the level of the description of the project has a positive impact on the success of a CF campaign.

Following this argument, we hypothesize:

H2: The provision of prototypes or detailed information of the future product has a positive impact on the success of a CF campaign.

## Availability of project updates

The updates to the project are useful as the description of the project is prepared at the beginning or early stage of the project. After that, the funders are interested in obtaining more information about the status of the project, the indication of preliminary results or reporting about problems with the delivery of the outcomes of the project. According to Cho and Kim (2017, p. 313) “to be successful in crowdfunding, continuous communication between the people who participate in a project is necessary”.

Using a combination of qualitative and quantitative empirical research techniques, Block, Hornuf and Moritz (2018) find that posting an update has a significant positive effect on the number of investments by the crowd and the investment amount collected by the start-up. An empirical investigation based on the Chinese reward-based crowdfunding site “Demohour” reveals that the number of updates is a key motivating factor in investment decision and subsequently, project success or failure (Shahab, Ye, Riaz, & Ntim, 2019). In the case of the Kickstarter platform, Xu *et al.* (2014) underscored the importance of updates as projects with frequent updates can almost double the probability of successful funding. In a review of literature of empirical studies, Kuppusswamy and Bayus (2018), as well as Mollick (2014) conclude that project funding success is related to the number of updates.

Following these arguments, we hypothesize:

H3: The provision of project updates has a positive impact on the success of a CF campaign.

## Typology of the project

A specific category product has to be assigned to the project by the entrepreneur. Depending on the CF platform to be used the products can be classified upon different categories. Data extracted in 23rd December of 2019 from the CF platform Kickstarter (<https://www.kickstarter.com/help/stats?ref=hello>) pointed out for different rates of successfully funded projects that have lower rates for technology (89%) than for Arts (93%), Comics (98%) or Dance (99,5%). Contradictory results were found, in the previous year by Zhang and Chen (2019) alerting for a majority of technology projects that failed to reach their funding goals in the same platform and indicating that fewer than 20% of them were successfully funded. Mollick (2014) use the same platform to study the factors that lead to successful fundraising and found that there exist systematic variations in funding activities across product categories. Hörisch (2015) examining projects taken from the Indiegogo platform corroborate the same findings. Chan, Park, Patel and Gomulya (2018) hypothesised that product category-level determinants will likely influence CF success, but the results of the study are not consistent. The authors argue these results could be explained because different product categories are likely to have a very different amount of requested funding or because backers could freely choose to fund projects in any product categories. In addition, the literature suggests that typology projects acceptance is also constrained by contextual factors, as “projects in the creative domains are more successful in locations where the creative industries are well-developed” (André *et al.*, 2017, p. 318).

As the empirical evidence is not clear about the direction of the hypothesis, we put forward the following proposition:

H4: The technological projects posted on a CF platform have a positive impact on the success of a campaign.

## Amount of pledging goal

The pledging goal is the amount of money that founders seek to raise and in some platforms funds are only collected if the goal is reached, in an all or nothing scheme. Thus, there is a strong incentive for individuals to select realistic pledging goals, since fundraising too little capital percentage may result in the non-delivery of the project. Previous research has shown that lower pledging goals are more likely to be successful (Colombo et al., 2015; Frydrych, Bock, Kinder, & Koeck, 2014; Gangi & Daniele, 2017; Janku & Kucerova, 2018; Kaartemo, 2017; Koch & Siering, 2019; Mollick, 2014; Zhou et al., 2018;). For instance, Koch and Siering (2015) examine the size of the pledging goal as a proxy for the complexity and amount of money needed to fund the project. The conclusion is that in both cases the size of the pledging goal has a negative impact on the success of funding. A possible explanation is that the potential funders might see the project to be riskier due to the high investment involved and the complexities of implementation.

Following the previous empirical evidence, we hypothesize:

H5: The amount of the project pledging goal has a negative impact on the success of a CF campaign.

## Promoter Related Factors

### Presentation of the project's promoter

The project is presented to the visitors of the page and the potential funder has the chance to virtually meet and come to know the entrepreneur responsible for the project conduction. This act of transparency helps to reduce the uncertainty against the entrepreneur (Koch & Siering, 2015), and also to reinforce the emotional link to the project (De Buysere et al., 2012). Boeuf, Darveau and Legoux (2014) as well as Colombo *et al.* (2015) corroborates this idea underlining that a picture of the project owner boosts the probability of obtaining success. Further, the findings of Gafni, Marom and Sade (2018) study indicate that the pitches that focus more frequently on the name of entrepreneurs on their Kickstarter pages are positively and statistically significantly associated with the success of the campaign for the projects, as well with the level of success.

In the area of e-commerce, Egger (2001) and Fogg *et al.* (2001) state that presenting real people of a company helps in conveying a “real-world feeling” and adds credibility. Thus, funding inhibition might be taken off the potential funder, as possibly sympathy with the responsible persons evolves or at least the needed information level concerning the responsible persons is reached (Koch & Siering, 2015).

Following these arguments, we hypothesize:

H6: The presentation of the promoter of the project has a positive impact on the success of a CF campaign.

### Number of backers

The backers are the number of funders supporting the project and this number varies among projects. This information is known by the public, generating the idea that campaigns with more number of backers have better projects. This is the so-called herding behavior that is a “rational” way for people to reduce their own risk in the face of uncertainty about the proposed new venture posted on the platform (Kuppuswamy & Bayus, 2018). According to Paschen (2017, p.184) the herd behavior “is the tendency

for individuals to mimic the actions of a larger group (...) [and] may be caused by social pressure of conformity or by the common rationale that it is unlikely such a large group could be wrong”.

Since crowdfunders are not professional investors and probably do not have the appropriate skills for evaluating the risks involved in each project, “most lenders tend to follow herding behaviour and consequently finance loans with high number of bidders” (Mezei, 2018, p. 1367). This herding behaviour describes, according to Lee, Lee and Chae (2011, p. 495) “many social and economic situations in which an individual’s decision-making is highly influenced by the decisions of others”. Thus, according to Cruz (2018) the aggregate amount collected in a campaign could sign the valuation made by investors ‘how much the crowd appreciates the project’ and to reveal the project’s potential that is unveiled by the crowd.

In lending CF, some studies use data from different peer to peer lending platforms and testify that there exists herding behavior. The investigation of Lee *et al.* (2011) confirms the herd effect, since an auction with a higher participation rate attracts more bids, even though there is a diminishing marginal effect of the herding behaviour. Similarly, Shen, Krumme and Lippman (2010) confirm that there are significant herding effects on lending CF. Based on data from PPDai, the largest peer to peer lending platform in China, Wang and Tu (2016) found that there exists herding behavior. In Korea, Lee and Lee (2012) examine a large sample of daily data from one of the largest P2P lending platforms in Korea, to conclude for the evidence of a strong herding behavior that has a diminishing marginal effect as bidding advances. In the United States, Herzenstein, Dholakia and Andrews (2011) study the peer to peer loan auctions on Prosper.com to provide evidence of strategic herding behavior by lenders such that they have a higher likelihood of bidding in auctions with more existing bids. Similarly, in reward-based CF, Gangi and Daniele (2017) found that the number of backers is a positive predictor of the probability of success of a campaign. Also, the literature on information cascades argues that an initiative with a lot of community support signals that the project is of high quality (Bikhchandani, Hirshleifer, & Welch, 1992). Colombo *et al.* (2015) and Hobbs *et al.* (2016) provide evidence of considerable economic magnitude that early support for a project is an important antecedent of the success of a crowdfunding campaign in Kickstarter. On the Sellaband platform that accommodates artistic projects, Agrawal, Catalini and Goldfarb (2015) found that funders’ propensity to invest in a given artist increases as that artist visibly accumulates capital on the platform. Zhang and Liu (2012) document a similar pattern in the context of lending on Prosper.com, suggesting that past investment by others may increase the propensity to fund. Specifically, Kuppuswamy and Bayus (2018) indicate that the dynamic pattern of backer support over the project funding cycle is U-shaped.

Following these arguments, we hypothesize:

H7: The number of backers supporting the project has a positive impact on the success of a CF campaign.

## Gender

Research on economic entrepreneurship generally identifies a gender gap that is favourable to men (Bacq, Hartog, Hoogendoorn, & Lepoutre, 2011; GEM, 2016; Pines, Lerner, & Schwartz, 2012) even in the most gender equality countries in the world (Berglann, Moen, Roed, & Skogstrøm, 2011). This gender gap is identified in almost all countries, including Portugal (GEM, 2016). The 2016 and 2014 GEM reports confirm that early-stage entrepreneurial activity is gender-sensitive for a combination of cultural, societal and economic reasons. This assertion is reinforced by previous GEM reports, which showed the prevalence of men in early-stage entrepreneurial initiatives (GEM, 2014). In CF, researchers

## ***Financing Nascent Entrepreneurs by Reward-Based Crowdfunding***

show that funding success is significantly related to personal characteristics like gender (Kuppuswamy & Bayus, 2018, Mollick, 2014). Specifically, several studies indicate that women enjoy higher rates of success than men in funding their projects (Gorbatai & Nelson 2015; Greenberg & Mollick 2014; Marom, Robb, & Sade, 2014). According to Gorbatai and Nelson (2015) women tend to be more successful in CF campaigns than men due to the specific linguistic patterns they use (such as positive sentiment, vividness and inclusive language) that are preferred over male-specific patterns. Marom et al. (2014) found that women have a higher success rate in CF than men, although the mean amount of funds asked and raised by women are lower than the average amount asked by men. Nevertheless, the authors conclude that gender success differences are not explained by the different funding goal, once the smaller goal amounts are not driving the higher success rates among women crowdfunders. Other studies, in turn, find that gender is not a significant factor for understanding the CF campaigns success (e.g. Barasinska & Schafer, 2014; Okoyeuzu, Nwakoby, & Onwujekwe, 2019). In these cases, the researchers found that women do not have gender benefits in accessing CF compared to men, but have neither a disadvantaged position as it typically occurs in traditional funding sources.

Following these arguments, we hypothesize:

H8: The female gender of the project founder has a positive impact on the success of a CF campaign.

### **Nature of the founders (individual or group)**

Nascent ventures could be led by entrepreneurs that are acting individually or in a group. A group of entrepreneurs is defined as two or more individuals, interacting and interdependent, who have come together to implement a business idea. The formation of groups is a natural process in the development of the personal network of the entrepreneur and frequently happens in the presence of business challenges. Therefore, the success of a business idea is a reflection of the ability of the team to combine the talents and skills of its members to attain their objectives. In the context of crowdfunding, Lagazio and Querci (2018) found that projects that present a large number of team members had greater opportunities to succeed in fundraising.

Following these arguments, we hypothesize:

H9: The projects belonging to a team of founders has a positive impact on the success of a CF campaign.

### **Previous experience of the entrepreneur**

The creation of projects on CF platform is not restricted to one single project. Then, many entrepreneurs put on the platform the number of previously created projects. The intention is to signal higher reliability and build trust among potential investors compared to entrepreneurs who have not been active before. Previous research found that founders with a high number of successful project campaigns are more successful in the subsequent projects (Courtney et al., 2017; Janku & Kucerova, 2018; Koch & Siering, 2015; 2019; Zhou et al., 2018).

Following these arguments, we hypothesize:

H10: The existence of a previous campaign on the platform has a positive impact on the success of a CF campaign.



## **METHODOLOGY**

This research aims to empirically test the influence of project-related and entrepreneur-related factors on projects' crowdfunding success by using an explanatory empirical framework based on a unique dataset from Indiegogo. Specifically, we intend to examine the following determinants - length of video pitch, depth of the project description, availability of project updates, typology of the project, amount of pledging goal, presentation of the project's promoter, number of backers, gender, nature of the founders, previous experience of the entrepreneur.

### **The *Modus Operandi* of the Reward-based CF Platform IndieGoGo**

Indiegogo was created, in 2008, in the United States (San Francisco) and according to the information displayed on their website since the beginning of the operations the platform has helped more than 800,000 innovative ideas come to life. Each month 10 million people from all over the world (235 countries and territories) visit the platform while more than 19.000 campaigns are launched by month ([www.indiegogo.com](http://www.indiegogo.com)). Projects fall into three main groups: i) Tech & Innovation; ii) Creative Works; iii) Community Projects. The first group includes audio, camera gear, education, energy & green tech, fashion & wearables, food & beverages, health & fitness, home, phones & accessories, productivity, transportation, and travel & outdoors. The second group encompasses art, comics, dance & theatre, film, music, photography, podcasts, blogs & vlogs, tabletop games, videogames, web series & TV shows, and writing & publishing. The last group includes culture, environment, human rights, local businesses, and wellness.

Fundraisers typically offer a variety of rewards, which allow for small contributions to large contributions. The reward often contains the final product (e.g. a book or a game), which may be personalized (signed, a thank you note, among others) and a publicly available mention. The creators of the project can choose between flexible funding or "all-or-nothing". The first option allows keeping any amount raised, acting the funding goal more as an orientation. The second option allows the creators to get the money but only in the case that the funding goal is attained.

The study focuses on the projects launched by entrepreneurs to raise money from backers to start their new venture within a limited time window and in return, the entrepreneurs provide backers with different rewards schemes. The backers interested in a certain project choose an appropriate reward scheme and pay the backing prices to support the project.

## **Method**

To perform the study, secondary data were randomly collected from the platform IndieGoGo ([www.IndieGoGo.com](http://www.IndieGoGo.com)). The process of the content analysis of the projects displayed on the platform occurred between March and September of 2019. The sample includes both successful and unsuccessful projects and is limited to technology and arts and culture categories. The final sample was composed of 125 technological and 125 arts and culture projects.

To estimate a response model, we use a multiple regression analysis (OLS). This is a statistical technique that allows an experimenter to analyze the impact of each factor in an experiment. The formula assumes that the outcome (dependent variable) – in this case the success rate of a project – is a function of the factors (independent variables). The generic equation is the following:

## Financing Nascent Entrepreneurs by Reward-Based Crowdfunding

$$\text{Log (SUC)} = \alpha + \beta_1\text{VIDD} + \beta_2\text{PROT} + \beta_3\text{UPD} + \beta_4\text{NAT} + \beta_5\text{AMOU} + \beta_6\text{PRES} + \beta_7\text{BACK} + \beta_8\text{GENDM} + \beta_9\text{GENDF} + \beta_{10}\text{TEAM} + \beta_{11}\text{PREV} + \epsilon$$

In this model, the dependent variable is the Success of a CF project (SUC), and the independent variables are related with the project (first group of variables) and the project's promoter (second group of variables). The rationale for the dependent variable considered that a project that attains values above 100% (attain the pledging goal) are successful while projects with values below 100% are a failure. The higher the value above 100%, the more successful is the project. Log of SUC is used in the analysis to render the distribution nearly normal. Table 2 presents the variables included in the model.

Table 2. Synthesis of the variables included in the research model

Variables	Description
<b>Dependent Variable</b> Success of a CF Project (SUC)	Takes the value given by the percentage of the pledging goal (could be above or below 100%)
<b>Independent Variables</b>	<b>Related with the project</b>
Length of the video pitch (VIDD)	Duration of the video, in minutes
Depth of the project description (PROT)	Dummy variable that takes the value of 1 when there is a detailed description of the product/service and 0 otherwise
Availability of project's updates (UPD)	Dummy variable that takes the value of 1 when there is an update for the project and 0 otherwise
Typology of the project (NAT)	Dummy variable that takes the value of 1 for technology projects and 0 for arts and culture projects
Amount of the pledging goal (AMOU)	Amount of the pledging goal, in US dollars
<b>Independent Variables</b>	<b>Related with the project's promoter</b>
Presentation of the project's promoter (PRES)	Dummy variable that takes the value of 1 when the promoter of the project is clearly detached and 0 otherwise
Number of backers (BACK)	Number of backers for a given project
Gender (GEND)	GENDM, if 1 is male and 0 female or both GENDF, if 1 is female and 0 is male or both
Nature of the founders (TEAM)	Dummy variable that takes the value of 1 if the project is developed by a team and 0 by one person
Previous experience of the promoter (PREV)	Dummy variable that takes the value of 1 when the promoter has previous experience of a CF and 0 otherwise

Source: Author's own elaboration

## RESULTS

The analysis of table 3 shows that the dependent variable that measures the success of each CF campaign in the Indiegogo platform has a minimum value of 4 and a maximum value of 20600. Thus, of the 250 campaigns, we can see at least one of them was exceptionally successful surpassing the pledging goal by far (20600%), while on the other extreme a campaign has failed by obtaining only 4% of the pledging goal. To avoid problems of skewness of the data, the variable was logarithmized.

*Table 3. Descriptive Statistics*

Variables	Mean	Standard Deviation	Minimum	Maximum
SUC	846.34	2051.668	4	20600
LogSUC	5.43	1.55	1.39	9.93
VIDD	2.09	1.64	0	11
PROT	0.78	0.418	0	1
UPD	0.76	0.425	0	1
NAT	0.52	0.500	0	1
AMOU	35598.53	81306.02	500	669086
PRES	0.63	0.484	0	1
BACK	2400.57	6712.49	3	46285
GENDM	0.44	0.497	0	1
GENDF	0.212	0.409	0	1
TEAM	0.58	0.494	0	1
PREV	0.32	0.467	0	1

Source: Author's own elaboration

The independent variables VIDD (video length) has a maximum of 11 minutes and a mean of 2 minutes. The pledging goal for the projects is positioned between 500 and 669,086 US dollars (M=36000USD). The number of backers varies between 3 e 46,285 (M=2400).

The correlation matrix for the variables used in the study is provided in table 4. No large correlations were noted between any of the independent variables, thus indicating that multicollinearity was not a problem (Hair, Anderson, Tatham, & Black, 1995).

To test the hypotheses, following Koch and Siering (2015; 2019) and Cumming, Leboeuf and Schwienbacher (2020), we conducted an OLS multiple regression to examine the impact of each of the independent variables according to the model presented previously. For this purpose, we have considered three models. The first one encompasses all the variables previously presented. The second model focuses only on the project-related factors, and the third model deals with the promoter-related factors.

Table 5 shows the results of OLS regression between the success of a campaign of CF and all the variables that the platform displays to a potential funder. A global analysis of the first model (Table 5) shows that the values of the adjusted R<sup>2</sup> are high in the first three models (between 0.46 and 0.25) with a F of Snedecor statistical significant (p<0.01 in the three models).

Model 1 indicates that when all variables are included in the model the critical factors for a successful campaign of CF (p<0.01) is the existence of detailed information about the product/service, the updates that are added to the project, the technological nature of the project, the number of funders that already invested in the project (backers), and the previous experience of the founder on the platform. Less important (p<0.05) and with a negative impact seems to be the video duration of the pitch, and the amount of the project, both inversely related to the success of the campaign. Even less important (p<0.10) are the presentation on the platform of the promoters of the project. Irrelevant to the success of the project seems to be the gender (male or female).

## Financing Nascent Entrepreneurs by Reward-Based Crowdfunding

Table 4. Correlation Matrix

Variables	1	2	3	4	5	6	7	8	9	10
VIDD (1)	1									
PROT (2)	0.075	1								
UPD (3)	0.3**	0.085	1							
NAT (4)	0.012	0.237**	0.093	1						
AMOU (5)	0.169**	0.04	0.043	0.061	1					
PRES (6)	0.153*	-0.235**	0.118	-0.154*	-0.083	1				
BACK (7)	0.25**	0.105	0.18**	0.078	0.259**	0.05	1			
GENDM (8)	-0.025	-0.026	0.056	-0.107	-0.056	0,032	-0.029	1	-0,216**	0,152*
GENDF (8)	-0.076	-0.214**	-0.196**	-0,289**	-0,039	0,136*	-0,098	1	-0,456**	-0,23**
TEAM (9)	-0.069	-0.286**	-0.104	-0.398**	-0.062	0.012	-0.213**	-0.454**	1	0,092
PREV (10)	-0.022	0.101	0.038	0.07	-0.043	-0.04	0.012	-0.064	-0.092	1
LogSUC (11)	0.049	0.313**	0.299**	0.47**	-0.065	0.03	0.37**	0.169**	-0.36**	0.244**

Note: N = 250. Significance: (\*\*) p<0.01; (\*) p<0.0

Source: Author's own elaboration

Table 5. Results of the OLS multiple regression (dependent variable Log (SUC))

Variables	Model 1 (All variables)	Model 2 (Project related variables)	Model 3 (Promoter related variables)
Intercept	3.27***	3.547***	5.131***
VIDD	-0.10**	-0.031	
PROT	0.172***	0.201***	
UPD	0.208***	0.258***	
NAT	0.37***	0.405***	
AMOU	-0.162**	-0.104*	
PRES	0.093*		0.04
BACK	0.33***		0.308***
GENDM	-0.027		-0.076
GENDF	0.029		0.09
TEAM	0.079		0.217**
PREV	0.187***		0.213***
Adjusted R <sup>2</sup>	0.466	0.322	0.252
F	20.764***	24.665***	14.984***

Note: (\*\*\*) p<0.01; (\*\*) p<0.05; (\*) p<0.10.

Source: Author's own elaboration

Model 2 drops the variables regarding the founder to evaluate the impact of project-related factors on the success of the campaign. The decrease in the adjusted  $R^2$  over model 1 (3.901) is also significant ( $p < 0.01$ ). As in model 1, we found support for hypothesis H2 (PROT) that postulates the importance of the information available on the platform about the project to increase the chance of funding. The same occurs with the posting of updates to the project (H3 (UPD)) and the technological nature of the project H4 (NAT). The total amount of money of the project decreases the attractiveness of the project to potential backers and corroborates the hypothesis H5 (AMOU, negative sign). The video duration of the pitch is statistically significant in model 1 and exhibit a negative sign; thus H1 (VIDD) is not supported, meaning that lengthy video pitches are not adequate to capture the attention of potential funders.

Model 3 drops the variables related to the project to evaluate the impact of founder related factors on the success of a CF campaign. The decrease in the adjusted  $R^2$  over model 1 (5.78) is significant ( $p < 0.01$ ) but moderate. To attract more funds to their projects founders have to rely on backers ( $p < 0.01$ ), on team effort more than individually ( $p < 0.01$ ), and with promoters that had previous experience on campaigns launch in the same platform. These results support hypotheses H7 (backers) and H10 (PREV) stating that backers attract more backers and that previous experience on the development of CF campaigns on the platform are valuable factors to increase the reputation of a project. Another interesting conclusion derives from the acceptance of H9, indicating that projects developed by teams are more valued than individual projects that seem to attract more interest from the investors. Inversely, H6 (PRES) and H8 (GENDM or GENDF) are not supported by the data.

## **SOLUTIONS AND RECOMMENDATIONS**

Concerning H1 (VIDD) that indicates that the provision of video material has a positive impact on the success of a CF campaign is not supported by the data. Therefore, we can conclude that video material, especially if it is too long, may have a negative impact on the success of a campaign on the Indiegogo platform. This result contradicts the result obtained by Jiang and Benbasat (2007) indicating that video material is perceived by the funders as more useful than sites without it. However, the hypothesis tested relates to the duration of the video and not their presence on the website. Thus, we should be most careful on this conclusion as videos with less duration may be effective in attracting potential funders.

Thus, our findings do not necessarily contradict the existing evidence, since most of the existing studies show that including a video in the CF campaign is a positive factor that helps to convince the potential investors to support the project (e.g. Jiang & Benbasat, 2007; Koch & Siering, 2019; Mollick, 2014). Our achievements bring further insight, by explaining that it is critical to have a short video pitch, based on a creative narrative about the project. This finding brings new challenges to digital marketing and design professionals.

Regarding H2 (PROT) that postulates that the presence of a prototype of the product in the platform increases the success of the campaign, the results confirm the hypothesis with the expected signal (positive) and statistical relevance. Therefore, similarly to Koch and Siering (2015), we can conclude that the presence of a prototype of the product (pictures, photo, schemes) could attract potential investors to the project. Through the presence of a prototype, the entrepreneurs transmit clearer information about the content of the project to be financed, which can positively influence the potential investors' decision-making process. The presence of a prototype can also offer higher confidence for potential supporters, since they have a more comprehensive understanding of the idea to be fundraised and its feasibility. Our

findings are also in accordance with existing evidence that unveils that the quantity of information used to describe the project positively impact the CF fundraising outcomes (e.g. Hobbs *et al.*, 2016; Hossain & Oparaocha, 2017; Koch & Siering, 2015, 2019). The detailed information provided also could help to mitigate the fears of information asymmetry, which can deter a high number of possible investors.

H3 is also confirmed, as the availability of updates about the project (UPD) has a positive effect on the success of the CF campaign. This result is also not surprising in the context of information asymmetry theory, where the continuous provision of information about the project could help to give the potential investors the trust that is required to support the project. Maintain a close and ongoing communication could be important to build an emotional linkage with the people who visit the platform and monitor the project for a potential investment. The conclusions attained regarding the relevance of constant updates are consistent with existing studies, that also had found a positive impact on the campaign success (e.g. Cho & Kim, 2017, Kuppuswamy & Bayus, 2018; Mollick, 2014 or Shahab *et al.* 2019).

The research shows that technological projects tend to be more successful than cultural ones. This result confirms H4 (NAT) as previously found by other researchers (e.g. Chan *et al.*, 2018; Hörisch, 2015). Our findings show that the typology of the project is able to constrain the fundraising outcomes. The research carried out suggests that crowdfunders, keeping everything else constant, feel more comfortable in supporting technological projects rather than cultural ones. In future studies, it would be worthy to assess whether projects are able to take advantage of the technological nature in other types of CF models, such as donation or lending based.

H5 (AMOU) is also supported. Similarly to previous studies (e.g. Colombo *et al.*, 2015; Frydrych *et al.*, 2014; Kaartemo, 2015; Mollick, 2014, among others), the research also shows that the financial goal of the campaigns has a slightly negative effect on the campaign success. As CF works based on (very) small contributions, a campaign that has a higher pledge have to succeed in convincing a higher number of potential investors to support the project. Thus, a higher number of people have to make a positive judgment about how attractive the project is. In addition, higher amounts sign a riskier project that could be punished by more risk-averse investors.

Concerning the promoter related factors, the hypothesis H6 (PRES) that states that the presentation of the promoter of the project is beneficial to attain the success of a CF campaign is supported by the data. Although with weak statistical significance in model 1 and no significance in model 3, the expected signal is correct (positive). Then, we can conclude that is important for promoters to present themselves as entrepreneurs capable of implementing the project and deliver the promised output. On the other hand, real people helps to reduce uncertainty, increase transparency (Koch & Siering, 2015), and adds credibility (Egger, 2001; Fogg *et al.*, 2001). The use of such kind of presentation could foster the investors personal and emotional proximity to the project (De Buysere *et al.*, 2012).

Also, H7 (BACK) is supported as the investigation shows that there is a positive effect of the number of supporters on the success of a campaign in attaining the financial goals. This result, that is significant, suggests that there is some herding effect and that potential supporters (crowdfunders) pay attention to all information sources that could help them obtain some protection against the information asymmetry risks that CF encompasses, including the validation made by other previous investors. As suggested by Lee *et al.* (2011), the research shows that the decision made by each investor is not completely independent, but is influenced by the behaviour of other crowdfunders. Thereby, existing evidence shows that this mimetic behavior could be found in different types of CF campaigns, either in investment or non-investment models.

Concerning H8 - gender (GEND), the results show that the promoters' gender, whether male or female, is not able to influence the capacity for resources collection. The data collected does not support H8 and confirm the gender neutrality impact that has been identified in some recent studies (Barasinska & Schafer, 2014; Okoyeuzu et al., 2019). Further, the research also does not find any women related benefit in the campaign design, that has been advocated by some researchers such as Gorbatai and Nelson (2015) or Greenberg and Mollick (2014). In addition, the research does not support that there is any gender bias favourable to men (GENDM), as shown in economic entrepreneurship activity.

The composition of the projects' founders (TEAM) is just recognized as significant in model 3, when the analysis focuses only on the promoters-related factors. Thus, model 3 supports H9, in which the impact of developing the project in a group, compared with the possibility of being lead individually, has a positive effect on campaign success. Through the presence of different promoters, the campaign could take advantage of a more extensive network, composed of more and more diversified contacts. The extended network can even confer greater visibility to the project on social networks, for example. When we consider all of the variables, either project-related or promotor-related (Model 1), the effect of the team constitution, although still having a positive sign, is no longer considered statistically significant.

H10 (PREV) is supported in both models (model 1 and 3), since the previous experience of the founder is recognized as significant for the success of the call for funds. As found by other studies (Courtney et al., 2017; Koch & Siering, 2015, 2019; Janku & Kucerova, 2018; Zou *et al.*, 2018), it could be expected that entrepreneurs with previous experience have an improved capacity to conduct the project, that makes the project less risky. This factor could be especially valuable in a scenario where potential investors do not have the financial expertise to assess the economic viability of the project. Furthermore, the information about the past achievements could be used as a proxy for the success of the current project and signal some additional confidence for potential investors, as in the past other backers also had trusted in these entrepreneurs.

It is also worthy to note that the predictive capability of the first model is higher than the second and third ones. This suggests that to capture a more accurate comprehension of the factors affecting the fundraising outcomes, it is important to consider both project-related and also the promoters related characteristics. Thereby, the design of a successful campaign is not only led by its intrinsic characteristics, but also should simultaneously be focused on both dimensions.

## **FUTURE RESEARCH DIRECTIONS**

In the future, it would be worthy of extending the investigation to other platforms and countries, since most of the empirical studies have been performed under the most well-known American platforms, such as Kickstarter or Indiegogo. It would be interesting to study the success factors of CF campaigns in other platforms of more peripheral countries and with different economic development levels.

In the future it would be positive to get new insights through the study of the influence of the platforms' features in the fundraising success that could be achieved through a transnational study. It would also be quite interesting to understand if the major factors that influence CF success are the same in different types of CF models. Future research could still analyze the impact of external-related factors into the fundraising outcomes.

## ***Financing Nascent Entrepreneurs by Reward-Based Crowdfunding***

As the research suggests that investors are highly concerned with asymmetry information risks, it would be worthy of performing additional research on the topic, and study in-depth the main fears affecting potential investors.

## **CONCLUSION**

Crowdfunding has been recognized as a very promising fundraising tool, especially for nascent entrepreneurs who typically face greater barriers to accessing finance. However, not all campaigns have the same potential in terms of resource mobilization, since some of them are successful in terms of funds collected and others not. In this scenario, it is critical to have a deeper understanding of the factors that are able to drive the success of a given campaign, which was the aim of this research.

The results indicate that it is possible to find an explanation for the different levels of success of reward CF campaigns based on the analysis of the characteristics of the project and its founder. The results show that the factors that have a positive impact are the presence of prototypes or detailed information of the future product, the provision of project updates, the nature of the project specifically if it has a technological nature, the inclusion of presentation of the promoter of the project, the number of backers supporting the project, projects promoted by a team of founders and the existence of a previous campaign on the platform.

By contrast, the length of the video pitch and the amount of the project pledging goal affects negatively. Gender is not recognized as a variable capable of influencing the CF success.

The study indicates that we can attain a better understand of the level of success of CF campaign if we adopt a dual approach, that includes either project and promoters related factors.

Thus, the success of a CF campaign is based on multiple criteria that include the nature of the project/campaign by itself as well as the characteristics of its promoters. Thus, a deeper understanding of the success causes could not isolate these two components.

The evidence collected suggests that the projects that were more successful in attracting the investors' interest are those who provide more information and signaling mechanisms that reduce the information asymmetry problem.

The conclusions attained also reveal that the most important factors for fundraising outcomes are related to informational issues, that are critical for CF. The results obtained indicate that in the investor's decision-making process, potential funders (crowdfunders) highlight the importance of the attributes that signal the quality of the project for which funds are called, and thus mitigate some of the risks arising from information asymmetry. The research carried out suggest that the fears about information are major constrain of CF. This occurs even in reward-based CF, that is considered a non-investment model of CF.

Thus, creating a successful CF campaign is very demanding in terms of information, not only in the elements involved but also in the form used, where a concise approach is highly valued.

## **FUNDING INFORMATION**

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.



## REFERENCES

- Agrawal, A., Catalini, C., & Goldfarb, A. (2010). *The geography of crowdfunding*. NET Institute Working Paper, No. 10-08. <https://ssrn.com/abstract=1692661>
- Agrawal, A., Catalini, C., & Goldfarb, A. (2015). Crowdfunding: Geography, social networks, and the timing of investment decisions. *Journal of Economics & Management Strategy*, 24(2), 253–274. doi:10.1111/jems.12093
- Ahlers, G. K. C., Cumming, D., Gunther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955–980. doi:10.1111/etap.12157
- André, K., Bureau, S., Gautier, A., & Rubel, O. (2017). Beyond the Opposition Between Altruism and Self-interest: Reciprocal Giving in Reward-Based Crowdfunding. *Journal of Business Ethics*, 146(2), 313–332. doi:10.1007/10551-017-3652-x
- Bacq, S., Hartog, C., Hoogendoorn, B., & Lepoutre, J. (2011). Social and commercial entrepreneurship: Exploring individual and organizational characteristics. *Scales Research Reports, EIM Business and Policy Research*. Retrieved December 12, 2019, from [http://www.ondernemerschap.nl/sys/cftags/assetnow/design/widgets/site/ctm\\_getFile.cfm?file=H201110.pdf&perId=615](http://www.ondernemerschap.nl/sys/cftags/assetnow/design/widgets/site/ctm_getFile.cfm?file=H201110.pdf&perId=615)
- Barasinska, N., & Schafer, D. (2014). Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform. *German Economic Review*, 15(4), 436–452. doi:10.1111/geer.12052
- Baumgardner, T., Neufeld, C., Huang, P., Sondhi, T., Mursalin, F., & Talha, A. (2017). Crowdfunding as a Fast Expanding Market for the Creation of Capital and Shared Value. *Thunderbird International Business Review*, 59(1), 115–126. doi:10.1002/tie.21766
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585–609. doi:10.1016/j.jbusvent.2013.07.003
- Belleflamme, P., Omrani, N., & Peitz, M. (2015). The Economics of Crowdfunding Platforms. *Information Economics and Policy*, 33, 11–28. doi:10.1016/j.infoecopol.2015.08.003
- Berglann, H., Moen, E., Roed, K., & Skogstrøm, J. F. (2011). Entrepreneurship: Origins and returns. *Labour Economics*, 18(2), 180–193. doi:10.1016/j.labeco.2010.10.002
- Bi, S., Liu, Z., & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowdfunding. *Journal of Business Research*, 71, 10–18. doi:10.1016/j.jbusres.2016.10.001
- Bikhchandani, S., Hirshleifer, D., & Welch, I. (1992). A Theory of Fads, Fashion, Custom, and Cultural-Change as Informational Cascades. *Journal of Political Economy*, 100(5), 457–486. doi:10.1086/261849
- Block, J., Hornuf, L., & Moritz, A. (2018). Which updates during an equity crowdfunding campaign increase crowd participation? *Small Business Economics*, 50(1), 3–27. doi:10.1007/11187-017-9876-4
- Boeuf, B., Darveau, J., & Legoux, R. (2014). Financing creativity: Crowdfunding as a new approach for theatre projects. *International Journal of Arts Management*, 16(3), 33–48.

## **Financing Nascent Entrepreneurs by Reward-Based Crowdfunding**

Bretschneider, U., Knaub, K., & Wieck, E. (2014). Motivations For Crowdfunding: What Drives The Crowd To Invest In Start-Ups? *Proceedings of Twenty Second European Conference on Information Systems*, 1–11.

Chan, C. S. R., Park, H. D., Patel, P., & Gomulya, D. (2018). Reward-based crowdfunding success: De-composition of the project, product category, entrepreneur, and location effects. *Venture Capital*, 20(3), 285–307. doi:10.1080/13691066.2018.1480267

Cho, M., & Kim, G. (2017). A cross-cultural comparative analysis of crowdfunding projects in the United States and South Korea. *Computers in Human Behavior*, 72, 312–320. doi:10.1016/j.chb.2017.03.013

Colombo, M. G., Franzoni, C., & Rossi-Lamastra, C. (2015). Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, 39(1), 75–100. doi:10.1111/etap.12118

Committee Nobel Prize. (2001). *George A. Akerlof, A. Michael Spence, Joseph E. Stiglitz: Markets with asymmetric information*. Nobel Prize Committee. Retrieved February 25, 2020, [https://www.nobelprize.org/nobel\\_prizes/economics/laureates/2001/popular.html](https://www.nobelprize.org/nobel_prizes/economics/laureates/2001/popular.html)

Courtney, C., Dutta, S., & Li, Y. (2017). Resolving information asymmetry: Signaling, endorsement, and crowdfunding success. *Entrepreneurship Theory and Practice*, 41(2), 265–290. doi:10.1111/etap.12267

Cruz, J. (2018). Beyond financing: Crowdfunding as an informational mechanism. *Journal of Business Venturing*, 33(3), 371–393. doi:10.1016/j.jbusvent.2018.02.001

Cumming, D. J., Leboeuf, G., & Schwienbacher, A. (2020). Crowdfunding models: Keep-it-all vs. all-or-nothing. *Financial Management*, 49(2), 331–360. doi:10.1111/fima.12262

De Buysere, K., Gajda, O., Kleverlaan, R., & Marom, D. (2012). *A Framework for European Crowdfunding*. European Crowdfunding Network (ECN). <https://www.fundraisingschool.it/wp-content/uploads/2013/02/European-Crowdfunding-Framework-Oct-2012.pdf>

Deffains-Crapsky, C., & Sudolska, A. (2014). Radical innovation and early stage financing gaps: Equity-based crowdfunding challenges. *Journal of Positive Management*, 5(2), 3–19. doi:10.12775/JPM.2014.009

Di Pietro, F., & Buttice, V. (2020). Institutional characteristics and the development of crowdfunding across countries. *International Review of Financial Analysis*, 71, 101543. Advance online publication. doi:10.1016/j.irfa.2020.101543

Egger, F. N. (2001). Affective Design of E-Commerce User Interfaces: How to Maximise Perceived Trustworthiness. *Proceedings of the Conference on Affective Human Factors Design (CAHD)*.

European Commission. (2015). *Crowdfunding from an investor perspective*. Oxera.

Fogg, B. J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., Fang, N., Paul, J., Rangnekar, A., Shon, J., Swani, P., & Treinen, M. (2001). What Makes Web Sites Credible? A Report on a Large Quantitative Study. *Proceedings of the CHI Conference on Human Factors in Computing Systems*.

Frydrych, D., Bock, A. J., Kinder, T., & Koeck, B. (2014). Exploring Entrepreneurial Legitimacy in Reward-Based Crowdfunding. *Venture Capital*, 16(3), 247–269. doi:10.1080/13691066.2014.916512

Gafni, H., Marom, D., & Sade, O. (2018). Are the life and death of an early-stage venture indeed in the power of the tongue? Lessons from online crowdfunding pitches. *Strategic Entrepreneurship Journal*, 13(1), 3–23. doi:10.1002/ej.1293

Gajda, O., & Mason, N. (2013). *Crowdfunding for Impact in Europe and the USA*. European Crowdfunding White Paper. Retrieved December 20, 2019, from [http://eurocrowd.org/wp-content/blogs.dir/sites/85/2013/12/20131220\\_ECN\\_Toniic\\_CrowdfundingForImpact.pdf](http://eurocrowd.org/wp-content/blogs.dir/sites/85/2013/12/20131220_ECN_Toniic_CrowdfundingForImpact.pdf)

Gangi, F., & Daniele, L. M. (2017). Success drivers of reward-based crowdfunding: conceptual framework and empirical evidence. *Proceedings EURAM Conference 2017: Making Knowledge Work*, 21-24.

GEM. (2014). *Global Entrepreneurship Monitor 2014 Global Report*. Retrieved December 10, 2019, from <https://www.gemconsortium.org/report>

GEM. (2016). *2015/16 Global Report*. Retrieved December 10, 2019, from <https://www.gemconsortium.org/report>

Gerber, E., Hui, J., & Kuo, P. (2012). Crowdfunding: Why people are motivated to post and fund projects on crowdfunding platforms. *CSCW Workshop*. Retrieved December 15, 2019, from [http://www.juliehui.org/wpcontent/uploads/2013/04/CSCW\\_Crowdfunding\\_Final.pdf](http://www.juliehui.org/wpcontent/uploads/2013/04/CSCW_Crowdfunding_Final.pdf)

Gierczak, M. M., Bretschneider, U., Haas, P., Blohm, I., & Leimeister, J. M. (2015): Crowdfunding – Outlining the New Era of Fundraising. In *Crowdfunding in Europe – State of The Art in Theory And Practice* (pp. 7-23). Cham: Springer Science + Business Media.

Giudici, G., Massimiliano, G., & Rossi-Lamastra, C. (2017). Reward-based crowdfunding of entrepreneurial projects: The effect of local altruism and localized social capital on proponents' success. *Small Business Economics*, 50(2), 307–324. doi:10.1007/11187-016-9830-x

Gorbatai, A., & Nelson, L. (2015). Gender and the Language of Crowdfunding. *Academy of Management Annual Meeting Proceedings*, 1, 15785-15785. Available at SSRN: <http://ssrn.com/abstract=2549354>

Gorbatai, A., & Nelson, L. (2015). The Narrative Advantage: Gender and the Language of Crowdfunding. *Academy of Management Annual Meeting Proceedings*, 15785-15785.

Greenberg, J., & Mollick, E. (2014). Leaning In or Leaning On? Gender, Homophily, and Activism in Crowdfunding. *Academy of Management Annual Meeting Proceedings*. DOI: 10.5465/AMBPP.2015.18365abstract

Guo, Y., Zhou, B., Luo, C., Liu, C., & Xiong, H. (2016). Instance-based credit risk assessment for investment decisions in P2P lending. *European Journal of Operational Research*, 249(2), 417–426. doi:10.1016/j.ejor.2015.05.050

Hair, J. F. Jr, Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis: with readings* (4th ed.). Prentice Hall.

Herzenstein, M., Dholakia, U. M., & Andrews, R. L. (2011). Strategic Herding Behavior in Peer-to-Peer Loan Auctions. *Journal of Interactive Marketing*, 25(1), 27–36. doi:10.1016/j.intmar.2010.07.001

## **Financing Nascent Entrepreneurs by Reward-Based Crowdfunding**

- Hobbs, J., Grigore, G., & Molesworth, M. (2016). Success in the management of crowdfunding projects in the creative industries. *Internet Research*, 26(1), 146–166. doi:10.1108/IntR-08-2014-0202
- Hommerová, D. (2020). Crowdfunding as a new model of nonprofit funding. In I. Garcia-Rodriguez & M. E. Romero-Merino (Eds.), *Financing Nonprofit Organizations*. Routledge. doi:10.4324/9780429265419-16
- Hörisch, J. (2015). Crowdfunding for Environmental Ventures: An Empirical Analysis of the Influence of Environmental Orientation on the Success of Crowdfunding Initiatives. *Journal of Cleaner Production*, 107, 636–645. doi:10.1016/j.jclepro.2015.05.046
- Hossain, M., & Oparaocha, G. O. (2017). Crowdfunding: Motives, definitions, typology and ethical challenges. *Entrepreneurship Research Journal*, 7(2), 1–14. doi:10.1515/erj-2015-0045
- Janku, J., & Kucerova, Z. (2018). Successful Crowdfunding Campaigns: The role of project specifics, competition and founders' experience. *Czech Journal of Economics and Finance*, 68(4), 351–373.
- Jiang, Z., & Benbasat, I. (2007). The Effects of Presentation Formats and Task Complexity on Online Consumers' Product Understanding. *Management Information Systems Quarterly*, 31(3), 475–500. doi:10.2307/25148804
- Kaartemo, V. (2017). The elements of a successful crowdfunding campaign: A systematic literature review of crowdfunding performance. *International Review of Entrepreneurship*, 15(3), 291–318.
- Koch, J., & Siering, M. (2015). Crowdfunding Success Factors: The Characteristics of Successfully Funded Projects on Crowdfunding Platforms. *Twenty-Third European Conference on Information Systems (ECIS)*.
- Koch, J., & Siering, M. (2019). The Recipe of Successful Crowdfunding Campaigns: An analysis of crowdfunding success factors and their interrelations. *Electronic Markets*, 29(4), 661–679. doi:10.1007/12525-019-00357-8
- Kraus, S., Richter, C., Brem, A., Cheng, C.-F., & Chang, M.-L. (2016). Strategies for reward-based crowdfunding campaigns. *Journal of Innovation & Knowledge*, 1(1), 13–23. doi:10.1016/j.jik.2016.01.010
- Kuppuswamy, V., & Bayus, B. L. (2018). A review of crowdfunding research and findings. In P. Golder & D. Mitra (Eds.), *Handbook of Research on New Product Development* (pp. 361–373). Edward Elgar Publishing. doi:10.4337/9781784718152.00028
- Lagazio, C., & Querci, F. (2018). Exploring the multi-sided nature of crowdfunding campaign success. *Journal of Business Research*, 90, 318–324. doi:10.1016/j.jbusres.2018.05.031
- Lee, E., & Lee, B. (2012). Herding Behavior in Online P2P Lending: An Empirical Investigation. *Electronic Commerce Research and Applications*, 11(5), 495–503. doi:10.1016/j.elerap.2012.02.001
- Lee, E., Lee, B., & Chae, M. (2011). Herding Behavior In Online P2P Lending: An Empirical Investigation. *Electronic Commerce Research and Applications*, 11(5), 495–503. doi:10.1016/j.elerap.2012.02.001
- Löher, J. (2017). The interaction of equity crowdfunding platforms and ventures: An analysis of the preselection process. *Venture Capital*, 19(1-2), 51–74. doi:10.1080/13691066.2016.1252510
- Malekipirbazari, M., & Aksakalli, V. (2015). Risk Assessment in Social Lending via Random Forests. *Expert Systems with Applications*, 42(10), 4621–4631. doi:10.1016/j.eswa.2015.02.001

- Marom, D., Robb, A., & Sade, O. (2014). Gender dynamics in crowdfunding (Kickstarter): Evidence on entrepreneurs, investors, deals and taste-based discrimination. *SSRN Electronic Journal*. Available at SSRN: <http://ssrn.com/abstract=2442954>
- Mezei, J. (2018). Credit risk evaluation in peer-to-peer lending with linguistic data transformation and supervised learning. In *Proceedings of the 51st Hawaii International Conference on System Sciences* (pp. 1366–1375). doi:10.24251/HICSS.2018.169
- Mollick, E. R. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1–16. doi:10.1016/j.jbusvent.2013.06.005
- Mollick, E. R., & Kuppuswamy, V. (2014). *After the Campaign: Outcomes of Crowdfunding*. UNC Kenan-Flagler Research Paper No. 2376997. Available at SSRN: <https://ssrn.com/abstract=2376997>
- Moritz, A., & Block, J. H. (2016). Crowdfunding: A Literature Review and Research Directions. In *Crowdfunding in Europe* (pp. 25-53). Springer, Cham. doi:10.1007/978-3-319-18017-5\_3
- Okoyeuzu, C., Nwakoby, I., & Onwujekwe, O. (2019). Crowdfunding: An Alternative to Funding Women Entrepreneurs. *South Asian Journal of Social Studies and Economics*, 5(2), 1–10. doi:10.9734/ajsse/2019/v5i230140
- Parhankangas, A., Mason, C., & Landström, H. (2019). Crowdfunding: an introduction. In A. Parhankangas, C. Mason, & H. Landström (Eds.), *Handbook of Research on Crowdfunding* (pp. 1–21). Edward Elgar Publishing Limited. doi:10.4337/9781788117210.00005
- Park, O.-C., & Hopkins, R. (1993). Instructional conditions for using dynamic visual displays: A review. *Instructional Science*, 21(6), 427–449. doi:10.1007/BF00118557
- Paschen. (2017). Choose wisely: Crowdfunding through the stages of the startup life cycle. *Business Horizons*, 60, 179-188.
- Pines, A., Lerner, M., & Schwartz, D. (2012). Gender differences among social vs. business entrepreneurs. Social entrepreneurship. In T. Burger-Helmchen (Ed.), *Entrepreneurship - Gender, geographies and social context* (pp. 171–190). InTech.
- Schwiebacher, A., & Larralde, B. (2012). Crowdfunding of Small Entrepreneurial Ventures. In D. Cumming (Ed.), *The Oxford Handbook of Entrepreneurial Finance*. Oxford University Press.
- Shahab, Y., Ye, Z., Riaz, Y., & Ntim, C. G. (2019). Individual's financial investment decision-making in reward-based crowdfunding: Evidence from China. *Applied Economics Letters*, 26(4), 261–266. doi:10.1080/13504851.2018.1464643
- Shen, D., Krumme, C., & Lippman, A. (2010) Follow the Profit or the Herd? Exploring Social Effects in Peer-to-Peer Lending. *2nd International Conference on Social Computing*, 137-144.
- Stack, P., Faller, J., O'Reilly, P., Gleasure, R., Li, S., & Cristoforo, J. (2017). Managing Risk in Business Centric Crowdfunding Platforms. *13th International Symposium, OpenSym '17*. DOI: 10.1145/3125433.3125460

## **Financing Nascent Entrepreneurs by Reward-Based Crowdfunding**

Statista. (2020). *Percentage of successfully funded Kickstarter projects as of December 2019*. Retrieved February 27, 2020, from <https://www.statista.com/statistics/235405/kickstarter-project-funding-success-rate/>

Vlassopoulos, M. (2009). Quality, reputation and the choice of organizational form. *Journal of Economic Behavior & Organization*, 71(2), 515–527. doi:10.1016/j.jebo.2009.02.014

Wang, X., & Tu, Y. (2016). The Existence of Herding in P2P Lending and the Rationality of It - An Empirical Study from China. *Journal of Economics. Business and Management*, 4(11), 652–659.

Xu, A., Yang, X., Rao, H., Fu, W. T., Huang, S. W., & Bailey, B. P. (2014). Show me the money! An analysis of project updates during crowdfunding campaigns. In *Proceedings of the 32nd annual ACM conference on human factors in computing systems* (pp. 591–600). ACM. 10.1145/2556288.2557045

Young, T. (2013). *The Everything Guide to Crowdfunding: Learn How To Use Social Media For Small-Business Funding*. Adams Media.

Yu, S., Johnson, S., Lai, C., Cricelli, A., & Fleming, L. (2017). Crowdfunding and regional entrepreneurial investment: An application of the CrowdBerkeley database. *Research Policy*, 46(10), 1723–1737. doi:10.1016/j.respol.2017.07.008

Zhang, J., & Chen, W. (2019). Crowdfunding technological innovations: Interactions between consumer benefits and rewards. *Technovation*, 84, 11–20. doi:10.1016/j.technovation.2018.05.001

Zhang, J., & Liu, P. (2012). Rational Herding in Microloan Markets. *Management Science*, 58(5), 892–912. doi:10.1287/mnsc.1110.1459

Zhou, M., Lu, B., Fan, W., & Wang, A. (2018). Project description and crowdfunding success: An exploratory study. *Information Systems Frontiers*, 20(2), 259–274. doi:10.1007/10796-016-9723-1 PMID:29755287

## **ADDITIONAL READING**

Adhikary, B. K., Kutsuna, K., & Hoda, T. (2018). *Crowdfunding: Lessons from Japan's Approach*. Springer. doi:10.1007/978-981-13-1522-0

Croux, C., Jagtiani, J., Korivi, T., & Vulcanovic, M. (2020). Important factors determining fintech loan default: Evidence from a lendingclub consumer platform. *Journal of Economic Behavior & Organization*, 173, 270–296. doi:10.1016/j.jebo.2020.03.016

Gartner, W. B., Frid, C. J., & Alexander, J. C. (2012). Financing the emerging firm. *Small Business Economics*, 39(3), 745–761. doi:10.1007/11187-011-9359-y

Harris, R. (2016). *Crowdfunding and Entrepreneurial Finance*. Routledge.

Lawton, K., & Marom, D. (2010). *The Crowdfunding Revolution: Social Networking Meets Venture*. McGraw Hill.

Schwienbacher, A. (2018). Entrepreneurial risk-taking in crowdfunding campaigns. *Small Business Economics*, 51(4), 843–859. doi:10.1007/11187-017-9965-4

## KEY TERMS AND DEFINITIONS

**Crowdfundee:** Company or venture that use crowdfunding platforms for attracting funds.

**Crowdfunder:** People that offer funds to support a crowdfunding campaign, that could or not be repaid and rewarded.

**Crowdfunding:** Fundraising operation through which an organization asks funds through an open call directly to a large number of people (the crowd), who typically contribute with small amounts.

**Crowdfunding Campaign:** Action carried out through digital media and CF platforms to inform potential investors (crowdfunders) of the financing needs of a given project, the activities where the money will be invested and the expected reward that will be offered to the campaign supporters.

**Crowdfunding Platforms:** Digital platforms that disseminate on their website the projects that are asking funding (crowdfundees), and collect the offers made by crowdfunders. Crowdfunding platforms also defines the rules to be used in the CF operations.

**Financing:** Process of collecting financial resources (fundraising) among potential investors in order satisfy the financial needs of a given company or project that are related to investment or operational activities.

**Nascent Entrepreneur:** Individual engaged in the creation of a new project or venture.

**Reward-Based CF:** Type of CF where investors do not receive any direct financial return for supporting the project. Instead they are treated as early customers and as reward they could receive a thank-you note, an offering of a sample or a discount on the purchase of the product or service.

# Chapter 12

## Awareness of Government Entrepreneurial Support Programmes: A Survey of Women Entrepreneurs in South Africa

Evelyn Derera

 <https://orcid.org/0000-0002-9762-4295>

University of KwaZulu-Natal, South Africa

### ABSTRACT

*Women's entrepreneurship plays a significant role in economic and social development. It represents a large pool of untapped entrepreneurial talent that nations could benefit from. This chapter explores the nexus between women entrepreneurship and awareness of government support programmes designed to stimulate the growth and sustainability of women-owned businesses. Drawing from a mixed-method research, the empirical data was gathered from 50 women entrepreneurs operating small businesses in Pietermaritzburg, South Africa. A snowballing sampling technique was used to identify the women. The findings revealed that the majority of women entrepreneurs were not aware of existing government support programmes that are targeting them. Consequently, the majority of these women entrepreneurs were not benefiting from these programmes. The study recommended a review of the mechanisms that are used to disseminate information on the available government support initiatives. This is necessary because women entrepreneurship in South Africa has the potential for transforming the economy.*

### INTRODUCTION

Within the global economy, the study of women entrepreneurship is a significant component of research on economic development (Garba, 2011; Todaro & Smith, 2011). Women represent a large pool of untapped entrepreneurial talent (Carter & Shaw, 2006) that nations could utilise to develop their economies

DOI: 10.4018/978-1-7998-4826-4.ch012



(Manniti & Arenius, 2003). Some researchers have considered the growth of women entrepreneurship as the most significant, yet the quietest revolution of our time (Derera et al., 2014; Sadi & Al-Ghazali, 2012). While research has been conducted on the significance of encouraging women entrepreneurship (Madichie & Gallant, 2012), little is known about their contribution to developing countries such as Africa (Derera et al. 2014). What is required is developing a deeper understanding of the complexity of women entrepreneurship in transforming economies such as South Africa. This knowledge could assist in revealing ways in which women entrepreneurship could flourish and inspire help to create sustainable jobs, and promote economic development.

Although women entrepreneurship is increasing in Africa, women are still far from reaching their full potential. Previous research has addressed differences between female and male entrepreneurship (Peterson & Altounian, 2019; Santos et al., 2016); the challenges that women encounter in the small business sector (Aneke et al., 2017; Derera et al., 2014; Mordi et al., 2010); and motivation for women entrepreneurship (Franck, 2012; Nnamdi & Gallant, 2012). More recently, research examining women entrepreneurship includes poverty alleviation and women empowerment through entrepreneurship (Digan et al., 2019; Derera, 2015; Scott et al., 2012; Datta & Gailey, 2012); and growth orientation in women-owned small businesses (Manolova et al., 2012). Despite these works, it is still unknown whether women in the small business sector, particularly in developing countries are aware of, and are benefiting from the government support programmes that are available to them. Yet, governments such as the one in South Africa have an array of initiatives to support entrepreneurial talent amongst women. Surprisingly, the literature is silent about this aspect of women entrepreneurship in South Africa. Interestingly, women entrepreneurs face many challenges, including insufficient startup capital and lack of information (Treanor & Henry, 2010; Nieman & Nieuwenhuizen, 2009). Therefore, the question that this study is grappling with is: Are women entrepreneurs aware of government support programmes that promote or encourage the growth of their entrepreneurial talent?

A major point of interest is the fact that developing countries are struggling with challenges of political instability, high levels of unemployment, high inflation rates, poverty, droughts and food shortages (United Nations, 2019) among other issues. Yet, women entrepreneurs are considered to be today's principal agents for economic growth and development (Derera et al., 2014; Thierry, 2007), and can take an active role in solving some of the challenges mentioned above. Women, according to Orhan and Scott (2001), represent a significant source for innovation, job creation and poverty reduction. Therefore, the stimulation of the small business sector through supporting women entrepreneurship must be seen as an amalgamated effort to address some of the social, economic and political challenges that are facing developing nations. Given this background, governments need to acknowledge the existence of gendered resource constraints and focus more on strengthening women's capacity to participate fully in the global economy (Derera et al., 2014; Thierry, 2007). It is for this reason that government agencies in many countries are increasing their efforts to encourage more women to engage in entrepreneurship (McGowan et al., 2012).

Given this background, the purpose of this chapter is to find out whether women entrepreneurs in Pietermaritzburg, South Africa are aware of, and benefiting from government entrepreneurial initiatives that are targeting them. The objectives guiding this chapter are:

1. To find out if women entrepreneurs are aware of the government entrepreneurial support programmes that are targeting them;

### ***Awareness of Government Entrepreneurial Support Programmes***

2. To explore the channels of communication that are used to create awareness of government entrepreneurial support programmes; and
3. To investigate whether women entrepreneurs are benefiting from the available government entrepreneurial support programmes.

By studying government initiatives towards women entrepreneurs, this chapter contributes to entrepreneurial research in three ways. Firstly, it contributes to a much-needed scarcity of literature on indigenous women's economic activities in Africa. The chapter focuses on the channels of communication used to create awareness in a society where women's roles have been confined to the domestic context of production. Secondly, the chapter details the benefits, if any of these government initiatives to women as entrepreneurs. Thirdly, the empirical results are used as a foundation for considering the future debate on how policymakers and researchers in Africa could find ways of encouraging more women to venture into small businesses.

To situate this research theoretically, the next section discusses the gendered barriers to entry into entrepreneurship. This is followed by a discussion of women entrepreneurship in South Africa with specific reference to the overview of the South African economy and the plight of women in small businesses. After that, the chapter presents a summary of government entrepreneurial support for women entrepreneurs in South Africa, and awareness of the programmes before turning to the research context and data. Here, an overview of the importance of government support for women entrepreneurs is provided.

## **WOMEN ENTREPRENEURSHIP AND GENDERED BARRIERS TO ENTRY**

Women, like their male counterparts, encounter barriers to entry into entrepreneurship (Derera et al., 2014; Hossain et al., 2009; Singh & Belwal, 2008). These challenges are often underpinned by economic, social, cultural, and the religious environment (Derera et al., 2014; Mordi et al., 2010; Boohene et al., 2008). Apart from economic and socio-cultural barriers, women entrepreneurs also face gender-specific barriers (Derera et al., 2014; Treanor & Henry, 2010). Some of these barriers relate to the additional family responsibilities, limited access to networks, market information, technology, finance, and poor educational background. Researchers have also identified lack of business training, affordable business premises, and astringent regulatory framework as significant barriers to entry for women entrepreneurs (Chinomona & Maziriri, 2015; Derera, 2015; Derera et al., 2014). Consistent with this, Derera et al. (2014) found that a lack of industry and entrepreneurial experience, act as a barrier to entry for aspiring women entrepreneurs. Other challenges include political instability, poor infrastructure, high production costs, weak linkage to support services, gaps between policy and implementation and an unfavourable business environment (Chinomona & Maziriri, 2015; Derera et al., 2014; Boohene et al., 2008). Paradoxically, these challenges are more significant among female compared to male entrepreneurs, thereby resulting in a higher failure rate among women-owned small businesses (Derera et al., 2014).

Entrepreneurial research has examined extensively the risks associated with starting a small business by aspiring entrepreneurs (Nieman et al., 2007), and found that this risk is higher among women entrepreneurs than male entrepreneurs. Studies have linked this to gendered inequalities that are embedded in the traditional society, where women's role has often been confined to the domestic context of consumption and production (Cappellini & Parsons, 2012). In a similar vein, Singh and Belwal (2008) suggested that women entrepreneurs encounter more operational and strategic impediments than their

male counterparts. This is because starting a small business requires a variety of skills, some of which are acquired through formal training. However, in some countries, women are denied the opportunity to attain formal education. For example, 750 million youth and adults lack necessary literacy skills (UNESCO, 2018). Two-thirds of them are women, many living in remote rural communities in Asian Pacific countries (UNESCO, 2018). Yet, starting a small business require specific skills, some of which can be gained through education and training. Despite these challenges, women-owned businesses make significant contributions to economic development in Africa, and this cumulative contribution cannot be downplayed (Derera, 2015; Tillmar, 2007). Consistent with this conception, the chapter argues that for a country to benefit from women's entrepreneurial potential fully, structured programmes must be developed to support women-owned small businesses. This, in part, will help to address the imbalances embedded in traditional society, some of which have confined women to the domestic context of production and the peripheries of the small business sector. This, as the chapter argues, will help to unleash women's entrepreneurial potential, and promote the growth of the economy.

The literature focuses more on barriers to entry encountered by women in developed countries (Derera et al., 2014; Al-Lamky, 2007; Forson, 2006) but, still little is known about the challenges faced by women entrepreneurs in developing economies. To address this theoretical gap, the chapter focuses on understanding whether women entrepreneurs in South Africa are aware of and benefiting from the available government support mechanisms to unleash their entrepreneurial potential.

## **WOMEN ENTREPRENEURSHIP IN SOUTH AFRICA**

### **The South African Context**

South Africa is a country with extreme differences in income and wealth distribution (Rudin, 2019; Wittenberg & Leibbrandt, 2017). The gap between the rich and the poor is vast, and the most vulnerable group of inequality gap is the black population (Rudin, 2019; Wittenberg & Leibbrandt, 2017). Francis and Webster (2019) agreed that South Africa has very high levels of unemployment, sluggish economic growth and high levels of poverty. The unemployment rate for South Africa has been on the rise over the past few years. For example, the unemployment rate rose from 25.5% in the third quarter of 2015 to 29.1% during the same period of 2019 (StatsSA, 2015, 2019). The Gross Domestic Product (GDP) growth rate averaged 3.2% from 1993 to 2012, reaching an all-time high of 7.6% in December of 1994 and a record low of -6.3% in March of 2009 (StatsSA, 2002, 2012). During the third quarter of 2017, the GDP was 2%, and it decreased to -1.4% during the fourth quarter of 2019 (StatsSA, 2017, 2020). Furthermore, almost half (49.2%) of the South African adult population were living below the upper-bound poverty line (UBPL) in 2019 (StasSA, 2019). The poverty situation will worsen due to the negative impact of the Covid-19 pandemic as more people continue to lose jobs.

Consequently, the South Africa government has acknowledged the critical role that the small business sector plays in addressing some of the challenges facing the country. In 1994, the South African government prioritised the development of the small business by finding innovative ways of stimulating growth and sustainability of the sector (Nieman et al., 2007). The government established the White Paper on the National Strategy for the Development and Promotion of Small Business in 1995. The publication of the 1995 White paper on Small Businesses represented the government's thinking and commitment towards the development of the small business sector (Republic of South Africa, 1995). One of the ob-

## **Awareness of Government Entrepreneurial Support Programmes**

jectives of the White Paper on Small Business Development was to stimulate women entrepreneurship by developing several initiatives to assist women in overcoming some of the obstacles they encounter. The National Act was amended in 2004. The amended Act No. 29 of 2004 emphasised the impediments faced by black entrepreneurs and individuals who were disadvantaged during the apartheid era (Nieman et al., 2007). One of the key objectives of the Act was to design and implement support programmes as well as strengthening the capacity of service providers who support small enterprises (Republic of South Africa, 2004).

In 2014, the government further demonstrated its commitment to place SMMEs at the centre of economic activities by establishing the Ministry of Small Business Development. The mandate of the Department of Small Business Development was to achieve a radical transformation of the economy by developing sustainable and competitive entrepreneurs, small businesses and cooperatives that can contribute to job creation and economic growth (DSBD, 2020). Nevertheless, more than two decades later after the end of the apartheid era, women entrepreneurs are still struggling to establish and operate successful business ventures, despite the efforts from the government of South Africa. When more support is channelled towards supporting women entrepreneurship, a more diversified economy with increased productivity, more job creation, improved standards of living, poverty reduction and economic independence among women is achieved. This makes sense because females constitute a more significant proportion of the population of South Africa compared to males. According to Statistics South Africa's mid-year population estimates of 2019, females constitute approximately 51.2 per cent (about 30 million) of the country's population of 58.78 million (StatsSA, 2019). Therefore, investing in females is crucial to achieving sustainable economic development.

## **The Plight of Women in Developing Countries**

Prior research suggests that the number of women raising families as single parents is rising unabated (Harkness et al., 2012; OECD, 2011). Consistent with this literature, within the South African context, a typical child is raised by their mother in a single-parent home (Holorn & Eddy, 2011). This is reinforced by the fact that 37.9% of children in South African households are female-headed, while 43,1% of the children live only with their mothers (StatsSA, 2018). Some women exercise their democratic right by choosing to be single parents. Similarly, female-headed households are rising due to the increased number of divorce cases (Harkness et al., 2012). For example, in 2017, 25 390 divorces were recorded in South Africa (StatsSA, 2018).

While women in developing countries are increasingly marginalised (Derera, 2015), and constitute a more significant portion of people who are susceptible to poverty (Pines et al., 2010), their entrepreneurial potential is often underestimated. There is a growing perception around the globe that poverty is feminised (Aneke et al., 2017; Derera et al., 2014) as it is believed that poverty tends to affect females more than males (Derera et al., 2015). Surprisingly, the majority of women in developing economies are starting small businesses at a faster rate compared to their counterparts in developed countries (Pines et al., 2010). Since women in developing countries have limited opportunities for survival, their last resort is establishing a small business out of necessity rather than the existence of a business opportunity. Pines et al. (2010) mentioned that motivation for female entrepreneurship is explained in two broad categories, namely necessity (push factors) and opportunity (pull factors). The push factors force people to become entrepreneurs, while the pull factors attract them into entrepreneurship. Still and Walker (2006) concur that women are traditionally likely to be "pushed" rather than "pulled" into entrepreneurship, and this

is mostly the case for women in developing countries (Pines et al., 2010). Given this background, this chapter argued that there is an urgent need to empower women entrepreneurs and develop them into sustainable wealth creators who can make a positive contribution to economic development. Consistent with this conception, Derera et al. (2015) suggested that promoting and supporting women to start small businesses is indeed a means of empowering them and of raising entrepreneurship within an economy. Self-employment empowers women economically, and this increases the scope and role played by women in developing economies.

### **Government Entrepreneurial Support Programmes for Women Entrepreneurs**

The South African government, through the Department of Trade and Industry and the Department of Small Business Development, has shown commitment towards the stimulation of women entrepreneurship. Several government agencies were established for this purpose (e.g. the Small Enterprise Development Agency (SEDA) and Khula Enterprise Finance Limited). The commitment by the government was manifested through several support programmes that were developed to assist women entrepreneurs in this country (O’Neill, 2008). An overview of some of the government support programmes for women in the small business sector is presented in Table 1. This information in the table is not exhaustive, but it gives an idea of the government support for women in the small business sector.

*Table 1. Examples of government and private sector support for women in the small business sector*

<b>Barriers</b>	<b>Support for women entrepreneurs</b>
Access to Finance	The Isivande Women’s Fund (IWF), Women Entrepreneurial Fund (WEF), Business Partners Women in Business Fund, IDF Managers Funding, Enablis Acceleration Fund, The National Empowerment Fund (NEF), ABSA Women Empowerment Fund, The Special Projects and Programmes Unit (SPP), Women in Oil and Energy South Africa (WOESA)
Access to networks	SAWEN (South African Women Entrepreneurs’ Network), TWIB (Technology for Women in Business), SAWIC (South African Women in construction), WOESA (Women in oil and energy sector South Africa), and SAWIMA (South African Women in mining association), Businesswomen’s Association of South Africa, South African Council for Businesswomen (SACBW), Black Business Women’s Association (BBWA), Young Women in Business Network, Businesswomen’s Association (BWA), Women in Business Forum-Durban Chamber of Commerce and Industry, Fine Women Business Network, KZN Women in Business, South African Council for Businesswomen (SACBW), Xtraordinary Women

Source: Own compilation (Crampton, 2019; SME South Africa, 2019; Business Partners, 2015)

Table 1 shows two primary types of support for women entrepreneurs. The support is mainly in the form of financial assistance and networking opportunities. While this could be in line with the needs of women in the small business sector, a well-balanced support structure is most likely to yield better and positive results. The study argues that financial support and networking opportunities on their own are not enough. Entrepreneurial support programmes should be extended to entrepreneurial skills development, mentoring, and ensuring that women entrepreneurs receive preferential treatment when raising startup capital. The table also reveals that women have a few programmes that are designed specifically for them. Yet the burden of entrepreneurial challenges is more substantial for women than men. The fact that women entrepreneurs have programmes that are specifically targeting them implies that they have more programmes at their disposal. This is because women can benefit from the programmes target-

## ***Awareness of Government Entrepreneurial Support Programmes***

ing the entire sector, as well as the gender-specific programmes. If this is true, it supports the fact that gender discrimination plays a significant role in discouraging women from accessing these programmes.

## **Awareness of Entrepreneurial Support Programmes**

There is a shortage of research on awareness and accessibility of government entrepreneurial support programmes, particularly for women entrepreneurs. Although most governments, worldwide, have come up with several initiatives to support the development and sustainability of the small business sector, a more significant proportion of entrepreneurs have not benefitted from these programmes. Goyal and Parkash (2011) suggested that there are gaps in the provision of government entrepreneurial support programmes and entrepreneurs. Derera (2011) agreed that while the support programmes are available to entrepreneurs, there are inefficiencies in the coordination and delivery of the programmes. These inefficiencies in service delivery often discourage entrepreneurs from accessing the programmes. The situation is worse for women entrepreneurs, as only a few of them have benefitted from government support programmes. In the study conducted by Goyal and Parkash (2011), the authors concurred that only a small section of the middle-class women who reside in urban areas in India had benefitted from government-sponsored entrepreneurial programmes. This suggests that these programmes are not reaching women in remote regions of the country.

In an attempt to ensure that women benefit from the programmes, governments, across the world, have introduced gender-sensitive policies that ensure preferential treatment of women in the small business sector. However, only a few women are knowledgeable about these programmes, let alone benefitting from them. Forson (2006) concurred that although there are programmes that are targeting women, these programmes are not explicitly focusing on them. According to Pettersson (2012), the government support programmes targeting entrepreneurs are criticised for placing women in a subordinate position to men, thereby risking sustaining the societal and cultural norms. For the few women entrepreneurs who have tried to access the government support programmes, their experience with the service delivery was unpleasant. Yet, Lee, Sohn and Ju (2011) mentioned that government support processes have the highest effect on improving the satisfaction levels for women entrepreneurs. Goyal and Parkash (2011), therefore, suggested the urgent need to spread awareness of the government entrepreneurial programmes to women who are often excluded from communication channels. The authors further argued that this would enable the women to fully participate in the sector and make a more significant contribution to the economy. Importantly, women entrepreneurs should invest in networking as a way of sharing business information since most of them are not actively involved in such platforms (Verhuel & Thurik, 2001).

## **RESEARCH METHODS**

In line with Molina-Azorín et al. (2012), this study adopted a mixed-method approach, which combined qualitative and quantitative research methods. This is critical because women entrepreneurship represents a complex and heterogeneous group. The study sample consisted of fifty women entrepreneurs and six experts from Pietermaritzburg, South Africa. A snowball approach was used to identify women entrepreneurs while a convenience sampling technique was used for the experts. Snowballing was utilised as it proved to be challenging to identify women entrepreneurs who had specific characteristics and knowledge about this study. Although the database for women entrepreneurship is available in Pietermaritzburg, the

list from Pietermaritzburg Chamber of Commerce is not comprehensive since most women entrepreneurs are not members of this organisation. The women who participated in this study were required to have operated a small business for at least one year. Experts were selected based on them being directly involved in the development of small business for at least five years as either an academic or having been employed at a management level by a government agency that supports the small business sector.

Furthermore, these experts were required to have a postgraduate qualification in the field of entrepreneurship. Two different questionnaires that included similar themes were developed and hand-delivered to women entrepreneurs and experts. The use of two different samples in the same study enabled the researcher to gather diversified views from the respondents. Descriptive statistics and content analysis were used to analyse the data. The following section outlines a brief background of the sample for women entrepreneurs.

## PRESENTATION AND DISCUSSION OF RESULTS

### Background Information of the Respondents

Table 2 summarises information about the sampled women entrepreneurs who were operating small businesses in Pietermaritzburg in South Africa.

*Table 2. Background Information of respondents*

Variable	Frequency	Percentage (%)
<b>Marital status:</b>		
Married	32	64
Divorced	8	16
Widowed	5	10
Single	5	10
<b>Total</b>	<b>50</b>	<b>100</b>
<b>Race:</b>		
Whites	27	54
Blacks	10	20
Indians	10	20
Coloureds	3	6
<b>Total</b>	<b>50</b>	<b>100</b>
<b>Education:</b>		
Post-school qualification	34	68
High school education	13	26
Education below high school	3	6
<b>Total</b>	<b>50</b>	<b>100</b>
<b>Type of industry:</b>		
Retail and Service industry	46	92
Manufacturing, Construction and Engineering	4	8
<b>Total</b>	<b>50</b>	<b>100</b>
<b>Year of business establishment:</b>		
• Businesses established before 1995	10	20
• Businesses established after 1995	40	80
<b>Total</b>	<b>50</b>	<b>100</b>

## **Awareness of Government Entrepreneurial Support Programmes**

*Marital Status:* The majority (64%) of the women were married, 16% were divorced, while the single women and widowed women constituted 10% of the sample each. This implies that 36% of the sample represented female-headed households.

*Age:* Most (58%) of the women entrepreneurs fell between the 30-49 years age category; followed by the age group of 50-59 years, which constituted 24% of the sample. Ten per cent of the women were above the age of 60 years. The age group with the least number of respondents was 20-29 years category which represented 8% of the sample.

*Race:* The majority (54%) of the sampled women entrepreneurs were whites, followed by blacks and Indians who both represented 20% of the sample. Women of colour constituted 6% of the sample. The fact that more than half of the sampled women entrepreneurs were whites justifies why the 1995 White Paper on Small Businesses gives preferential treatment for the empowerment of previously disadvantaged women in South Africa (e.g. blacks, Indians and women of colour). Black women are the most underprivileged group in South Africa (Rudin, 2019), yet they constituted only 20% of the study sample. This implies that the South African government still has a long way towards addressing the imbalances created by the apartheid government.

*Educational:* A more substantial proportion (68%) of the women entrepreneurs had a post-school qualification, while 26% had completed high school education. Six per cent of the women entrepreneurs had not completed high school level of education. From the 68% who had a post-school qualification, 38% had either a certificate or a diploma, while 30% had a bachelor's degree. These women entrepreneurs represented a fairly educated sample. The fact that the majority {94% (68% + 26%)} of the sampled women had achieved either a high school certificate or a post-school qualification is beneficial to the South African economy. Nieman *et al.* (2007) concurred that secondary education increases one's capacity to pursue entrepreneurial activities, while tertiary education increases the durability of entrepreneurial activity.

*Type of industry:* Most (92%) of the women-owned businesses were found in the retail and service industry, while 8% were in manufacturing, construction and engineering. These findings are consistent with Derera *et al.* (2014), who stated that most women-owned businesses are in the retail and service industries.

*Year business establishment:* The majority (80%) of women businesses were established after 1995, while 20% were created before that date.

The following section presents and discusses the empirical findings of the study. The section is organised in this order - awareness of government support programmes, how the women became aware of the programmes, and whether women are benefiting from government support programmes.

## **Awareness of Government support programmes**

The South African government has introduced various programmes to stimulate women entrepreneurship. However, the majority of these women are not aware of these programmes (see Table 3).

The majority (80%) of the women revealed that they were not aware of any government programmes that support women in the small business sector. Twenty per cent of the women were aware of some of the government support programmes that target them. The Chi-square test was used to assess the statistical difference between the expected and the observed score and to determine if the deviation occurred by chance. The following hypotheses were formulated to conduct the Chi-square test (see Table 4).



### Awareness of Government Entrepreneurial Support Programmes

$H_0$ : Women entrepreneurs are aware of the available government support programmes.

$H_1$ : Women entrepreneurs are not aware of the available government support programmes.

*Table 3. Awareness of government support programmes*

Awareness of government support programmes	Frequency	Percentage	Cumulative Percent
Yes	10	20.0	20.0
No	40	80.0	100.0
<b>Total</b>	<b>50</b>	<b>100.0</b>	

*Table 4. The Chi-square test: Awareness of government support programmes*

Awareness of government support programmes	
Chi-square	18.000 <sup>a</sup>
df	1
Asymp. Sig.	.000

The null hypothesis is rejected at 5% significance level ( $\alpha = 0.05$ ), and the alternative hypothesis is accepted. The results showed that the sampled women were not aware of any government initiative that supports women entrepreneurs in the small business sector. These results are consistent with the literature. For example, Goyal and Parkash (2011) agreed that only a few women have benefited from government entrepreneurial support programmes.

The majority of women were not aware of the available government entrepreneurial support programmes, as indicated in Table 3 above. Lack of awareness for these programmes raises to the need for the relevant government departments to intensify their advertising in order to reach out to a broader audience of women. The following insights shared by some of the experts support this:

*Numerous programmes are there to support women entrepreneurs, for example, Preferential Treatment on tenders, SAWEN and even funding for women to start small businesses are available (Expert).*

*The government has created opportunities for women to be part of the small business because there are programmes that have been developed to assist them (Expert).*

The empirical findings confirm that the government has developed support programmes for women entrepreneurs. The lack of awareness by the women suggests that there may be a gap between the formulation and implementation of government entrepreneurial support programmes. The results also indicate a disconnection between the government departments that are responsible for delivering the products and services, and its target market (i.e. women entrepreneurs). These findings concur with Goyal and Parkash (2011), who stated that the relevant government departments should intensify their awareness programmes to reach out to more women. The government, through the department, should communicate their product offering to the women entrepreneurs, including those in remote areas of the country.

## **Awareness of Government Entrepreneurial Support Programmes**

Interestingly, one would ask the question: How were these programmes developed without input from the targeted group? If the targeted audience were involved, the government would have known the appropriate methods of dissemination the information to them. Below is a comment from one entrepreneur who has no clue of the existence of government entrepreneurial support programmes targeting women in the small business sector.

*I have been in business for five years, and I have never received any form of support. I don't even know whether they are willing to assist or not (Entrepreneur)*

These findings are consistent with the views of some of the experts.

*The government initiatives do not address the actual needs of women entrepreneurs... (Expert).*

*Government initiatives are available, but the problem is that they are not based on empirical research (Expert).*

The results may suggest the inability of the government to develop research-based programmes. As a result, the available programmes are failing to meet the actual needs of women entrepreneurs. Forson (2006) concurred that although women are targeted, there is no direct focus on them at all. In this case, the government support programmes are available, but there are no measures that are put in place to ensure that the women are fully benefiting from them. As long as these initiatives are not research-based, the marginalisation of women in the small business sector will continue.

While governments are committed to uplifting women in the small business sector, nations could only benefit fully from this entrepreneurial talent when women are aware of support programmes that are available to them. Women need to be equipped with all the necessary information for them to overcome some of the barriers they encounter in their quest to establish and operate small business ventures. In a similar vein, Goyal & Parkash (2011) argues that there is often a gap between policy formulation and implementation. The support programmes are available, but only a few entrepreneurs are benefiting from them. The following extracts from both entrepreneurs and experts confirm this.

*The government is lacking in monitoring and evaluation of government support programmes (Expert).*

*Most of the government employees dealing with women entrepreneurs are not very incompetent (Expert).*

*The government employees are not equipped to deal with the challenges that women are facing (Entrepreneur).*

*There is no link between departments in terms of support and guidance offered to women who want to establish and grow small businesses (Entrepreneur).*

These narratives demonstrate that programmes are available, but these programmes are not reaching the targeted beneficiaries due to several reasons, such as lack of training of the employees who deliver these programmes to women in the small business sector. The findings may suggest that the government

should prioritise and intensify human capital developed to improve on service delivery. This is consistent with insights from one entrepreneur who commented that:

*Although there are departments like SEDA, IDC, which are ‘theoretically’ there to support women entrepreneurs, the process is so bureaucratic that we miss opportunities in the process of seeking government support (Entrepreneur).*

Bureaucratic processes are often associated with inefficient operational systems. Therefore investing in human capacity development by the government could assist with streamlining of operational processes. Derera (2011) agrees that while the support programmes are available to entrepreneurs, there are inefficiencies in the coordination and delivery of the programmes. These inefficiencies in service delivery often discourage entrepreneurs from benefitting from the programmes as indicated in the quote above that entrepreneurs end up missing business opportunities while seeking government entrepreneurial support. Yet, Lee, Sohn and Ju (2011) state that government support processes have the highest effect on improving the satisfaction levels for women entrepreneurs.

### **Sources of Information About Government Support**

Given that a minority (20%) of women were aware of at least a government programme that supports women entrepreneurs in South Africa, this section focuses on establishing how these women became aware of the programmes. In as much as the government is crucial in spreading information about support programmes, women have a significant role to play in this equation. The government could use media and utilising women forums to inform women about the programme, but women, on the other hand, need to seek for information. In this study, sources of information about support programmes are displayed in Table 5.

*Table 5. Sources of information on government support programmes*

<b>Sources of information about government support programmes<sup>a</sup></b>		<b>Percentage</b>
	Business associates	22.2%
	Relatives / friends	22.2%
	Other women entrepreneurs	22.2%
	Media (press, television, radio)	33.3%
Total		100.0%
a. Dichotomy group tabulated at value 1.		

The empirical results indicate that the majority (33.3%) of women were informed about the government support programmes through the media. The women entrepreneurs who were notified through business associates; relatives and friends; and other women entrepreneurs represented 22.2% each. On a different angle, the results revealed the power of networking as a source of information among women entrepreneurs. Thus, 66.7% of the women entrepreneurs became aware of these programmes through networking either with their business associates, other women entrepreneurs or through relatives and

## **Awareness of Government Entrepreneurial Support Programmes**

friends (22.2% + 22.2% + 22.2%). The implications of these results showed that networking is a powerful tool that could be utilised to spread awareness of government support programmes to women entrepreneurs in South Africa. Nonetheless, research has shown that women entrepreneurs are not actively involved in networking (Verhuel & Thurik, 2001). This implies that women need to be encouraged to build beneficial networking systems if they are to thrive in the small business sector.

## **The Power of Networking**

Developing sound entrepreneurial networks is essential to overcome some of the unique challenges that women entrepreneurs encounter. Roomi *et al.* (2009) support this by pointing out that women entrepreneurs lack useful networking abilities as they fail to convert network opportunities into potential business opportunities. A large body of literature has shown a strong positive association between networking and small business performance (Jenssen & Greve, 2002). Networking provides platforms whereby women could share their experiences, encourage and mentor each other. In South Africa, women business networking forums are available, as indicated in Table 1. The only drawback of such networking forums is that they do not represent the majority of ordinary South African woman who lives in the townships or rural area, for example. Yet, this is the same woman who is suffering from high levels of poverty. Because of this, more networking forums need to be identified as a form of support towards women small business owners. These networking forums could place in non-business settings; such as church conferences and any other women gatherings. Spreading awareness through church conferences is a cheaper option of spreading awareness of government support programmes as compared to organising formal business conferences, breakfast meetings, etc. Another benefit of such settings is that there is a high possibility that women from all levels of the society are represented, unlike the formal business conferences whereby only women from middle to upper class are represented. Once the awareness programmes are appropriately managed, other barriers to women entrepreneurship are indirectly solved. For example, women are equipped with knowledge about how they could finance their businesses, where they could be trained, to mention just a few.

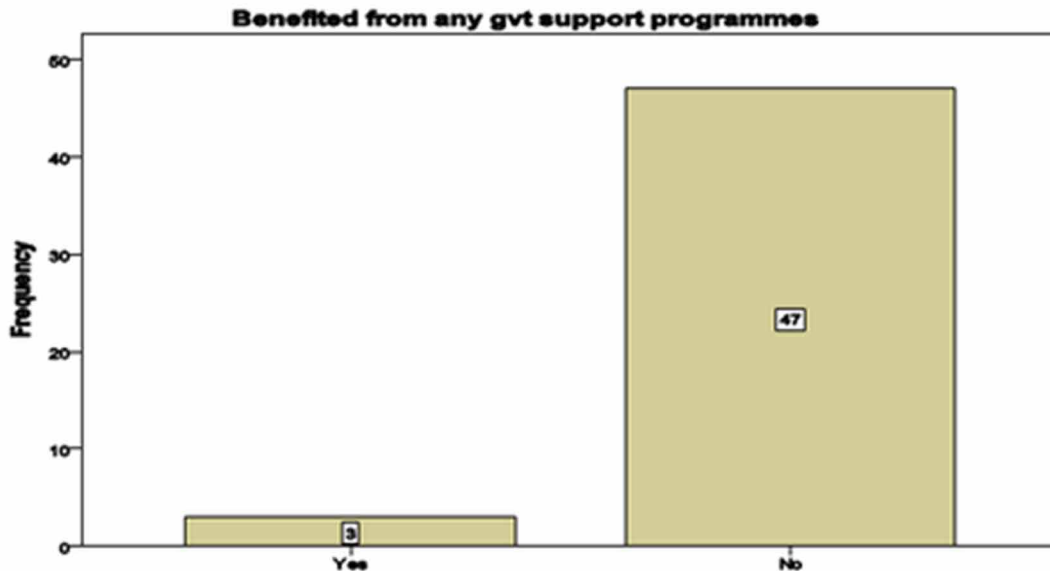
Additionally, women entrepreneurs are bound to motivate each through sharing their entrepreneurial experience; hence mentorship would take place. The bottom line is, there is the power that is inherent in networking is has a high possibility of moving women entrepreneurship to a higher level because women are likely to benefit from programmes that they are knowledgeable about. Having discussed the sources of information that was used by 20% of the women entrepreneurs, the next logical step was to establish whether the sampled women entrepreneurs benefited from any of the government support programmes.

## **Benefiting From Government Support Programmes**

The empirical findings revealed that the most (94%) of the sampled women entrepreneurs did not benefit from any form of government support; only 6% of the sampled women entrepreneurs benefited from government support. The results are displayed in Figure 1.

The racial composition of the three women were; two whites and one black woman. The form of support that was received by the three women entrepreneurs was as follows; the first entrepreneur received startup capital, the second entrepreneur received training, and the last entrepreneurs received business advice. The results indicated that women entrepreneurs are not benefiting from government support programmes. This situation is disturbing because the government has shown commitment towards the

Figure 1.



development of women entrepreneurship in this country by introducing several programmes that could unleash the potential hidden in women entrepreneurship. The fact that only three (3) women benefited from government support programmes do not paint a good picture of the implementation phase of government support programmes. Yet, the government is willing to provide support. This is consistent with another expert who has this to say:

*Although the government is trying; it requires a combined effort from the government and women in the small business sector.*

This statement implies that both the government and the women play a crucial role in making the government support programmes a success. These findings are consistent with previous studies that stated that only a few women have benefitted from government support programmes (Forson 2006; Derera, 2011; Goyal & Parkash, 2011). While various initiatives were introduced, women should actively search for information. On the other hand, the government should formulate new strategies on how best these programmes could reach the targeted population. This could be achieved by carrying out more research that is geared towards having a deeper understanding of the targeted group in terms of their characteristics and expectations. Hence, the implementation phase could be tailor-made according to the nature of women entrepreneurs who live in South Africa. Additionally, more research is required, which addresses how more women could benefit from the available support programmes.

## **CONCLUSION**

The results of this study indicate that women entrepreneurs are not aware of government support programmes that are targeting them. These results also indicate that networking played a major role in minority entrepreneurs who were aware of the existence of government support programmes. This implies that more networking forums need to be encouraged at every level with the society. Another significant outcome of this study is that women entrepreneurs are not benefiting from government support programmes. There is a need for the government to improve the delivery and implementation phase of these programmes. The South African government needs to understand the nexus between the communication of its programmes and how they are accessible to women entrepreneurs. These results also suggest that there is a need to understand why this gap exists. The limitation of the research study is that it focused only on government support programmes that were put in place to stimulate women entrepreneurship in South Africa. The initiatives from the other sectors of the economy (e.g. the private sector and the Non-governmental Organisations (NGOs) were excluded from the study. Even though they are indeed playing a significant role in the development and empowerment of women entrepreneurs worldwide. The other limitation is that due to resource constraints, primary data was gathered in Pietermaritzburg in KwaZulu Natal. Hence the results cannot be generalised on the population at large as they do not represent the collective views of women entrepreneurship in South Africa. Although the data used was collected in 2009, the research provides a basis for future research on this subject. What is required is for further research to be conducted to establish whether the level of awareness of entrepreneurial initiatives has improved among women. Future research could focus on Pietermaritzburg (study area) and another part of South Africa, with a possibility of comparing the results. However, this study provides an insight into women entrepreneurship in South Africa. The results could assist in developing ways in which women entrepreneurship could be stimulated to reach another level, whereby women take an active role in solving socio, political as well as economic challenges that most African countries are confronted with. This study is crucial in that it encourages future debate on how policymakers and researchers in Africa could find ways of encouraging more women to venture into small businesses.

## **REFERENCES**

- Al-Lamky, A. (2007). Feminising Leadership in Arab Societies: The Perspectives of Omani Female Leaders. *Women in Management Review*, 22(1), 49–67. doi:10.1108/09649420710726229
- Aneke, E. O., Derera, E., & Bomani, M. (2017). An exploratory study of challenges faced by women entrepreneurs in the construction industry in South Africa. *International Journal of Business and Management Studies*, 9(2), 35–51.
- Baden, S. (1999). *Meeting on Women and Political Participation: 21<sup>st</sup> Century Challenge United Nations Development Programme 24-26 March 1999, New Delhi, India. Background Paper, No. 1. 2, Gender, Governance and the 'Feminisation of Poverty.* <http://mirror.undp.org/magnet/events/gender/india/Badefeb2.htm>
- Boohene, R., Sheridan, A., & Kotey, B. (2008). Gender, personal values, strategies and small business performance. *Equal Opportunities International*, 27(3), 237–257. doi:10.1108/02610150810860075

Business Partners. (2015). *Business Organisations and Associations for Women*. <https://www.business-partners.co.za/entrepreneurs-growth-centre/useful-articles/women-in-business/business-organisations-and-associations-for-women>

Cappellini, B., & Parsons, E. (2014). Constructing the culinary consumer: Transformative and reflective processes in Italian cookbooks. *Consumption Markets & Culture*, 17(1), 71–99. doi:10.1080/10253866.2012.701893

Carter, S., & Shaw, E. (2006). Women's business ownership: Recent research and policy developments. *Report to Small Business Service*. <http://www.berr.gov.uk/files/file38330.pdf>

Chinomona, E., & Maziriri, E. T. (2015). Women in action: Challenges facing women entrepreneurs in the Gauteng Province of South Africa. *International Business & Economics Research Journal*, 14(6), 835–850. doi:10.19030/iber.v14i6.9487

Coleman, S., & Robb, A. (2009). A comparison of new firm financing by gender: Evidence from the Kauffman Firm survey data. *Journal of Small Business Economics*, 1-15. <http://www.springerlink.com/content/t5r386117j311837/fulltext.pdf>

Crampton, N. (2019). *Funding And Financial Assistance For SA Women Entrepreneurs*. <https://www.entrepreneur.com/article/327558>

Datta, P. B., & Gailey, R. (2012). Empowering Women through Social Entrepreneurship: Case Study of a Women's Cooperative in India. *Entrepreneurship Theory and Practice*, 36(3), 569–587. doi:10.1111/j.1540-6520.2012.00505.x

Department of Small Business Development (DSBD). (2020). Republic of South Africa. <http://www.dsbd.gov.za/>

Department of Trade and Industry (DTI). (2012). Republic of South Africa. <http://www.thedti.gov.za/>

Derera, E. (2011). *A review of government initiatives to stimulate women entrepreneurship in South Africa: 1955-2009* [Unpublished Masters dissertation]. University of KwaZulu-Natal, South Africa.

Derera, E. (2015). *Women's economic empowerment and entrepreneurship in agriculture: A case of Mashonaland West Province in Zimbabwe* [Unpublished doctoral dissertation]. University of KwaZulu-Natal, South Africa.

Derera, E., Chitakunye, P., & O'Neill, C. (2014). The impact of gender on startup capital: A case of women entrepreneurs in South Africa. *The Journal of Entrepreneurship*, 23(1), 95–114. doi:10.1177/0971355713513355

Derera, E., Chitakunye, P., O'Neill, C., & Tarkhar-Lail, A. (2014). Gendered lending practices: Enabling South African women entrepreneurs to access startup capital. *Journal of Enterprising Culture*, 22(3), 313–330. doi:10.1142/S0218495814500137

DeVault, M. L. (1991). *Feeding the Family: The Social Organization of Caring as Gendered Work*. University of Chicago Press.

## **Awareness of Government Entrepreneurial Support Programmes**

- Digan, S. P., Sahi, G. K., Mantok, S., & Patel, P. C. (2019). Women's Perceived Empowerment in Entrepreneurial Efforts: The Role of Bricolage and Psychological Capital. *Journal of Small Business Management*, 57(1), 206–229. doi:10.1111/jsbm.12402
- Forson, C. (2006). The strategic framework for women's enterprise: BME women at the margins. *Equal Opportunities International*, 25(6), 418–432. doi:10.1108/02610150610713737
- Francis, D., & Webster, E. (2019). Poverty and inequality in South Africa: Critical reflections. *Development Southern Africa*, 36(6), 788–802. doi:10.1080/0376835X.2019.1666703
- Franck, A. K. (2012). Factors motivating women's informal micro-entrepreneurship: Experiences from Penang, Malaysia. *International Journal of Gender and Entrepreneurship*, 4(1), 65–78. doi:10.1108/17566261211202981
- Garba, A. S. (2011). Stumbling block for women entrepreneurship in Nigeria: How risk attitude and lack of capital mitigates their need for business expansion. *European Journal of Economics, Finance and Administrative Sciences*, 36, 38–49.
- Goyal, M., & Parkash, J. (2011). Women entrepreneurship in India-problems and prospects. *International Journal of Multidisciplinary Research*, 1(5), 195-207.
- Harkness, S., Gregg, P., & MacMillan, L. (2012). *Poverty: The role of institutions, behaviours and culture*. Joseph Rowntree Foundation (JRF) Programme Paper on Poverty. <https://www.jrf.org.uk/sites/files/jrf/poverty-culture-behaviour-full.pdf>
- Hartmann, H., English, A., & Hayes, J. (2010). *Women and Men's Employment and Unemployment in the Great Recession. Briefing Paper #C373*. Institute for Women's Policy Research.
- Holorn, L., & Eddy, G. (2011). Fractured families: A crisis for South Africa. *A research paper by the South African Institute of Race Relations*. <http://www.sairr.org.za/services/publications/occasional-reports/files/first-steps-to-healing-the-south-african-family-final-report-mar-2011.pdf>
- Hossain, A., Naser, K., Zaman, A., & Nuseibeh, R. (2009). Factors influencing women business development in the developing countries: Evidence from Bangladesh. *The International Journal of Organizational Analysis*, 17(3), 202–224. doi:10.1108/19348830910974923
- Jenssen, J. I., & Greve, A. (2002). Does The Degree Of Redundancy in Social Networks Influence the Success of Business Start-Ups? *International Journal of Entrepreneurial Behaviour & Research*, 8(5), 254–267. doi:10.1108/13552550210448357
- Lee, J. (1996). The motivation of women entrepreneurs in Singapore. *Women in Management Review*, 11(2), 18–29. doi:10.1108/09649429610112574
- Madichie, N. O., & Gallant, M. (2012). Broken silence: A commentary on women's entrepreneurship in the United Arab Emirates. *Journal of Entrepreneurship and Innovation*, 13(2), 81–92. doi:10.5367/ije.2012.0071



- Manolova, T. C., Brush, C. G., Edelman, L. F., & Shaver, K. G. (2012). One size does not fit all: Entrepreneurial expectancies and growth intentions of US women and men nascent entrepreneurs. *Entrepreneurship and Regional Development: An International Journal*, 24(1/2), 7–27. doi:10.1080/08985626.2012.637344
- Mathur-Helm, B. (2005). Equal opportunity and affirmative action for South African women: A benefit or barrier? *Women in Management Review*, 20(1), 56–71. doi:10.1108/09649420510579577
- McGowan, P., Redeker, C. L., Cooper, S. Y., & Greenan, K. (2012). Female entrepreneurship and the management of business and domestic roles: Motivations, expectations and realities. *Entrepreneurship and Regional Development*, 24(1/2), 53–72. doi:10.1080/08985626.2012.637351
- Minniti, M., & Arenius, P. (2003, April). Women in entrepreneurship. In *The entrepreneurial advantage of nations: First annual global entrepreneurship symposium* (pp. 1–28). United Nations. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.471.7819&rep=rep1&type=pdf>
- Molina-Azorín, J. F., López-Gamero, M. D., Pereira-Moliner, J., & Pertusa-Ortega, E. M. (2012). Mixed methods studies in entrepreneurship research: Applications and contributions. *Entrepreneurship and Regional Development: An International Journal*, 24(5/6), 425–456. doi:10.1080/08985626.2011.603363
- Mordi, C., Simpson, R., Singh, S., & Okafor, C. (2010). The role of cultural values in understanding the challenges faced by female entrepreneurs in Nigeria. *Gender in Management*, 25(1), 5–21. doi:10.1108/17542411011019904
- Nieman, G., Hough, J., & Nieuwenhuizen, C. (2007). *Entrepreneurship: A South African perspective* (8th ed.). Van Schaik Publishers.
- Nieman, G., & Nieuwenhuizen, C. (2009). *Entrepreneurship: A South African perspective* (2nd ed.). Van Schaik Publishers.
- Nnamdi, M. O., & Gallant, M. (2012). Broken silence: A commentary on women's entrepreneurship in the United Arab Emirates. *International Journal of Entrepreneurship and Innovation*, 13(2), 81–92. doi:10.5367/ijei.2012.0071
- O'Neill, R. C. (2008). Is sufficient attention being given to the development of women entrepreneurs, especially the support of entrepreneurial initiatives emerging from poor people? Dialogue on poverty reduction strategies and interventions, Poverty and Women. *Public Service Commission*, 1, 1–9.
- OECD. (2011). *Families are changing. Doing better for families*. <http://www.oecd.org/els/familiesand-children/47701118.pdf>
- Orhan, M., & Scott, D. (2001). Why women enter into entrepreneurship: An explanatory model. *Women in Management Review*, 16(5), 232–247. doi:10.1108/09649420110395719
- Peterson, R. A., & Altounian, D. (2019). Self-perceived Performance of Female-owned Firms and Male-owned Firms: Insights from Black and Mexican-American Entrepreneurs. In V. L. Crittenden (Ed.), *Go-to-Market Strategies for Women Entrepreneurs* (pp. 95–105). Emerald Publishing Limited., doi:10.1108/978-1-78973-289-420191014

## **Awareness of Government Entrepreneurial Support Programmes**

Pettersson, K. (2012). Support for women's entrepreneurship: A Nordic spectrum. *International Journal of Gender and Entrepreneurship*, 4(1), 4–19. doi:10.1108/17566261211202954

Pines, A. M., Lerner, M., & Schwartz, D. (2010). Gender differences in entrepreneurship: Equality, diversity and inclusion in times of global crisis. *Equality, Diversity and Inclusion*, 29(2), 186–198. doi:10.1108/02610151011024493

Republic of South Africa. (1995). *National strategy for the development and promotion of small business: White Paper*. <https://www.gov.za/documents/national-strategy-development-and-promotion-small-business-white-paper>

Republic of South Africa. (1995). *National strategy for the development and promotion of small business in South Africa*. Government Printer.

Republic of South Africa. (2004). *National Small Business Act, No. 29*. <http://www.info.gov.za/view/DownloadFileAction?id=67967>

Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. (2001). *The Global Entrepreneurship Monitor 2001 Executive Report*. London Business School and Babson College.

Roomi, M. A., Harrison, P., & Beaumont-Kerridge, J. (2009). Women-owned small and medium enterprises in England: Analysis of factors influencing the growth process. *Journal of Small Business and Enterprise Development*, 16(2), 270–288. doi:10.1108/14626000910956056

Rudin, R. (2019, December 1). Analysis of inequality in South Africa remains shallow. *Mail & Guardian*. <https://mg.co.za/article/2019-12-01-00-analysis-of-inequality-in-south-africa-remains-shallow/>

Sadi, M. A., & Al-Ghazali, B. M. (2012). The dynamics of entrepreneurial motivation among women: A comparative study of businesswomen in Saudi Arabia and Bahrain. In *The GCC Economies* (pp. 217–227). Springer. doi:10.1007/978-1-4614-1611-1\_18

Santos, F. J., Roomi, M. A., & Liñán, F. (2016). About gender differences and the social environment in the development of entrepreneurial intentions. *Journal of Small Business Management*, 54(1), 49–66. doi:10.1111/jsbm.12129

Scott, L., Dolan, C., Johnstone-Louis, M., Sugden, K., & Wu, M. (2012). Enterprise and Inequality: A Study of Avon in South Africa. *Entrepreneurship Theory and Practice*, 36(3), 543–568. doi:10.1111/j.1540-6520.2012.00507.x

Singh, G., & Belwal, R. (2008). Entrepreneurship and SMEs in Ethiopia: Evaluating the role, prospects and problems faced by women in this emergent sector. *Gender in Management*, 23(2), 120–136. doi:10.1108/17542410810858321

South Africa, S. M. E. (2019, August 26). *Where to Access Funding for Women-Owned Businesses in South Africa*. Retrieved from <https://smesouthafrica.co.za/where-to-access-funding-for-women-owned-businesses-in-south-africa/>

Statistics South Africa. (2002). *Gross Domestic Products*. <http://www.statssa.gov.za/publications/P0441/P04411stQuarter2002.pdf>

## Awareness of Government Entrepreneurial Support Programmes

- Statistics South Africa. (2012). *Gross Domestic Products*. <http://www.statssa.gov.za/publications/P0441/P04413rdQuarter2012.pdf>
- Statistics South Africa. (2015). *Unemployment increases in the third quarter of 2015*. <http://www.statssa.gov.za/?p=5681>
- Statistics South Africa. (2017). *GDP in the third quarter of 2017 grew by 2,0%*. <http://www.statssa.gov.za/?p=10775>
- Statistics South Africa. (2018). *General Household Survey, 2018*. <http://www.statssa.gov.za/publications/P0318/P03182018.pdf>
- Statistics South Africa. (2019). *Five facts about poverty in South Africa*. <http://www.statssa.gov.za/?p=12075>
- Statistics South Africa. (2019). *Mid-year population estimates, South Africa: 2019*. <https://www.statssa.gov.za/publications/P0302/P03022019.pdf>
- Statistics South Africa. (2019). *Unemployment rises slightly in third quarter of 2019*. <http://www.statssa.gov.za/?p=12689>
- Statistics South Africa. (2019). *Marriages and divorces, 2019*. <http://www.statssa.gov.za/publications/P0307/P03072017.pdf>
- Statistics South Africa. (2020). *GDP in the fourth quarter of 2019 decreased by 1,4%*. <http://www.statssa.gov.za/?s=gdp>
- Still, L. V., & Walker, E. A. (2006). The self-employed woman owner and her business: An Australian profile. *Women in Management Review*, 21(4), 294–310. doi:10.1108/09649420610666597
- Thierry, A. R. (2007). The elephant in the room: Gender and export-led poverty reduction. *Management Decision*, 45(8), 1359–1378. doi:10.1108/00251740710819087
- Tillmar, M. (2007). Gendered small-business assistance: Lessons from a Swedish project. *Journal of European Industrial Training*, 31(2), 84–99. doi:10.1108/03090590710734327
- Todaro, M. P., & Smith, S. C. (2011). *Economic Development* (11th ed.). Pearson Education Limited.
- Treanor, L., & Henry, C. (2010). Gender in campus incubation: Evidence from Ireland. *International Journal of Gender and Entrepreneurship*, 2(2), 130–149. doi:10.1108/17566261011051008
- UNESCO. (2018). *The Global Alliance for Literacy*. <https://uil.unesco.org/literacy/global-alliance>
- United Nations. (2019). *World Economic Situation and Prospects: October 2019 Briefing, No. 131*. <https://www.un.org/development/desa/dpad/publication/world-economic-situation-and-prospects-october-2019-briefing-no-131/>
- Verhuel, I., & Thurik, R. (2001). Startup capital: Does gender matter? *Small Business Economics*, 20(4), 443–476.
- Wittenberg, M., & Leibbrandt, M. (2017). Measuring inequality by asset indices: A general approach with application to South Africa. *Review of Income and Wealth*, 63(4), 706–730. doi:10.1111/roiw.12286

## Chapter 13

# Social Entrepreneurship and Related Concepts: The Path of Opportunity to Foster New Ventures

**Cristina López-Cózar-Navarro**

*Universidad Politécnica de Madrid, Spain*

**Tiziana Priede-Bergamini**

*Universidad Europea de Madrid, Spain*

### **ABSTRACT**

*In the past few decades, a new way of responding to social and environmental problems has emerged: the social entrepreneurship. It is presented as a special type of venture, in which the creation of social value prevails over the maximization of profits. Thus, the main objective of these types of ventures is to serve the community and to search for a positive social change. In this chapter, in addition to presenting the concept of social entrepreneurship and its various approaches within the so-called third sector and the emergent fourth sector, the main sources of funding that can be used by social entrepreneurs are also presented, especially business angels and crowdfunding, are detailed. New paradigms such as the collaborative economy and the circular economy are also addressed within social economy, highlighting the relationship with social entrepreneurship and the path of opportunity to foster new ventures in these fields.*

### **INTRODUCTION**

Given the current economic climate, it is increasingly difficult for governments to supply the goods and services of so-called welfare state, and generally to serve a society that gradually demands more support, thereby increasing public spending. In this context, the social enterprise emerges as an organization capable of providing innovative and efficient solutions to social and environmental problems, as a starting point for the creation and consolidation of a more sustainable and balanced social and

DOI: 10.4018/978-1-7998-4826-4.ch013

economic order. Due to the growth of social enterprises around the world in many different sectors of the economy, research and article publication has grown substantially in recent years (Zahra & Wright, 2016; Carmona et al., 2018).

The social entrepreneur, by generating ideas and investing resources, effort and personal commitment, can find solutions to issues such as: fair access to housing, inclusion of vulnerable groups, equal access to employment and training, managing the dependence, etc. Thus, social enterprises allow a different form of development; this is, innovative, inclusive and sustainable; highly necessary for today's global market. In this economic context, the role of these types of businesses is growing, even considered by the European Commission of great importance, which has led to the implementation of many initiatives and research projects, offering different ways of development. In this regard, the European Commission published in 2011 the Social Business Initiative (SBI), in which eleven key actions to promote the development of social enterprises are presented, grouped around three main intentions: to increase the visibility of social entrepreneurship, to improve the legal environment and to facilitate access to financing (European Commission [COM], 2011).

Although, the visibility of the social enterprise across Europe has risen and there is an honest interest in its development, there is, however, still much work to do to improve awareness, recognition and understanding of its models and value creation. From the European Union it is emphasized that citizens, civil society and social enterprises must be at the heart of European strategies to promote social cohesion, social inclusion and well-being (EESC, 2014). Indeed, recently, the Commission has also developed a five-pillar strategy intended to increased access to funding and to markets, better framework conditions, foster social innovation and internationalization issues (European Commission [COM], 2020).

The issue is clearly of some importance, as these social entrepreneurship ventures may vary in their business models, ownership structures, legal forms and financing (Zahra & Wright, 2016); it is therefore very appropriate to expand the existing knowledge in order to contribute to a better understanding of the concept and to delve into the differentiating aspects of this particular type of organization. Certainly, we consider this work particularly timely, because the current trend in the majority of economies is conceding greater importance to the social economy sector. Thus different countries are developing initiatives in terms of legal forms, new financing sources and other issues to foster the development of new ventures of social entrepreneurship.

The objectives of this chapter are:

- To know the dimensions of the third sector as a framework for social entrepreneurship.
- To present the new paradigms related to the social economy.
- To understand the concept of social entrepreneurship and social enterprise.
- To identify the financial alternatives available for nascent social entrepreneurs.
- To understand the relationship between social enterprise and corporate social responsibility.

To achieve these objectives, the chapter is organized as follows: first, the concept of the third sector is presented, distinguishing between the different approaches according to the entities that comprise it and showing the new notions related to the concept. Next, the basis of social entrepreneurship and social enterprise are presented; the financial frameworks are exposed, as well as its relation to corporate social responsibility (CSR). We finish the chapter including solutions and recommendations, future research directions and the main conclusions.

## **THE THIRD SECTOR**

Throughout history, in all ages and cultures there have been individuals and organizations who have acted on behalf of vulnerable and disadvantaged groups. Directing solidarity, altruism and own and other efforts, they have identified the needs of these groups and have carried out various actions to address them. However, from the last third of the twentieth century a significant growth about this issue has been developed worldwide and is shaping as an important part of the economic system. Therefore, is a matter of increasing attention by both politicians and academic literature (Monzón, 2006; Defourny, Hulgård & Pestoff, 2014; Salamon & Sokolowsky, 2016; Defourny & Nyssens, 2017).

Social entrepreneurship can be developed in the third, commercial and government sectors. Indeed, most definitions in the academic literature, focus largely on social entrepreneurship within the non-profit and business sectors (Austin, Stevenson & Wei-Skillern, 2006). Nevertheless, it is certainly a new concept different from classical business and traditional non-profit activity, linking the social aim with a market focus and following standards of financial and economic performance (Galera & Borzaga, 2009; Defourny et al., 2014).

The term third sector comes from the reference to the other two institutional sectors of the economy: the public sector and the private sector. Hence, it is presented as an option other than public bodies and traditional capitalist enterprises, in order to meet needs or fill gaps that neither others can address, or do it poorly (Monzón & Chaves, 2008).

From this general concept, it is possible to distinguish different approaches. Following Monzón (2006), Sajardo & Chaves (2006), Monzón & Chaves (2008) and Chaves & Monzón (2018), in this section the main features of each of these perspectives are set, noting the similarities and differences between them.

### **Non-Profit Approach**

The non-profit approach of Anglo-Saxon origin, according to which third sector organizations are those that meet the following characteristics (Salamon & Anheier, 1992).

- Private organizations (although they may have public funding).
- Formal structure, i.e. they must have some degree of institutionalization.
- Autonomous and self-government; that is, these entities have their own governing bodies and are not controlled by external entities.
- With job and other voluntary resources.
- Entities that are subject to the principle of non-distribution of profits among its members.
- Not focused on market competition.

Under this approach, the non-profit entities have a main social purpose and in any case the profit is going to be distributed between the people who is controlling the business; instead is intended precisely to fulfill its social aim or to help people -which cannot exercise any control over the organization-. It is based on philanthropic and charitable traditions, and the most representative entities of the same are foundations and charities.

## **Social Economy Approach**

The focus of the social economy, with a French origin, has also spread to other European countries, including Belgium, Portugal and Spain, as well as Latin America. It can be said that emerges during the late 70s of the last century when the so-called *Comité nacional de liaison des activités coopératives, mutuelles et associatives*<sup>1</sup> (CNLAMCA) defines the social economy as a set of entities outside the public sector, with democratic management, and with a special regime of property and distribution of profits. Since then, there have been various efforts to make a conceptual delimitation of the social economy. Note the wide definition proposed by Barea (1990, p. 110), according to which the social economy “includes companies operating in the market in order to produce, secure, finance or distribute goods or services, but in which the profit distribution is not directly related to the capital contributed by each member and the decision making process is not taking into account the capital of each partner; indeed, when making decisions the weight is the same for everyone, regardless of the contributed capital”

Thereafter the European Social and Economic Committee<sup>2</sup> (ESEC), in its report on the social economy in the EU, proposes a similar definition: “the set of private, formally-organized enterprises, with autonomy of decision and freedom of membership, created to meet their members’ needs through the market by producing goods and providing services, insurance and finance, where decision-making and any distribution of profits or surpluses among the members are not directly linked to the capital or fees contributed by each member, each of whom has one vote, or at all events take place through democratic and participative decision-making processes. The social economy also includes private, formally organized organizations with autonomy of decision and freedom of membership that produce non-market services for households and whose surpluses, if any, cannot be appropriated by the economic agents that create, control or finance them” (Monzón & Chaves, 2012, p. 22).

So, according to the above definitions, a broad understanding of the third sector arises and are considered social economy entities those meeting the following principles

- Private organizations with a legal form.
- Democratic. In the decision-making process the people and their work contributions and / or services provided, are prioritized over their contribution to the equity.
- Autonomous and self-government; that is, these entities have their own governing bodies and are not controlled by external entities.
- Freedom of membership.
- They can distribute profits, although not linked to the share capital. This is, the distribution of the results obtained by the economic activity is carried out based on work performed or the services provided by partners or by its members and, where appropriate, the application to its social order.
- They develop a market-oriented economic activity, in order to meet the needs of its members and the society.

Therefore, the social economy includes not only non-profit entities, legally made up of associations and foundations, but also other commercial entities market-oriented, such as cooperatives, mutual entities, etc. Thus, the term social economy is broader in its conception and frames to a wide variety of organizations created with the aim of responding to the shared needs of certain social groups. It includes entities with various legal forms, which give primacy to the people and the social objective over the equity contributed, both in management and decision-making.

## ***Social Entrepreneurship and Related Concepts***

There are differences between the nonprofit approach and the social economy, among which it can be highlighted the market orientation and the possibility of profit distribution (although with limits). Indeed, for the non-profit approach the entities are not focused at all on market competition, while for the social economy the entities are developing a market-oriented economic activity. Moreover, the requirement of non-distribution of profits in the non-profit approach is considered by diverse authors as too strict and restrictive and would not allow to include within the social economy organizations such as cooperatives. For this reason, the focus of the social economy is broader than the non-profit approach, including more types of entities, and is considered superior to better answer today society's needs.

### **The Solidarity Economy Approach**

The solidarity economy approach, also originated in France, during the 80s of the last centuries and is based on the idea that the economy has a plural nature, and hence should not be reduced strictly to monetary issues and trade. Is clear in its ambition to strengthen cooperation and solidarity among different agents, generally on a voluntary and reciprocity basis This perspective includes a set of organizations, with different forms, performances and economic activities, which pursue social utility in favor of disadvantaged groups; as its name suggests, the common element is solidarity.

It is proposed as a combination of voluntary citizen participation, collaboration and public support, and as such is articulated on the following areas:

- Fair trade
- Solidarity finance.
- Local Initiatives.
- Non-monetize exchange.
- Local exchange trade systems (LETS).

In this approach converge the market economy, the non-market economy and the non-monetary economy. Therefore, there are involved organizations operating in the market selling goods and services; entities that perform functions that are traditionally assigned to the public sector and collaborate on support from public grants and donations; as well as various forms of self-production and mutual exchange between individuals. In short, the main objective is the creation of synergies between different players such as governments, private enterprises, local authorities, citizens, etc. offering new services and, at the same time, creating workplaces. For example, the associations for the development of proximity services in France which join local communities, organizations of social housing and inhabitants to manage their territory (Moulaert & Ailenei, 2005).

### **The Economy for the Common Good Approach**

The model called Economy for the Common Good (ECG) has recently developed in Europe. This wide approach aims to develop a new economic, political and social order, with the intention of building -from the ground- a sustainable and more balanced society. The first ideas associated with this new trend appeared in Austria developed by Christian Felber. It is based on the belief that the economy must be at the service of citizens and not the opposite, and consistent with the values and objectives contained in most countries' Constitutions. Since the beginning, the movement has undergone significant develop-



ment in several European countries, with the support of individuals, companies and organizations that back the initiative in different ways.

The ECG is an alternative to existing models: the free market economy and the centrally planned economy. Unlike these traditional economic models, the ECG places the human being and any entity associated with interpersonal relationships, in the center of economic activity, achieving this way the common good. It is an alternative system built on widely accepted values such as equality, justice, solidarity and sustainability, among others; through which it intends to initiate an economic, political and social change that must be set as pattern of behavior towards a better future. Therefore, following Felber (2012), the ECG is a holistic model, which may be a new option over the existing socio-economic systems, understood as an inspiring force for a real global change.

In the same line, and based on the principles established in its conception, the Association for the Promotion of the Economy for the Common Good (2016) also considers the ECG as a catalyst for change through this threefold perspective: economy, politics and society.

- From an economic point of view, the movement develops an alternative appropriate to all business organizations regardless of their characteristics, size or legal status. The economic purpose and the evaluation of success of these organizations must be based and defined on the values actually aimed at achieving the common good, and must be measured not by classical financial reports and purely economic criteria, but through new tools applied in both, companies and the global economy.
- From a political perspective, legislative changes arise willing to facilitate an equitable life and ensure the basic needs of people and respect for all living beings.
- In the social sphere, the movement aims to create general awareness and motivate many people and organizations as possible, through a joint action towards the common good.

Thus, the goal of the ECG is to provide better living conditions for all inhabitants of the planet, based on a social, political and economic system, mainly focused on achieving an overall profit. In this way, human dignity, equity, solidarity, ecological sustainability, social justice and democratic participation are considered inherently linked to the movement values and are the basis on which to build the change to achieve that objective.

Facing this new challenge, social entrepreneurship finds an appropriate framework for development, since these entrepreneurs are the protagonists of a new market economy and a different way of doing business, focusing on growth and prosperity, but at the same time creating social value.

## **THE NEW PARADIGMS**

During the 21st century, and especially motivated by the serious financial crisis of 2008, a wave of concepts related to the social economy have emerged, such as the collaborative economy and the circular economy. These new trends have demonstrated the important role of the social economy sector to foster sustainable growth, to open new employment fields, and to satisfy the current consumer's needs (Monzón & Chaves, 2017).

## **The Collaborative Economy**

While the idea of sharing resources is not new at all, the high costs of information and coordination caused it to be a practice among few participants and at a local level. However, the development of the internet has favored the emergence of platforms that minimize these costs, allowing millions of users to connect in different countries of the world (Sundararajan, 2016). Thus, the collaborative economy refers to the new production and consumption systems that have emerged due to the new possibilities offered by technological advances which allow the exchange and sharing of goods and services.

In the year 2016, the European Commission defines the new concept as “business models where activities are facilitated by online platforms that create an open marketplace for the temporary use of goods or services” (European Commission [COM], 2016, p.3). The Commission itself notes that collaborative economy transactions can be done for profit or not for profit; products are often provided by private individuals and distinguishes three types of actors: service providers, users of these services and intermediaries, who, through online platforms, connect providers with users and facilitate transactions between them (European Commission [COM], 2016).

The Commission also notes that there is no universally accepted definition of the collaborative economy, which is also referred to by a range of synonyms such as the *sharing economy*, *peer-to-peer economy* or *demand economy*; although, the European institutions have opted for the term of the collaborative economy (Chaves & Monzón, 2018). Nevertheless, most definitions include some or all the following elements: online platforms, temporary usage, peer-to-peer (consumer-to-consumer) relations, and exchange of goods or services.

Furthermore, the European Economic and Social Committee (EESC), in its 2016 exploratory opinion on the “Sharing economy and self-regulation”, shows the growing importance of collaborative practices, which contribute extensively to worldwide economic production, job and wealth creation, and emphasizes their social and environmental dimension. However, the EESC also points out that the cooperatives, the mutual societies, the social entrepreneurship, the functional economy (linked to the circular economy), and the charitable activities are excluded from the collaborative concept.

## **The Circular Economy**

For some years now, the end of the linear productive model and the need to change towards a new, more sustainable model is discussed. In fact, the current production system is based on the extraction of resources, manufacturing by companies, use by consumers and disposal, in most cases becoming pollutants. In addition, negative effects such as the emission of harmful gases or excessive energy consumption in the extraction, manufacturing and transport of materials and products, are also generated in all phases of the process.

The problem with this linear system is that it is not sustainable. Indeed, natural resources are consumed at a fast pace without the possibility or time for them to regenerate. These resources, which are already beginning to run out alarmingly, are becoming increasingly fast waste; although in some cases they are recycled and can return to the production process, in most cases it is not possible or not profitable do it. It seems obvious that the time has come to think of a more adequate use of resources and energy, taking advantage of the so-called circular economy (Ellen MacArthur Foundation, 2015; Geissdoerfer, Savaget, Bocken, & Hultink, 2017; Monzón & Chaves, 2017).

There has been discussion about the issue since the last century (Perce & Turner, 1989), but this new paradigm has acquired - in recent years - more importance in all areas, both in academia as well as in the economic, political and social fields, due to its interest and relevance (Ellen MacArthur and McKinsey Foundation, 2015; Kirchherr, Reike & Hekkert, 2017). Furthermore, in the past few years, the Ellen MacArthur Foundation has played a very important role placing the circular economy on the European Commission's agenda.

Thus, the European Commission has taken this concept into consideration and in 2015 developed a work plan to activate the transition to the circular economy, based on a productive system in which resources, materials and products are maintained as possible within the business cycle and waste is minimized. This transformation has been conceived as a great opportunity to generate competitive advantages and promote a truly sustainable and inclusive economic growth in Europe (European Commission [COM], 2015). The action plan set 54 specific measures to move towards this objective by working in the investment of innovative projects, in the design and processes of production, consumption and waste management; as well as the promotion of the cooperation of all the agents interested and involved in the transition to a circular economy: member states, research centers, local communities, citizens, companies, etc.

Very recently, the European Commission has published a report assessing the progress of this transition plan towards the circular economy, confirming that the planned actions have been completed almost entirely, although the work will continue in the future (European Commission [COM], 2019). Therefore, this new paradigm has become a relevant and irreversible trend today; although there is increasing awareness of its benefits, there is still a long way to go, both in Europe and in the rest of the world, involving all the parties responsible for the process to effectively close the loop.

The advance towards this new circular economy has also demonstrated a path for nascent business models (repair, reuse and recycle) meaning the creation of new activities and jobs. In this sense, the social economy organizations, specially the social enterprises, have a great deal of opportunities to open new markets, allowing for economic, social and environmental growth (Monzón & Chaves, 2017).

## **The Emerging Fourth Sector**

The fourth sector is a very interesting concept also developed in 21<sup>st</sup> century as an evolution of the private first sector, the public second sector and the social third sector; creating an intersection where the organizations address social and environmental challenges while, at the same time, provide prosperity to society and not just economic results. This idea was first introduced by the Fourth Sector Network (FSN) in 1998, when the Concept Working Group was created to study and develop this new environment based on a broad-based research. In 2009 the Emerging Fourth Sector Report was published in collaboration with the Aspen Institute and the W.K. Kellogg Foundation (FSN, 2009). Since then, the FSN has been working to expand the network and create solid infrastructures to support organizations and individuals whose work contribute to the development of this sector.

In the past two decades the environment has experienced rapid change due to the globalization, the speed of information and the development of new technologies; individuals are better informed and ready to exert their values on the organizations they are related to as stakeholders. On the other hand, these same individuals develop a growing concern for the problems that plague the planet, as is the case of social inequalities or the sensitive environmental issues. To face these problems, high doses of innovation, new ways of thinking and dealing with problems are needed, as well as new business models and organizational designs that allow for long-term well-being.

## ***Social Entrepreneurship and Related Concepts***

Hence, new organizations have emerged with great potential to generate economic, but also social and environmental benefits and the boundaries among the traditional sectors have begun to change. For example, the for-profits organizations in the first sector have increased their interest for social and environmental issues as a business strategy which has become a global trend, the generalization of corporate social responsibility is a good example of this. At the same time, state owned organizations in the second sector and NGOs in the third sector, have become more business oriented, adopting strategies traditionally reserved for lucrative business.

If the main source of income of the organization is related to its main objective, the basis on which the emerging fourth sector has been created can be learned. In the private sector the primary revenue are the business profits and the primary purpose is the private interest. In the state-owned sector the primary revenue are the taxes while the main purpose is the general interest. In the third sector, the primary revenue are donations and grants, and the interest is also general. In the new fourth sector the primary revenue of the organizations are revenues while the primary purpose is not the private interest but the common good or general interest; the social enterprise, that we will approach next, is a good example for this sector (FSN, 2009; Jiménez Escobar & Morales Gutiérrez, 2011; Rubio-Mozos, García-Muiña, & Fuentes-Moraleda, 2019).

## **SOCIAL ENTREPRENEURSHIP AND SOCIAL ENTERPRISE**

Social entrepreneurs identify business opportunities searching to solve social problems such as fair access to housing and water, integration of people at risk of exclusion, or initiatives aimed at reducing ecological damage, developing a business project. Not to be confused with charity or altruism (Kroeger & Weber, 2014), this consists of creating a business model, based on the implementation of an innovative and creative solution, and motivated by a desire to help others and implement positive social change. The social entrepreneur wishes to provide an effective and efficient response in order to create financial, social and environmental wealth (Zahra & Wright, 2016), as a starting point for the creation and strengthening of a consolidated and more equitable social and economic order (Priede, López-Cózar & Rodríguez, 2014).

Austin et al. (2006) offer a comparative analysis of commercial and social entrepreneurship; they define the latter as an innovative, social value creating activity, and identify four key differences between the two concepts: market failure create different opportunities for social and business entrepreneurship; differences in mission; differences in resource mobilization; and differences in performance measurement.

Although there are many approaches to the concept of social enterprise made by different authors, there is no single commonly accepted official definition, nevertheless, there is a consensus on this term designating any business initiative whose objective is to respond to a social problem while pursuing commercial aims (Wry & York, 2017). In this regard, the European Commission, based on the recommendations of the Network of European Research (*Emergence of Social Enterprises in Europe, EMES*)<sup>3</sup>, proposes a description of common existing characteristics to social enterprise in most Member States.

The approach is based in nine indicators to define the social enterprise. Following Defourny and Nyssens (2012) these could be presented in three main groups: economic, social and corporate governance criteria.

- Economic indicators. Social enterprise must produce goods and services for the market and must compete with traditional companies; they must accept financial risk and be self-supporting on its activity; and they must have employees.
- Social indicators. They must have a clear objective for the community; and must be led by citizens from these community; they also present a limited profit distribution in order to avoid the maximization of profits, but instead the creation of social value.
- Corporate Governance indicators. They must have independent management, this means not being part of any other organization, but having their own statutes and developing independently; decision making power is not based on shareholder ownership; they must exercise an open-door democratic management including all stakeholder 's interests.

Thus, in order to develop a general framework to identify them in Europe, they are considered to be active in the market offering goods and services, but are characterized by three main elements: they conduct their business in a socially innovative way, indeed the social objective is their main goal; its benefits are mainly reinvested in the pursue of the social aim; and they have a way of organization and ownership also conditioned by this social mission, based on principles such as democracy, accountability, participation and social justice. Hence, the European Commission is not intending to set a normative definition, but to respect the different economic, political and social choices possible in Europe, and will adopt a more precise definition -if necessary- for regulatory issues in the future (Defourny & Nyssens, 2008, 2012, 2017; Fisac-García, Alves de Carvalho, Moreno-Romero, Moreno-Mateos & Rojas, 2012).

Based on this first approach, the social enterprise, regardless of the legal form, has a strong social purpose beyond the pursuit of wealth for their owners. This objective can be achieved in two ways. First, by providing products and social services to vulnerable people, such as: health care, access to housing, agricultural support, assistance to people with disabilities, etc. Secondly, facilitating professional and social integration of disadvantaged or at risk of exclusion people, through the access to employment and training in the company (Saebi, Foss & Linder, 2019). In sum, social enterprises are neither public or charities, nor traditional capitalist companies, with a clear mission of serving the community, operating in the market through resource extraction and the production of goods or services, as well as offering innovative, effective and efficient solutions to social unresolved issues.

As a result, in view of the arguments described so far, social enterprise are organizations identified within the social economy; as well, they could also be identified as a key elements for the development of the fourth sector representing a wider modern approach of change, which is gaining strength in recent years.

## **FINANCIAL CONTEXT FOR NASCENT SOCIAL ENTREPRENEURSHIP**

The access to financial resources is one of the main problems that nascent social entrepreneurs have to face (Lehner, 2013; Lehner & Nicholls, 2014; López-Cózar & Priede, 2015); actually, literature suggests that social entrepreneurs have a disadvantaged position when searching for funds compared to commercial entrepreneurs (Calic & Mosakowski, 2016). Therefore, in this section the main financial instruments available for them are addressed.

## **Traditional Funding**

In general terms, to start-up a social business an entrepreneur's own savings are the most common sources to financing the new venture. Additionally, funds from family and friends, known as the 3Fs (family, friends and fools) are often employed, being people who, motivated by their personal relationship with the entrepreneur, agree to contribute funds to the project, with the idea of supporting the initiative, rather than achieving high financial returns. This is in line with the theoretical basis of social enterprises in which self-financing is used to fund growth and development, profit-sharing is limited, and earnings are used to enhance the achievement of objectives and create social value (Defourny & Nyssens, 2008, 2017; Priede et al., 2014).

Moreover, nascent social entrepreneurs can also count on funding from other sources, such as state aid in the form of non-repayable grants or aid from private companies. Certain institutions aimed at promoting social entrepreneurship provide funds for the best projects submitted, providing the winners with financial backing, technical support and know-how. In any case, these options are feasible in the early stages of the creation process, but the proceeds are usually quite limited and, therefore, rarely enough to cover the amount of capital necessary for the consolidation of the organization (Lehner, 2013).

Access to credit from private banks is often an unsuitable option, due to the social entrepreneur's inability to provide enough guarantees or collateral. As it is common for financial institutions to ask for personal or real guarantees, emerging enterprises, with limited financial resources and low bargaining power, have less chance of receiving funding. Nevertheless, ethical banks could be a solution to social entrepreneurs -excluded in many cases from the commercial banking system- because ethical financing search to achieve a positive impact in society investing in social and environmental activities (Febea, 2016). In fact, commercial institutions distinguish between "good and bad borrowers" by the use of tools such as credit scoring. In this case, a good borrower is paying back the loan. In contrast, for ethical banking the good borrowers are those searching to create social value. Thus, there is a rising interest to include social issues into the credit score systems, in order to assess the social impact of the project and the commitment of the candidate, and not only its failure probability. In this same line, microfinance institutions or certain credit cooperatives, among others, grant socially responsible loans (Gutiérrez-Nieto, Serrano-Cinca & Camón-Cala, 2016).

## **Alternative Means of Funding**

Most developed countries have articulated measures and instruments that complement traditional financing mechanisms in order to help nascent entrepreneurship with limited possibilities for obtaining resources, such as the social entrepreneurs, both in raising equity or debt.

Mutual guarantee systems in various countries aim to solve the major funding problems for many organizations, helping to solve the existing limitation in obtaining credit due to lack of guarantees or collateral. Therefore, mutual guarantee institutions provide its guarantee against the financial institution when negotiating the allocation of funds. Hence, the conditions obtained by the entrepreneur in credit lines are usually preferred in terms of interest rates and repayment terms, due to the support offered by the guarantee institution. These mechanisms are particularly important in financing new business projects.

Another possible vehicle for financing social enterprises is through venture capital which have become one of the main instruments of corporate finance in advanced economies. This are independent institutions that provide a minority time-limited investment in the equity of a company who may also

participate in management decision-making, at medium or low level of risk. The ultimate goal of the investor is to obtain capital gains from the sale of the stake after the success and development of the funded project. It is a stable source of funding, and therefore is a very interesting tool whatever the life cycle stage of the project. Additionally, these investors can offer expertise, knowledge and professional contacts. However, given that the objective is a return on investment, they are often very demanding in terms of the entrepreneurs' skill levels and expectation of business growth, presenting in many cases difficulties for start-ups with little experience and a social focus (López-Cózar & Priede, 2015). It's very interesting to highlight that recently, venture capital has enter the social entrepreneurship field as social venture capital institutions (SVC), which provides capital to socially oriented enterprises, and are highly concerned with the social evaluation of the candidate, improving the usefulness of this source of financing for these type of entrepreneurship (Gutiérrez-Nieto et al., 2016).

## **Business Angels and Crowdfunding**

In recent years, a range of other financing options for social entrepreneurial start-ups have emerged, such as business angels and crowdfunding, which have grown in use and popularity and are expected to develop even faster in the future, driven by the need of innovative solutions for financing new ventures and the availability of new technologies (Bruton, Khavul, Siegel & Wright, 2015; Block, Colombo, Cumming & Vismara, 2018).

### **Business Angels**

A business angel is an individual investing in a project and contributing with own money and other resources to the progress of a business, especially for small entrepreneurs with an innovative idea. Although the investment could be done at any phase of development of the company, business angels often play a key role at the time of creation, supporting entrepreneurs in the early stages of their projects (Legazkue et al., 2014).

Business angels work in a similar way to venture capital as they contribute with equity, for a limited time and with a minority stake. Its goal is as well not to stay in the company a long period of time, but they invest with the expectation to retire in the medium term obtaining a capital gain, when the project consolidates its market position. In addition to financial resources, these investors also bring their experience, knowledge, time, offer advice and networking. It is interesting to promote and encourage this special source of financing creating channels to enable information and professionalize the activity, to make it more accessible for social entrepreneurs.

While the business angels respond to a heterogeneous profile, and therefore it is difficult to classify, there are some features that are common to all of them and that serve to differentiate them from other types of investors:

- They invest their own money (individuals), unlike venture capital investing other people's money (institutions).
- They make their own investment decisions.
- They search profitability, although it does not have to be the only motivation to invest.

## ***Social Entrepreneurship and Related Concepts***

Likewise, it is also possible to talk about *Angel Networks*, this is, a network of business angels who provide equity and offer management advice together. As a group, they can provide higher amounts of financing than each one separately (Block et al., 2018).

### **Crowdfunding**

Crowdfunding -also known as collective or mass-financing- is a new method for financing a range of initiatives such as businesses, cultural activities, social projects, etc. allowing the founders to request funds from a large number of people each who usually provides a relatively limited sum (Belleflamme, Lambert & Schwienbacher, 2014; Mollick, 2014). This funding model represents a new mechanism of financial disintermediation, which has been developed on the basis of the new currently existing technologies and has experienced significant growth in recent years, adapting very appropriately to the financing needs of the social enterprises.

The practice is based on an open offer, usually raised through a website, allowing individual founders to develop their ideas by requesting funds to a large number of people, providing a very interesting alternative to other traditional sources of financing. A crowdfunding process will normally involve three types of participants: the entrepreneur, the group of individuals who choose to contribute funds to support the initiative, and technological platforms that allow contact between them. The business can be of different dimensions, small, large, artistic, etc.

According to Ahlers, Cumming, Günther & Schweizer (2015) and Block et al. (2018), there are four types of crowdfunding. One type called donation-based crowdfunding, is when participation is motivated by the desire for an expected social outcome, as may be the case in humanitarians or solidarity projects, and participants will not receive a financial or material compensation by the donor and no legally financial obligation is incurred by recipient. The second type is the reward-based crowdfunding that could focus cultural, sport and other projects. Participants have an expectation and will receive a symbolic tangible compensation (not financial), such as a copy of the future product, some sort of promotional gift or public recognition for their contribution. The third type is lending-based crowdfunding may adopt different forms, for example peer-to-peer lending or invoice crowdfunding. In this case, the motivations to invest is basically financial and the crowd receive fixed interest rates. Today this is the type of crowdfunding with the largest total raised amount (Block et al., 2018). Finally, the fourth type is called equity crowdfunding, and is characterized by the involvement of agents with a strict investment behavior and is motivated by the expectation of a financial return. Investors may be offered shares or units of the company funded or a certain percentage of profits. However, in any of its types, even lending-based crowdfunding, there can be platforms that promote, to a greater or lesser extent, a pro-social agenda. Thus, many lenders combine social values with financial objectives; in this regard, Berns, Figueroa-Armijos, da Motta & Dunne (2020) show that when lenders take into consideration the social character of the project, the entrepreneur is likely to receive higher amount of funding.

Table 1 shows the main sources of financing (own and debt) studied throughout this section in order to summarize those that are most suitable for social entrepreneurship.



*Table 1. Main sources of financing for nascent social entrepreneurs (author compiled)*

<b>Source</b>	<b>Definition</b>
Own savings and 3Fs	Funds provided by the entrepreneur/family/friends.
Grants	Public or private non repayable funding.
Ethical Banking	Type of banks search to achieve a positive impact in society investing in social and environmental activities
Social Venture Capital	An institution providing capital to socially oriented enterprises highly concerned with the social evaluation of the candidate
Business angels	An individual investing in a project and contributing with own money and other resources to the progress of a business.
Angel Networks	Network of business angels who provide funding together
Crowdfunding	Request funds from a large number of people each who usually provides a relatively limited sum.
Donation-based crowdfunding	Where no financial or material returns are expected by the donor and no legally binding financial obligation is incurred by recipient.
Reward-based crowdfunding	Where backers have an expectation that recipients will provide a tangible (but non-financial) reward or product in exchange for their contribution.
Lending-based crowdfunding	Where the backers expect fixed interest rates.
Equity-based crowdfunding	The sale of registered security by mostly early-stage firms to investors.

## **CORPORATE SOCIAL RESPONSIBILITY AND SOCIAL ENTREPRENEURSHIP**

A wide range of definitions have been suggested for corporate social responsibility (CSR) since the first approach to the concept proposed by Bowen (1953). Today CSR is the incorporation of environmental and social responsibilities into the business activity balancing them with the economic responsibility to run a firm effectively and profitably.

In relation with social entrepreneurship, both concepts include a philosophy of pursuing positive social change, with the objective of a responsible firm being to understand and limit the social and environmental impacts of their profit-generating activities. In both cases, it is necessary to use a business model based on the market economy; and both concepts are voluntary and inclusive by nature.

Nevertheless, while enterprises with strong and developed responsible management practices pretend to reduce and eliminate the negative footprint that they have created, the objective of social entrepreneurship is to reduce or solve problems created by others. In addition, in both cases, the profitability is a common focus, however, the social entrepreneurship provides primacy to the social objective over other goals and motivations, while traditional companies that develop strategies within the framework of the CSR, are mainly looking for financial aims (Priede, Hilliard & López-Cózar, 2014).

Likewise, another notable difference is the degree of autonomy by those responsible for decision making. This autonomy reflects the perceived importance for each approach -CSR and social enterprise- and its relevance in the strategic process. The higher the value of these activities, the greater autonomy in decision-making. So, while social entrepreneurship projects are carried out mainly by independent entrepreneurs, CSR usually develop within the organization with less autonomy of decision for the responsible managers. There is, therefore, a need to integrate CSR and social enterprise in order achieve blended value (Zahra & Wright, 2016).

## ***Social Entrepreneurship and Related Concepts***

Management research on these issues is growing but remains fragmented. Nevertheless, in recent years a new concept called Positive Social Change (PSC) has emerged for organizations to better understand their external effects, change processes and its further implications. At the same time, it helps to integrate the huge stream of research on CSR and social enterprise. PSC is defined as “the process of transforming patterns of thought, behavior, social relationships, institutions, and social structure to generate beneficial outcomes for individuals, communities, organizations, society, and/or the environment beyond the benefits for the instigators of such transformations. The “beneficial outcomes” of this process are often referred to as (positive) social impact” (Stephan, Patterson, Kelly & Mair, 2016, p. 1252).

PSC is then a new integrated, multilevel, transformative process of change supported by the organization, which is applicable in different issues such as: environment, social and economic inclusion, health and well-being, and civic engagement. PSC is based on an inclusive, open, multi-stakeholder participation in corporate governance and strategic management. The organization is no longer providing solutions and direction but is open to co-develop products and services, and even strategies. In our understanding, this new holistic approach is an interesting starting point for further research in this field and a deeper knowledge on the PSC processes within the organizations.

## **SOLUTIONS AND RECOMMENDATIONS**

Nascent social entrepreneurship is a booming business reality that requires a specific regulation to suit its peculiarities and contribute to enhancing its future development. Consequently, all governments should provide answers to this new reality, offering support and new economic, fiscal, legal and financial frameworks to foster its development which is very important to answer many social needs.

Moreover, since in recent years the interest in social entrepreneurship in most countries has increased, the academic community needs to be concerned with this reality. Thus, a responsible entrepreneurial spirit must be fostered among young people, with the aim of achieving a business network in which new initiatives are capable of ensuring their economic viability and, at the same time, progress towards a greater social integration, a greater environmental respect and a more coherent and balanced growth model.

The general trend of the education systems, including different levels, should be directed towards the training of highly concerned citizens, capable of generating employment and wealth, but also capable of carrying out their activities in an ethical, responsible and sustainable manner. In this line, social entrepreneurship is configured as a feasible and adaptable alternative that must be globally promoted. In brief, we believe that it is necessary a greater institutional support and social recognition in order to encourage new entrepreneurs to start the path towards a more sustainable and responsible economic model.

## **FUTURE RESEARCH DIRECTIONS**

This chapter has studied the concept of social entrepreneurship and social enterprise, and its several approaches within the third sector and the new fourth sector. Innovative paradigms such as the collaborative economy and the circular economy are also addressed within social economy, as well as, its relationship with the traditional concept of CSR. Likewise, the main financial alternatives available for social entrepreneurs are shown.

We limit the analysis to the financial problems, but nascent social entrepreneurs have also other concerns to face, such as the development of a fiscal and legal framework according to specific needs; the lack of professionalization and a low development of management skills; a poor staff training; a low experience in many cases; the absence of processes of innovation and development, as well as scarcity of other resources. We consider that it could also be interesting to perform a review of a set of case studies as well as a quantitative analysis using databases, that include information about the legal form and the use of various sources of financing employed by social entrepreneurs, as well as other interesting aspects mentioned above.

Finally, we also consider interesting to continue to deepen the analysis of the emerging models in order to contribute to their diffusion, because we firmly believe that a new economic approach is possible. The idea of the profitable society that only seeks the maximization of profits for the shareholders has been delegitimized in the last decades, and there is an advance towards more responsible business models from a holistic point of view - economic, social and environmental - so new business opportunities based on social innovation are opened.

## **CONCLUSION**

In recent years has greatly increased the interest in social enterprises, which contribute to a major change by offering innovative solutions to problems affecting society, in line with the objectives set by the Europe 2030 Strategy, marking the road to smart, sustainable and inclusive growth. Facing this new challenge, social entrepreneurship must develop in all economies, since the social enterprise becomes a key agent in the market economy and show a different way of doing business, focusing on growth and profitability but with the aim of achieving social value.

The different approaches when considering the entities that comprise the third sector are non-profit focus, the social economy and the solidarity economy approach. Social enterprises are organizations identified within the social economy; as well, they could also be identified as the cornerstone for the development of the ECG, collaborative economy and circular economy, which represent a wider modern approach of change, which is gaining strength in recent years. Accordingly, the outbreak of the new paradigm of the fourth sector has allowed an evolution of the private first sector, the public second sector and the social third sector; creating an intersection were the organizations address new challenges according to the current needs.

However, despite its importance as agents of change and their growing presence in most economies, nascent social entrepreneurs encounter more difficulties than the traditional ones in the access to financial resources, which do not contemplate the special characteristics of these type of entrepreneurship. In general terms, the more frequently funding sources used by nascent social entrepreneurs are their own resources: entrepreneur's savings for the implementation of the project, and self-support to promote the growth and development. These alternatives are more readily available and considered the most suitable for these types of entrepreneurship, which rarely use other sources of financing, possibly due to their complexity and their lack of knowledge.

Indeed, regarding the use of credit from private banks, it is an option that requires a process of prior negotiation with the entity; because nascent social entrepreneurs do not usually meet the necessary requirements to access such negotiations, it is an option sparingly used by such entrepreneurs. However, it is interesting to highlight the rise of new financial alternatives, especially crowdfunding, which can be

## **Social Entrepreneurship and Related Concepts**

considered a feasible and interesting option. In this sense, the nature of the social enterprise must involve citizens collectively, so a funding source as crowdfunding allows the society to be part of the initiative.

In conclusion, all those business initiatives that place people in their core business, that have a sincere concern for sustainable development, and that plan their activities on the principles of cooperation and solidarity, should be the cornerstone of today's economic systems.

## **REFERENCES**

- Ahlers, G. K., Cumming, D., Günther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice, 39*(4), 955–980. doi:10.1111/etap.12157
- Association for the Promotion of the Economy for the Common Good. (2016). Retrieved February 22, 2016, from <https://www.ecogood.org/>
- Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice, 30*(1), 1–22. doi:10.1111/j.1540-6520.2006.00107.x
- Barea, J. (1990). Concepto y agentes de la economía social. *CIRIEC-ESPAÑA, Revista de Economía Pública, Social y Cooperativa, 8*, 109–117.
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing, 29*(5), 585–609. doi:10.1016/j.jbusvent.2013.07.003
- Berns, J. P., Figueroa-Armijos, M., da Motta Veiga, S. P., & Dunne, T. C. (2020). Dynamics of lending-based prosocial crowdfunding: Using a social responsibility lens. *Journal of Business Ethics, 161*(1), 169–185. doi:10.1007/10551-018-3932-0
- Block, J. H., Colombo, M. G., Cumming, D. J., & Vismara, S. (2018). New players in entrepreneurial finance and why they are there. *Small Business Economics, 50*(2), 239–250. doi:10.1007/11187-016-9826-6
- Bowen, H. R. (1953). *Social Responsibilities of the Businessman*. Harper & Row.
- Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New Financial Alternatives in Seeding Entrepreneurship: Microfinance, Crowdfunding, and Peer-to-Peer Innovations. *Entrepreneurship Theory and Practice, 39*(1), 9–26. doi:10.1111/etap.12143
- Calic, G., & Mosakowski, E. (2016). Kicking Off Social Entrepreneurship: How A Sustainability Orientation Influences Crowdfunding Success. *Journal of Management Studies, 53*(5), 738–767. doi:10.1111/joms.12201
- Carmona, V. C., Dai Pra Martens, C., Dal Belo Carneiro Leão, A. L., Nassif, J., Jorge Nassif, V. M., de Freitas, R., & Mello Rodrigues Mello, H. (2018). Empreendedorismo social: Uma perspectiva bibliométrica na área de administração e negócios. *Estudios Gerenciales, 34*(149), 399–410. doi:10.18046/j.estger.2018.149.2912

- Chaves, R., & Monzón, J. L. (2018). La economía social ante los paradigmas económicos emergentes: Innovación social, economía colaborativa, economía circular, responsabilidad social empresarial, economía del bien común, empresa social y economía solidaria. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 93(93), 5–50. doi:10.7203/CIRIEC-E.93.12901
- Defourny, J., Hulgård, L., & Pestoff, V. (2014). *Social enterprise and the third sector: Changing European landscapes in a comparative perspective*. Routledge. doi:10.4324/9780203487747
- Defourny, J., & Nyssens, M. (2008). Social enterprise in Europe: Recent trends and developments. *Social Enterprise Journal*, 4(3), 202–228. doi:10.1108/17508610810922703
- Defourny, J., & Nyssens, M. (2010). Conceptions of social enterprise and social entrepreneurship in Europe and the United States: Convergences and divergences. *Journal of Social Entrepreneurship*, 1(1), 32–53. doi:10.1080/19420670903442053
- Defourny, J., & Nyssens, M. (2012). El enfoque EMES de la empresa social desde una perspectiva comparada. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 75, 7–34.
- Defourny, J., & Nyssens, M. (2017). Fundamentals for an international typology of social enterprise models. *Voluntas*, 28(6), 2469–2497. doi:10.1007/11266-017-9884-7
- EESC. (2014). *EESC Recommendations on Social Enterprise* (EESC-2014-66-EN).
- EESC. (2016). *Opinion of the European Economic and Social Committee on the ‘Sharing economy and self-regulation’* (exploratory opinion). (2016/C 303/05).
- Ellen MacArthur Foundation. (2015). *Towards a circular economy: business rationale for an accelerated transition*. Retrieved from: [https://www.ellenmacarthurfoundation.org/assets/downloads/TCE\\_EllenMacArthur-Foundation\\_9-Dec-2015.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/TCE_EllenMacArthur-Foundation_9-Dec-2015.pdf)
- Ellen MacArthur Foundation & McKinsey. (2015). *Growth within a circular economy vision for a competitive Europe*. Retrieved from [https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation\\_Growth-Within\\_July15.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation_Growth-Within_July15.pdf)
- European Commission. (2011). Opinion of the European Economic and Social Committee on the ‘Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Social Business Initiative - Creating a favorable climate for social enterprises, key stakeholders in the social economy and innovation’. COM (2011) 682 final (2012/C 229/08). Brussels.
- European Commission. (2015). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Closing the loop - An EU action plan for the Circular Economy. COM (2015) 0614 final. Brussels.
- European Commission. (2016). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A European Agenda for the Collaborative Economy. COM (2016) 356 final. Brussels.

## **Social Entrepreneurship and Related Concepts**

European Commission. (2019). Report from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions on the implementation of the Circular Economy Action Plan. COM (2019) 190 final. Brussels.

European Commission. (2020). *Internal Market, Industry, Entrepreneurship and SMEs. Social economy in the EU*. Retrieved from: [https://ec.europa.eu/growth/sectors/social-economy/enterprises\\_en](https://ec.europa.eu/growth/sectors/social-economy/enterprises_en)

Febea -Fédération Européenne des banques Ethiques et Alternatives. (2016). Retrieved April 18, 2016, from <http://www.febea.org/en>

Felber, C. (2012). *La Economía del Bien Común*. Deusto.

Fisac-García, R., Alves de Carvalho, N., Moreno-Romero, A., Moreno-Mateos, J., & Rojas, A. (2012). Iniciativas emprendedoras de lucha contra problemas sociales: distintas aproximaciones geográficas. In *Proceedings of XVI Congreso de Ingeniería de Organización* (pp. 1065-1072). Vigo, Spain: Asociación para el Desarrollo de la Ingeniería de Organización (ADINGOR).

Fourth Sector Foundation FSN (2009). *The emerging fourth sector. A new sector of organizations at the intersection of public, private and social sectors*. Aspen Institute.

Galera, G., & Borzaga, C. (2009). Social enterprise: An international overview of its conceptual evolution and legal implementation. *Social Enterprise Journal*, 5(3), 210–228. doi:10.1108/17508610911004313

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The Circular Economy—A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757–768. doi:10.1016/j.jclepro.2016.12.048

Gutiérrez-Nieto, B., Serrano-Cinca, C., & Camón-Cala, J. (2016). A credit score system for socially responsible lending. *Journal of Business Ethics*, 133(4), 691–701. doi:10.1007/10551-014-2448-5

Jiménez Escobar, J., & Morales Gutiérrez, A. C. (2011). Social economy and the fourth sector, base and protagonist of social innovation. *CIRIEC-España Revista de Economía Pública. Social y Cooperativa*, 73, 33–60.

Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221–232. doi:10.1016/j.resconrec.2017.09.005

Kroeger, A., & Weber, C. (2014). Developing a conceptual framework for comparing social value creation. *Academy of Management Review*, 39(4), 513–540. doi:10.5465/amr.2012.0344

Legazkue, I., Guerrero, M., González-Pernía, J., Navarro, J., Medina, C., Tamayo, R., & Hoyos, J. (2014). *Global Entrepreneurship Monitor. Informe GEM España 2013*. Ed. Universidad de Cantabria.

Lehner, O. M. (2013). Crowdfunding social ventures: A model and research agenda. *Venture Capital*, 15(4), 289–311. doi:10.1080/13691066.2013.782624

Lehner, O. M., & Nicholls, A. (2014). Social finance and crowdfunding for social enterprises: A public–private case study providing legitimacy and leverage. *Venture Capital*, 16(3), 271–286. doi:10.1080/13691066.2014.925305

- López-Cózar, C., & Priede, T. (2015). Identificación de las principales fuentes de financiación empleadas por la empresa social en la actualidad. *Economía Agraria y Recursos Naturales*, 15(1), 41–59. doi:10.7201/earn.2015.01.03
- Mollick, E. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1–16. doi:10.1016/j.jbusvent.2013.06.005
- Monzón, J. L. (2006). Economía Social y conceptos afines: Fronteras borrosas y ambigüedades conceptuales del Tercer Sector. *CIRIEC-España. C.I.R.I.E.C. España*, 56, 9–24.
- Monzón, J. L., & Chaves, R. (2008). The European social economy: Concept and dimensions of the third sector. *Annals of Public and Cooperative Economics*, 79(3-4), 549–577. doi:10.1111/j.1467-8292.2008.00370.x
- Monzón, J. L., & Chaves, R. (2012). *The Social Economy in the European Union*. European Economic and Social Committee.
- Monzón, J. L., & Chaves, R. (2017). *Recent evolutions of the Social Economy in the European Union*. European Economic and Social Committee, EESC-CIRIEC.
- Moulaert, F., & Ailenei, O. (2005). Social economy, third sector and solidarity relations: A conceptual synthesis from history to present. *Urban Studies (Edinburgh, Scotland)*, 42(11), 2037–2053. doi:10.1080/00420980500279794
- Priede, T., Hilliard, I., & López-Cózar, C. (2014). Parallel Paths—A Comparison of CSR Firms and Social Enterprises. *Journal of US-China Public Administration*, 11(10), 852–861.
- Priede, T., López-Cózar, C., & Rodríguez, Á. (2014). Análisis del marco económico-jurídico específico para los emprendedores sociales. Un estudio comparado entre diversos países. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 80, 4–28.
- Rubio-Mozos, E., García-Muiña, F. E., & Fuentes-Moraleda, L. (2019). Rethinking 21st-Century Businesses: An Approach to Fourth Sector SMEs in Their Transition to a Sustainable Model Committed to SDGs. *Sustainability*, 11(20), 5569. 1-23.
- Saebi, T., Foss, N. J., & Linder, S. (2019). Social entrepreneurship research: Past achievements and future promises. *Journal of Management*, 45(1), 70–95. doi:10.1177/0149206318793196
- Sajardo, A., & Chaves, R. (2006). Balance y tendencias en la investigación sobre Tercer Sector No Lucrativo. Especial referencia al caso español. *CIRIEC-España Revista de Economía Pública. Social y Cooperativa*, 56, 87–116.
- Salamon, L., & Anheier, H. (1992). In search of the non-profit sector. I: The question of definitions. *Voluntas*, 3(2), 125–151. doi:10.1007/BF01397770
- Salamon, L. M., & Sokolowski, S. W. (2016). Beyond nonprofits: Re-conceptualizing the third sector. *Voluntas*, 27(4), 1515–1545. doi:10.1007/11266-016-9726-z

## **Social Entrepreneurship and Related Concepts**

Stephan, U., Patterson, M., Kelly, C., & Mair, J. (2016). Organizations driving positive social change. A review and an integrative framework of change processes. *Journal of Management*, 42(5), 1250–1281. doi:10.1177/0149206316633268

Sundararajan, A. (2016). *The sharing economy: The end of employment and the rise of crowd-based capitalism*. MIT Press.

Wry, T., & York, J. G. (2017). An Identity Based Approach to Social Enterprise. *Academy of Management Review*, 42(3), 437–460. doi:10.5465/amr.2013.0506

Zahra, S. A., & Wright, M. (2016). Understanding the Social Role of Entrepreneurship. *Journal of Management Studies*, 53(4), 610–629. doi:10.1111/joms.12149

## **KEY TERMS AND DEFINITIONS**

**Circular Economy:** A productive system in which resources, materials and products are maintained as possible within the business cycle and waste is minimized.

**Collaborative Economy:** Business models for the exchange of goods and services through an online platform.

**Crowdfunding:** Also known as collective or mass-financing, is a new method for financing a range of initiatives such as businesses, cultural activities, social projects, etc. allowing the founders to request funds from many people each who usually provides a relatively limited sum.

**Economy for the Common Good:** Is a holistic model, which may be a new option over the existing socio-economic systems, understood as an inspiring force for a real global change. It is a new economic, political and social order, with the intention of building—from the ground—a sustainable and more balanced society.

**Fourth Sector:** An evolution of the private first sector, the public second sector and the social third sector; creating an intersection where the organizations address social and environmental challenges while, at the same time, provide prosperity to society and not just economic results.

**Positive Social Change:** Process of transforming patterns of thought, behavior, social relationships, institutions, and social structure to generate beneficial outcomes for individuals, communities, organizations, society, and/or the environment beyond the benefits for the instigators of such transformations.

**Social Economy:** Set of entities outside the public sector, with democratic management, and with a special regime of property and distribution of profits.

**Social Enterprises:** Are neither public or charities, nor traditional capitalist companies, with a clear mission of serving the community, operating in the market through resource extraction and the production of goods or services, as well as offering innovative, effective and efficient solutions to social unresolved issues.

**Solidarity Economy:** Is clear in its ambition to strengthen cooperation and solidarity among different agents, generally on a voluntary and reciprocity basis.

**Third Sector:** Is option other than public bodies and traditional capitalist enterprises, in order to meet needs or fill gaps that neither others can address or do it poorly.




## **ENDNOTES**

- <sup>1</sup> Formed June 11th, 1970 by organizations representing the cooperatives, mutual societies and associations. During 2001 it becomes CEGES (*Conseil des entreprises, employeurs et groupements de l'économie sociale*).
- <sup>2</sup> First founded in 1957, is an advisory body of the European Union; is currently is comprised by 350 members out of the 27 UE member states.
- <sup>3</sup> Founded in 1996 by an international group of scholars with the support of the UE. EMES is an international research network for building theoretical and empirical knowledge about social enterprise, social entrepreneurship, social economy and solidarity economy.

# Chapter 14

## Advancing a Framework for Entrepreneurship Development in a Bioeconomy

Oluwaseun James Oguntuase

 <https://orcid.org/0000-0003-2225-7766>

Lagos State University, Nigeria

### ABSTRACT

*This chapter frames bioeconomy as a pathway to sustainable development, and entrepreneurship as the bedrock of a bioeconomy. Its objective is threefold. First, the chapter enumerates the importance of innovation and entrepreneurship in a bioeconomy. Second, the chapter identifies the key production determinants and transformative game changers in a bioeconomy that should be the focus of innovative entrepreneurial activities. Third, it presents a conceptual framework for entrepreneurship development in a bioeconomy. The chapter employs systematic literature review approach to achieve its objectives. In total, the chapter asserts that there are several entrepreneurial opportunities in a bioeconomy, spanning the production determinants, the development of transformative game changers, and in distinct innovations like substitute products, new (bio-based) products and new (bio-based) processes.*

### INTRODUCTION

Knowledge is argued to be a resource (Evers & Schweißhelm, 2005; Mihaela, 2009; Price, Stoica, & Boncella, 2013; Wiklund & Shepherd, 2003), with innovation being one vehicle that diffuses and upgrades already existing knowledge (Dzidrov, Simeonov, Cvetkov, Dimitrov, & Ceravolo, 2015). Entrepreneurship is a factor that turns knowledge into new-to-the-market innovation (Block, Thurik, & Zhou, 2013). It is identified by its role in opportunity recognition, discovery, and creation (Shane & Venkataraman, 2000). Entrepreneurship entails innovation, with the latter having great impact on the former (Estrin, Korosteleva, & Mickiewicz, 2014). In this chapter, solving escalating societal challenges like climate change, deforestation, loss of biodiversity, soil degradation and scarcity of food and other materials, is presented as source of entrepreneurial opportunities in a bioeconomy. Bioeconomy has other names. It is also known as bio-based economy or knowledge-based bio-economy.

DOI: 10.4018/978-1-7998-4826-4.ch014

The Global Bioeconomy Summit defined bioeconomy as the production, utilization and conservation of biological resources, including related knowledge, science, technology, and innovation, to provide information, products, processes and services across all economic sectors aiming toward a sustainable economy (GBS, 2018: 2). Bioeconomy is the sustainable and innovative use of biomass and biological knowledge to provide food, feed, industrial products, bioenergy, and ecological and other services (Lewandowski et al., 2018a). It addresses concerns about the exploitative use of natural resources by replacing non-renewable resources with resources derived from sustainably produced biomass to produce food, fuel, fine chemicals, and other substances, which is pivotal in transitioning to low carbon economy and sustainable economic development (Oguntuase, 2019).

Given the importance attached to the transition to bioeconomy by researchers and policymakers, the concept has continued to gain traction, both in science and policy, as the new economic system to mitigate and adapt to sustainability challenges that have characterized the Anthropocene era.

The transition to a bioeconomy is dependent on innovations around bio-based products and processing technologies (Bauer, Hansen, & Hellsmark, 2018; Devaney & Henschion, 2017; Meyer, 2017), which offer a plethora of entrepreneurial opportunities to be facilitated by entrepreneurship (Gómez et al., 2015; Kuckertz, 2020; Kuckertz, Berger, & Morales Reyes, 2018; Rodino, Butu, Gheorghe, & Butu, 2020). Despite the importance of entrepreneurship in the emerging bioeconomy, literature search appears not to have shown any conceptual framework that advances entrepreneurship development framework in a bioeconomy. This chapter addresses this shortcoming.

From the foregoing, the working definition of bioeconomy in this chapter is: innovation-triggered bio-based technological entrepreneurial activities to sustainably produce, utilize, and conserve biological resources which will replace fossil fuels in the production of various bio-based products, for final and intermediate consumption in several economic sectors towards achieving sustainable development and livelihoods. According to the European Standard (EN 16575:2014), bio-based products are wholly or partly derived from materials of biological origin, excluding materials embedded in geological formations and/or fossilized. They offer a promising basis for the production of sustainable chemicals, materials, and more complex articles (Sheerwood, Clark, Farmer, Herrero-Davila, & Moity, 2016).

Consistent with the above definition of bioeconomy, this chapter draws from different strands of literature to achieve its threefold objective. First, the chapter enumerates the importance of innovation and entrepreneurship in the transition to sustainable bioeconomy. Second, the chapter identifies the key production determinants and transformative game changers in a bioeconomy that should be the focus of innovation and entrepreneurial activities. Third, it presents a framework for entrepreneurship development in a bioeconomy. With these objectives in mind, the chapter proceeds as follows. To set the stage, the first 3 sections focus on concepts of bioeconomy as a pathway to sustainable development, knowledge-intensive innovative entrepreneurship and bioeconomy as a knowledge-based innovative economy. After these conceptual investigations, entrepreneurial opportunities, production determinants and transformative game changers in a bioeconomy move to the centre stage. The chapter will then present and discuss a conceptual framework for entrepreneurship development in a bioeconomy, before concluding with a set of recommendations that will serve as bases for further discussions and research.

## **BIOECONOMY FOR SUSTAINABLE DEVELOPMENT**

How bioeconomy is envisioned and defined matter. Different visions and definitions emphasize various technological, economic and social aspects and priorities, and relate to various conditions and developmental concepts such as sustainable development and innovative development, both at national and regional levels (Mieczysław, 2017).

It is arguable that the emergence of the bioeconomy agenda started with the publication of the Brundtland Report, which called for a new era of economic growth – growth that is forceful and at the same time socially and environmentally sustainable (World Commission on Environment and Development [WCED], 1987). The Report defines a development to be sustainable when “it meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987: 8). The concept of sustainable development has great influence on the visions and definitions of bioeconomy, and serves as a basis for a more interdisciplinary way of approaching bioeconomy (Pfau et al., 2014). Ramcilovic-Suominen and Pülzl (2018) believed that the way bioeconomy policies perceive sustainable development will have profound implications, not only on a practical level for policy implementation, but also on a conceptual level and for theoretical discourse surrounding sustainable development.

Moreover, the concept of sustainable development has become a fundamental strategy to guide the world’s social, environmental and economic transformation (Klarin, 2018). Bioeconomy is one essential element that can facilitate this transformation because sustainable development influences the formation of bioeconomy principles that cover the social, environmental and economic dimensions (Birner, 2018). The implementation of the bioeconomy is seen as an important component of sustainable development by many bioeconomy strategies (Grossauer & Stoglehner, 2020). The future of sustainable development is the implementation of bioeconomy strategies to prevent urgent problems, such as increasing competition for natural resources, climate change, and rural development (Ipate, David, Ipate, & Bogdan, 2015).

Several definitions of bioeconomy depict it as a new economic model for achieving sustainable development: The creation, development, and revitalization of economic systems based on a sustainable use of renewable biological resources in a balanced way (Aguilar, Twardowski, & Wohlgemuth, 2019); bioeconomy means a change in our current unsustainable patterns of economic production and consumption to a bio-based economy and substitution of fossil resources with renewable raw materials throughout the whole value chain, in industrial and energy production (Böcher, Töller, Perbandt, Beer, & Volgepohl, 2020); The global industrial transition of sustainably utilizing renewable aquatic and terrestrial resources in energy, intermediate and final products for economic, environmental, social and national security benefits (Golden & Handfield, 2014); Activities that make use of bio-innovations, based on biological sources, materials and processes to generate sustainable economic, social and environmental development (South African Government, 2013).

Furthermore, there is considerable attention on sustainability in the bioeconomy debate, with sustainability seen as an inherent characteristic of the bioeconomy. The future of sustainable development is in the implementation of bioeconomy to change our current patterns of production and consumption towards more sustainable pathways (Oguntuase, 2020). The knowledge-based bioeconomy builds on sustainable development through the application of biological and systems knowledge and the generation of innovations to develop a sustainable economy (Lewandowski et al., 2018a). Transformation towards a knowledge-based bioeconomic production system is supposed to terminate the existing negative relations between economic growth and environmental pollution, use of resources, climate change, and energy

consumption and to promote a sustainable economy (Pyka & Prettner, 2018). Other changing paradigms driving the transition to bioeconomy include cutting-edge biotechnological advancements, economic considerations, and changing demographics (Oguntuase, Adu, & Obayori, 2018).

Leitão (2016) submitted that bioeconomy embraces three elements to unlock the value hidden in bioresources and bio-processes for addressing societal challenges in a sustainable manner. These are advanced knowledge of genes and complex cell processes to develop new processes and products, efficient bioprocesses to support sustainable production, and integration of biotechnology knowledge and applications across sectors. Operationally, bioeconomy replaces non-renewable resources with resources derived from biomass to produce food, fuel, fine chemicals, and other substances while sequestering carbon and achieving sustainable economic growth (Palatnik & Zilberman, 2017; Pasculea, 2015).

## **KNOWLEDGE-INTENSIVE INNOVATIVE ENTREPRENEURSHIP**

There is indeed no single definition of the term knowledge as its meaning goes often in line with the context it is used for. Resource knowledge is essential for innovation activity due to the fact that innovation is closely linked to the exchange and recombination of knowledge (Nonaka & Takeuchi, 1995). An innovation is an idea, practice, or object that is perceived as new by an individual or other unit of adoption (Rogers, 1995). Innovation is the result of an interactive process of knowledge generation, diffusion and application (Camagni, 2001; Katila & Ahuja, 2002). Entrepreneurship is an effective mechanism to transform knowledge into innovative products (Block et al., 2013, Hamdani & Koubaa, 2018; Huggins & Thompson, 2015). Innovative entrepreneurship involves commercial activities intended to make profit by creating innovations such as new products, technologies, markets, materials, or setting up a pioneering enterprise, and proactively marketing them in the national economy (Odinokova, Bozhinova, & Petrova, 2018).

Entrepreneurial competencies and orientation are important in entrepreneurial process, in moving entrepreneurial intentions into actions in innovative economy (Al Mamun & Fazal, 2018; Hakala, 2013). Entrepreneurial competencies include primary characteristics such as basic and specific knowledge, motives, traits, self-image, roles and skills which are required for business startup, survival and/or growth that enable the entrepreneur to achieve and maintain business success (Ahmad, 2007; Bird, 1995). Entrepreneurial orientation is the process, practice and decision-making that leads to new business ventures (Lumpkin & Dess, 1996). According to Bolton and Lane (2012), the five dimensions of entrepreneurial orientation are risk taking, innovativeness, proactiveness, autonomy and competitive aggressiveness.

The emerging literature on knowledge-intensive innovative entrepreneurship (KIE) stresses the relevance of the knowledge-based economy, the central position of innovation in modern industries and services and the essential role of new firms in the economic growth of countries (Malerba & McKelvey, 2019). Malerba and McKelvey (2018) defined KIE firms as new learning organizations that use and transform existing knowledge and generate new knowledge in order to innovate within innovation systems.

The KIE provides a modern view of entrepreneurship that links the intense use of knowledge by the new ventures with a high innovative activity related to the economy and markets (Malerba & McKelvey, 2019). Knowledge-intensive innovative entrepreneurs are involved in the creation, diffusion, and use of knowledge; introduce new products and technologies; draw resources and ideas from their innovation system; and introduce change and dynamism into the economy (Malerba & McKelvey, 2018). In relation

to sustainable development, Gifford and McKelvey (2019) submitted KIE firms thus fill a key role as creators and users of new scientific and technological knowledge that is beneficial to the fulfillment or furthering of sustainable development.

KIE do not evolve in a vacuum. Alves, Fischer, Vonortas and de Queiroz (2019) identified five dimensions of entrepreneurial ecosystem of KIE as existence of preeminent research universities and strong technological activity, availability of highly skilled labor, large market dynamics, business environment of the location, and quality of infrastructure as the important dimensions of KIE ecosystem. In isolation, each dimension is conducive to entrepreneurship but insufficient to sustain it (Isenberg, 2010).

## **BIOECONOMY AS A KNOWLEDGE-BASED INNOVATIVE ECONOMY**

The term Knowledge-Based Economy (KBE) was first introduced by the Organization of Economic Cooperation and Development (OECD). OECD (1996:7) describes KBE as an economy that is directly based on the production, distribution and use of knowledge and information. Later, Asia Pacific Economic Cooperation (APEC) extended this idea and came up with a definition of KBE as “an economy in which the production, distribution, and use of knowledge is the main driver of growth, wealth creation and employment across all industries” (APEC, 2000:2). The goal of the knowledge-based economy is not only to advance knowledge, but it also promotes efficient use of knowledge in all economic sectors to enhance economic growth and development (Mortazavi & Bahrami, 2012; Qamruzzaman & Ferdaous, 2014).

The bioeconomy is one of the oldest economic sectors known to humanity. Bonaiuti (2014) traced the first use of the term *bioeconomics* to Zeman, who used the term in the late 1960s to designate an economic order that appropriately acknowledges the biological bases of almost all economic activities. Enriquez (1998) offered that the application of the discoveries of genomics to create new economic sectors will lead to a restructuring in the role of companies and industries, and the larger world’s economy. Today, bioeconomy is an emerging paradigm under which the creation, development, and revitalization of economic systems based on a sustainable use of renewable biological resources in a balanced way is rapidly spreading globally (Aguilar et al., 2019).

It is a well-discussed and highly-accepted issue that bioeconomy is a knowledge-based economy (Ahmed, 2018; Maciejczak, 2015, Mungaray-Moctezuma, Perez-Nunez, & Lopez-Leyva, 2015; Pyka & Prettner, 2018; Urmeter & Pyka, 2017; Urmeter, Schlaile, Bogner, Mueller, & Pyka, 2018; Virgin, Fielding, Sundell, Hoff & Granit, 2017). Gawel, Pannicke and Hagemann (2019) traced the foundation for the knowledge-based bioeconomy to the 1990s movement when the concept of bioeconomy was redefined as a business sector that utilizes new biological knowledge for commercial and industrial purposes. The European Commission (2005) has defined the Knowledge-Based Bioeconomy (KBBE) as the process of transforming life science knowledge into new, sustainable, eco-efficient and competitive products.

As an alternative to our present fossil-dependent economy, bioeconomy meets the radicalness and discontinuity of innovation (Oguntuase, Adu, & Obayori, 2018). It embraces innovations around bio-based products (final and intermediate) and production technologies (Oguntuase, 2020). It also involves radical innovation in technologies, changes in practices, values, beliefs, configurations of actor groups, networks and policies (Devaney & Henchion, 2017). These are usually achieved through four distinct innovation types in the bioeconomy to include substitute products, new (bio-based) processes, new (bio-based) products, and new behavior (Bröring, Laibach, & Wustmans, 2020).

Pyka and Prettner (2018) noted that successful generation and diffusion of relevant knowledge in a bioeconomy depend on dynamic innovation networks in which relevant actors jointly share and create such new knowledge. Oguntuase (2020) submitted that transition to a bioeconomy requires product, technology, societal, systemic and operational innovations, and fundamental socio-economic transition and must comprise changes in markets, user practices, values, beliefs, policies, configurations of actor groups, networks and institutions to ensure the development of renewable resource-based technologies that are environmentally sustainable, socially acceptable and economically competitive.

Lewandowski et al. (2018b) defined bioeconomy as an innovative and sustainable economy based on biogenic resources. A literature review by Van Lancker, Wauters and Van Huylenbroeck (2016) highlighted the importance of knowledge generation and innovation in the transition towards a bioeconomy. Adamowicz (2017) submitted that sectors and industries comprising bioeconomy are characterized by major innovation potential due to basing on scientific knowledge, developed industrial technologies and latent knowledge inherent in local communities. For the Australian Government, the modern bioeconomy is based on knowledge and innovation in biosciences, together with other technologies such as engineering, chemistry, computer science and nanotechnologies (Department of Industry, 2018), while the Netherlands encourages knowledge development and innovation in particular in nine top sectors: agriculture and food, water, chemicals, energy, life sciences and health, horticulture and propagation materials, logistics, high-tech systems and materials and creative industries (Netherlands Offices for Science and Technology, 2013). These views are consistent with others like Ahmed and Ammar (2017); Esposti (2012); Kargytė, Värnik, and Aleknevičienė (2018); Lainez, González, Aguilar, and Vela (2018); Pyka and Prettner (2018) that bioeconomy is a knowledge-based innovative economy.

## **ENTREPRENEURIAL OPPORTUNITIES IN BIOECONOMY**

In a world shaken by unsustainable conundrums, chiefly attributed to high dependence on non-renewable resources, a transition to competitive, ecologically sustainable and socially acceptable economy seems like the solution. Solving the unsustainable exploitation of natural resources and other associated societal challenges, and advances in life sciences and biotechnology presents entrepreneurial opportunities in several bioeconomy sectors (Kircher, 2019; Kuckertz, Berger, & Morales Reyes, 2018; Oguntuase, 2019).

Continuing population and consumption growth will mean that the global demand for food will increase for at least another 40 years with negative impact on global food security (Godfray et al., 2010). Bioeconomy has been identified to provide solutions to food security challenges (Ajayi & Akinbobola, 2020; Schneider, 2014; Schurr, 2020).

Bioeconomy is a new perspective for fighting climate change (Carus, 2017; Lindner, Hanewinkel, & Nabuurs, 2017; Oguntuase & Adu, 2020; Van Renssen, 2014). Bang et al. (2009) estimated that industrial biotechnology, biofuels and bioenergy could reduce global greenhouse gas emissions by 1.0–2.5 billion tons of carbon dioxide (CO<sub>2</sub>) per year by 2030.

The World Economic Forum (WEF) estimates that the revenue potential for new business opportunities in the biomass value chains could globally amount to about USD 295 billion by 2020, that is three times the amount of 2010. These revenues generated at the different stages of new biomass value chains include the manufacturing of agricultural inputs, biomass production and trading, bio-refining inputs (e.g. biomass pre-treatment methods), the actual biomass conversion in the biorefineries and the sale of end products (WEF, 2010).

New opportunities are rising in the bio-based products industry, which is characterized by strong growth and poised for ongoing growth. While bio-based products represented about 10% of total international trade in 2007, this figure reached 13% in 2014 (El-Chichakli, von Braun, Lang, Barben, & Philp, 2016). In 2018, U.S Department of Agriculture (USDA) published a report that showed global calculated worth of bio-economy together with industrial biotechnology, renewable chemicals, and polymers, biofuels, enzymes, and biomaterials at \$355.28 billion (Golden et al. 2018). For Kircher (2019), the annual global investment requirements for renewable energy, bio-based chemicals and fuels, and ecosystem services is estimated at USD 1–2 trillion over the next three decades, equivalent to about 1.3–2.6% of global GDP.

The development of bioeconomy requires process innovations that enable the efficient utilization of biomass and residual materials. Scarlat, Dallemand, Monforti-Ferrario and Nita (2015) noted that the transition toward a bioeconomy will rely on the advancement in technology of a range of processes, on the achievement of a breakthrough in terms of technical performances and cost effectiveness, and will depend on the availability of sustainable biomass.

In a knowledge-based bioeconomy, investment and economic growth still represent a crucial element for employment, international competitiveness, and income generation. The bioeconomy can make important contributions to accelerate investments by providing new investment opportunities generated by fundamental innovations, thereby bringing currently available large quantities of liquidity to a productive use. This, in turn, accelerates the technological paradigm shift (Pérez, 2010).

## **PRODUCTION DETERMINANTS OF A BIOECONOMY**

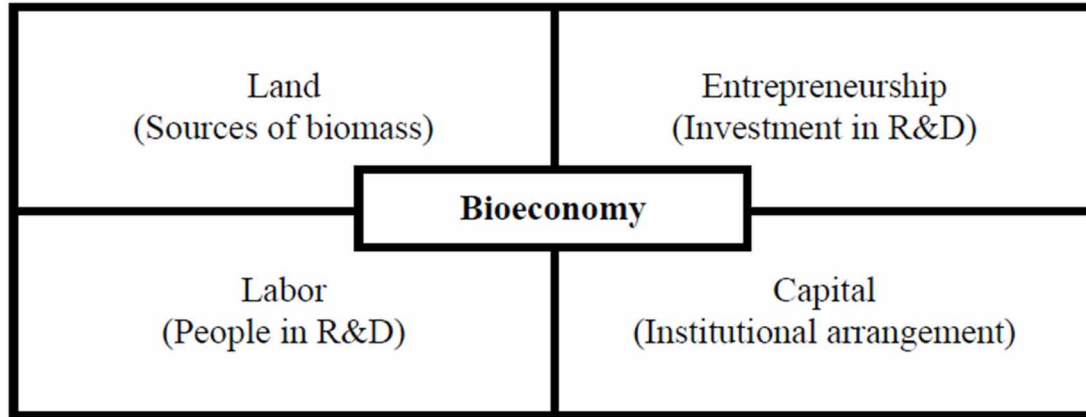
The epistemological understanding of production factor as a durable input employed in production activities allows for naming of new variables influencing and employed in the production processes as determinants. Having in mind the essence of bioeconomy, which is transition to low carbon sustainable economy, and the establishment that bioeconomy is a knowledge-based innovative economy, it needs to be stated that the primary production determinants of the bioeconomy extends beyond those in mainstream economic theory: land, labor and capital. They include the abundance of biological resources and the level of country development (Kniūkšta, 2009), or/and sources of biomass, people in research and development, investment in research and development, and institutional arrangement as expanded by Maciejczak (2015), as well as Talavyria, Lymar, Baidala and Holub (2016).

In bioeconomy, biomass are the exclusive substitutes for other (fossil) resources to provide products, processes and services in all economic sectors within the frame of a sustainable economic system (German Bioeconomy Council, 2010). Biomass is any organic matter that is available on a renewable or recurring basis, including agricultural crops and trees, wood and wood residues, plants (including aquatic plants), grasses, animal manure, municipal residues, and other residue materials. Biomass is generally produced in a sustainable manner from water and carbon dioxide by photosynthesis (Perlack et al., 2005). The dimension of the abundance of biological resources characterizes amount of biological resources which can be used in bioeconomy: plants, animals, microorganism and etc. (Kniūkšta 2009).

The dimension of the level of country development characterizes a country's abilities to use the new biotechnologies and life sciences in order to develop bioeconomy (Kniūkšta 2009). The people in R&D encompass people employed within the bioeconomy system, who have obtained sufficient knowledge to add value across the bioeconomy value chain. Bioeconomy demands high-skilled workers (Patermann & Aguiler, 2017), and the growing demand for professionals specifically educated in this field (Lewan-



*Figure 1. Bioeconomy production determinants in line with classical view of productive forces (Maciejczak, 2015)*



dowski, 2018) will have an impact on modes and agendas in education, training and research (Koukios, et al., 2018; Kangas, Tikkanen, Leskinen, Kurttila & Kajanus, 2016). Investment in R&D focuses on the development and commercialization of products and processes within the bioeconomy system. Putting bioeconomy concept into practice requires more R&D investments, demonstration facilities and commercialization support for spurring alternative technologies to help biological resources compete with fossil-based raw materials across different sectors and industries (European Commission, 2013). Public research and development (R&D) is an important driver of the bioeconomy but to a significant extent it is the private sector, especially big life science companies that lead its development (Liavoga, Virgin, Ecuru, Morris, & Komen, 2016). Institutional arrangements define and clarify institutional roles and responsibilities. They are connected to the organization of the system which enables implementation of solutions that ensure competitiveness under dynamic changes. Stenholm, Acs and Wuebker (2013) submitted that institutional arrangements influence both the rate and type entrepreneurial activity of a country.

## **TRANSFORMATIVE GAME CHANGERS IN A BIOECONOMY**

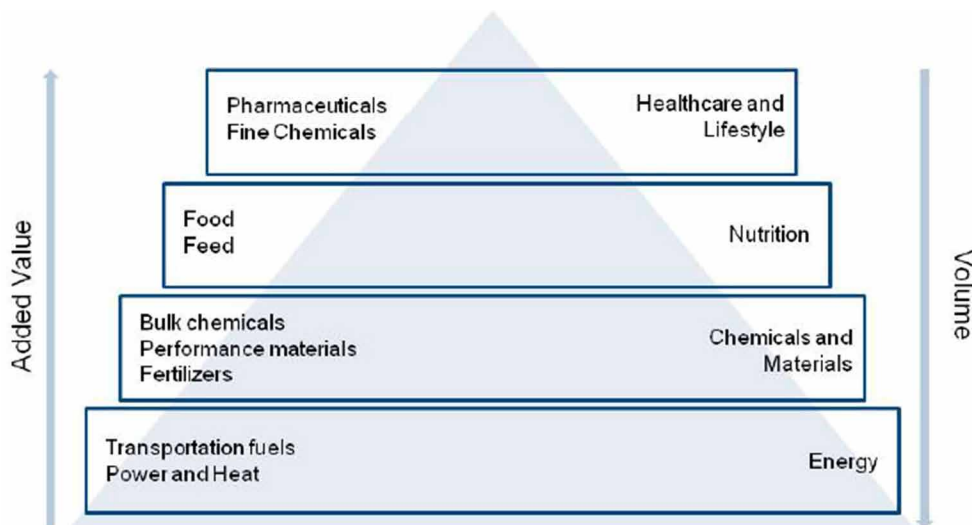
A cohesive bioeconomy policy, clarifying the visions, definitions, strategies and implementation principles, is the most important national/regional instrument for bioeconomy development (Philp, 2018). Gawel et al. (2019) noted that bioeconomy policy has a twofold role: the enabling function and the limiting function. The enabling function addresses the relevant market failures and creates a level playing field for bio-based processes and products. Under the limiting function, bioeconomy fulfills a restriction function and ensures the sustainability of increased use of biomass. Oguntuase (2019) built on O'Reilly (2017) to identify the five priorities for developing national bioeconomy as feedstock push, technology push, human capital push, governance push and market pull. The feedstock push, technology push, human capital push, governance push are related to production determinants source of biomass, investment in R&D, people in R&D and institutional arrangements respectively.

## Advancing a Framework for Entrepreneurship Development in a Bioeconomy

The evolution of a sustainable and socially acceptable bioeconomy also requires focusing on the transformative game changers across and outside the production determinants. Euapermkiati (2017) listed modern farming and biorefinery as the two key elements of transition to a sustainable bioeconomy. Modern farming requires improved breeding, provision of machineries and development of technologies on agricultural products to grow required biomasses. Investment in biorefinery will help produce final and intermediate bio-based products. These are to be complemented by efficient biomass supply chain management (Lin et al., 2014, Yadav & Yadav, 2016) and optimization of resource utilization through a sequential re-use of biomass along the value pyramid (Lange & Lindedam, 2016).

The concept of cascading has taken prominence in bioeconomy discourse as a resource optimization method for deriving maximum value from biomass by exploiting all its content/ structure (Fritsche & Iriarte, 2014; Olsson et al., 2016). It is a method for optimizing resource utilization through a sequential re-use of the remaining resource quality from previously used commodities and substances (Sirkin & Ten Houten, 1994). After refinery, each individual component of the biomass will have its own application and economic value as depicted by the biomass value pyramid (Figure 2).

Figure 2. Biomass value pyramid (Adapted from: *Business plan Bio-based Economy*)



In addition to the major categories of bio-based products shown in the biomass value pyramid, there are platform chemicals, which are precursors for making diverse products that include chemicals, materials, polymers and fuels (Ting & Philp, 2018). Cost effective and large scale production of bio-based platform chemicals at low costs from readily available biomasses is very important in bioeconomy development (Bomtempo, Chaves Alves, & de Almeida Oroski, 2017).

As a knowledge-based innovative economy, highly-skilled vibrant workers are required across emerging bioeconomy sectors (Patermann & Aguiler, 2017; White House 2012), and the demand for professionals specifically educated in this field is growing (Lewandowski, 2018). Bioeconomy professionals are expected to be specialized in one field but also be able to understand the scientific language of associ-

ated disciplines (Lask, Maier, Tchouga, & Vargas-Carpintero, 2018). Availability of professionals with multi- and interdisciplinary competencies is one of the transformative game changer in a bioeconomy.

Seizing the opportunities and mitigating potential risks of the bioeconomy depend heavily on how market pull factors and instruments are employed in creating or increasing market demand. The objective of market pull is to provide positive stimulus – increasing market demand – for products or services with particular characteristics (European Commission Directorate General Environment, 2009). These factors include production and consumption targets, mandates, public procurement, increasing public awareness, labels, and tax incentives (Velea, Oancea, & Fischer, 2018). The instruments include targets and quotas, mandates and bans, public procurement, labeling, raising public awareness, direct financial support for bio-based products, tax incentives for bio-based products, taxes on fossil carbon, investment support instruments, and incentives related to GHG emissions (Biofuture Platform, 2018; O’Reilly, 2017).

## **FRAMEWORK FOR ENTREPRENEURIAL DEVELOPMENT IN A BIOECONOMY**

The proposed framework is based on qualitative evidence from extant literature, which presuppose that the quest for sustainable development provides entrepreneurial opportunities in the bioeconomy. The basic criteria identified in applying the concept of knowledge-intensive innovative entrepreneurship to the advancement of entrepreneurship in a bioeconomy include the production determinants, transformative game changers and market pull instruments (see figure 3). A combination of these relevant components can significantly enhance the success of innovations in a knowledge-based bioeconomy towards achieving sustainable development.

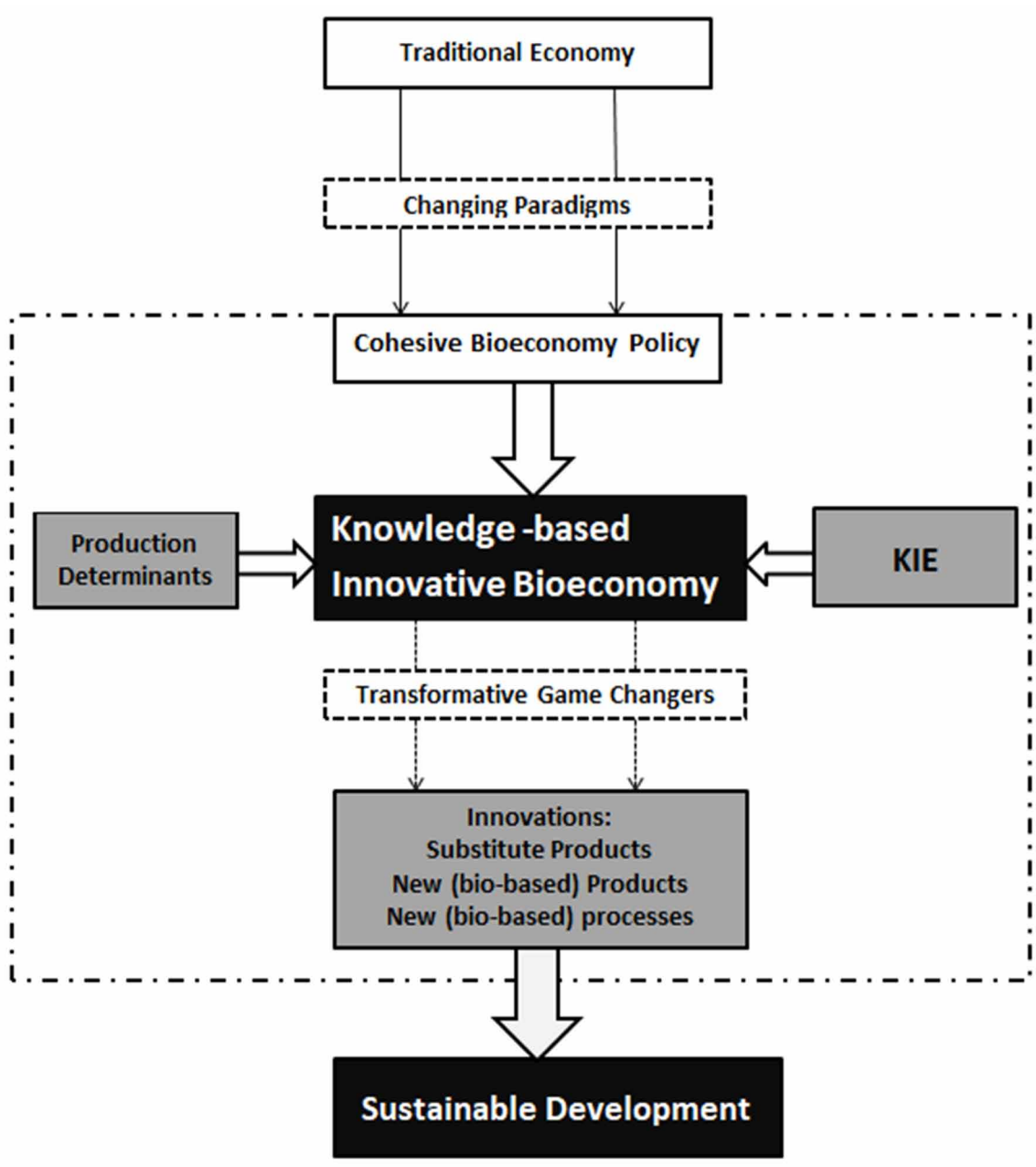
The framework specifically highlights the importance changing paradigm such as cutting-edge biotechnological advancements and changing demographics, and the importance of a cohesive bioeconomy policy to elucidate the definition, vision, strategies and implementation principles in a bioeconomy.

The framework is not specific to a particular sector of the emerging bioeconomy, but offers insight on how to develop entrepreneurial engagements and ecosystems across the spectrum of sectors related to the bioeconomy

## **FUTURE RESEARCH DIRECTION**

In all, this chapter provides a preliminary opinion on how to advance entrepreneurship in a bioeconomy. As such, it does not comprehensively explore the components are a pre-requisite to a sustainable bioeconomy. A further insightful exploration on the components of the framework is recommended to explore entrepreneurship opportunities across the value chain of the bioeconomy. As nations and jurisdictions continue to adopt bioeconomy policies, there is need for research into how they could build gradually develop and extend a combination of existing local and international instruments to embrace and advance entrepreneurial opportunities in bioeconomy sectors.

Figure 3. The proposed framework for entrepreneurial development in a knowledge-based bioeconomy



## CONCLUSION

The big picture of sustainable development underlines the importance of the transition to a competitive, sustainable and socially acceptable bioeconomy. The bioeconomy is an alternative to our present fossil-dependent economy and will depend heavily on knowledge, innovation and entrepreneurship.

This chapter presents bioeconomy as a knowledge-based innovative economy by exploring the relationships between knowledge, innovation and entrepreneurship that link the concepts of bioeconomy and knowledge-intensive innovative entrepreneurship. It also establishes that there are several entrepreneurial opportunities spanning the production determinants, the development of transformative game changers in a bioeconomy, and in distinct innovations like substitute products, new (bio-based) products and new (bio-based) processes. A conceptual framework was presented to advance entrepreneurship in the emerging sectors of the bioeconomy.

## REFERENCES

- Adamowicz, M. (2017). Bioeconomy – Concept, application and perspectives. *Problems of Agricultural Economics*, 1(350), 29–49. doi:10.5604/00441600.1232987
- Aguilar, A., Twardowski, T., & Wohlgemuth, R. (2019). Bioeconomy for sustainable development. *Journal of Biotechnology*, 20(8), e1800638. doi:10.1002/biot.201800638 PMID:31106982
- Ahmad, N. H. (2007). *A cross cultural study of entrepreneurial competencies and entrepreneurial success in SMEs in Australia and Malaysia*. University of Adelaide.
- Ahmed, E. M. (2018). Are bio-economy dimensions new stream of the knowledge economy? *World Journal of Science. Technology and Sustainable Development*, 15(2), 142–155. doi:10.1108/WJST-SD-06-2017-0014
- Ahmed, E. M., & Ammar, A. (2017). *Bioeconomy and its connection to knowledge-based economy*. Paper presented at the World Association for Sustainable Developed Conference, Manama, Bahrain.
- Ajayi, O. F., & Akinbobola, T. O. (2020). Links among bioeconomy, food security, and Sustainable Development Goals in Nigeria. In W. Leal Filho, A. Azul, L. Brandli, P. Özuyar, & T. Wall (Eds.), *Zero hunger. Encyclopedia of the UN Sustainable Development Goals*. Cham: Springer. doi:10.1007/978-3-319-69626-3\_106-1
- Al Mamun, A., & Fazal, S. A. (2018). Effect of entrepreneurial orientation on competency and micro-enterprise performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(3), 379–398. doi:10.1108/APJIE-05-2018-0033
- Alves, A. C., Fischer, B., Vonortas, N. S., & de Queiroz, S. R. R. (2019). Configurations of knowledge-intensive entrepreneurial ecosystems. *Revista de Administração de Empresas*, 59(4), 242–257. doi:10.15900034-759020190403
- Asia Pacific Economic Cooperation. (2000). *Towards knowledge-based economies in APEC*. APEC.
- Bang, J. K., Follér, A., & Buttazzoni, M. (2009). *Industrial biotechnology: More than green fuel in a dirty economy? Exploring the transformational potential of industrial biotechnology on the way to a green economy*. World Wildlife Fund.
- Bauer, F., Hansen, T., & Hellsmark, H. (2018). Innovation in the bioeconomy – Dynamics of biorefinery innovation networks. *Technology Analysis and Strategic Management*, 30(8), 935–947. doi:10.1080/09537325.2018.1425386

## **Advancing a Framework for Entrepreneurship Development in a Bioeconomy**

Biofuture Platform. (2018). *Creating the Biofuture: A Report on the State of the Low Carbon Bioeconomy*. Biofuture Platform.

Bird, B. (1995). Towards a theory of entrepreneurial competency. *Advances in Entrepreneurship, Firm Emergence and Growth*, 2, 51-72. Retrieved from [https://www.academia.edu/1282975/Toward\\_a\\_theory\\_of\\_entrepreneurialcompetency](https://www.academia.edu/1282975/Toward_a_theory_of_entrepreneurialcompetency)

Birner, R. (2018). Bioeconomy concepts. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 17–38). Springer. doi:10.1007/978-3-319-68152-8\_3

Block, J. H., Thurik, R., & Zhou, H. (2013). What turns knowledge into innovative products? The role of entrepreneurship and knowledge spillovers. *Journal of Evolutionary Economics*, 23(4), 693–718. doi:10.1007/00191-012-0265-5

Böcher, M., Töller, A. E., Perbandt, D., Beer, K., & Volgepohl, T. (2020). Research trends: Bioeconomy politics and governance. *Forest Policy and Economics*, 118, 102219. doi:10.1016/j.forpol.2020.102219

Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation: Development of a measurement instrument. *Education + Training*, 54(2/3), 219–233. doi:10.1108/00400911211210314

Bomtempo, J. V., Chaves Alves, F., & de Almeida Oroski, F. (2017). Developing new platform chemicals: What is required for a new bio-based molecule to become a platform chemical in the bioeconomy? *Faraday Discussions*, 202, 213–225. doi:10.1039/C7FD00052A PMID:28671699

Bonaiuti, M. (2014). Bio-economics. In G. D'Alisa, F. Dematia, & G. Kallis (Eds.), *Degrowth: A Vocabulary for a New Era* (pp. 52–55). Routledge/Taylor & Francis Group.

Bröring, S., Laibach, N., & Wustmans, M. (2020). Innovation types in the bioeconomy. *Journal of Cleaner Production*, 266, 121939. doi:10.1016/j.jclepro.2020.121939

Camagni, R. (2001). The economic role and spatial contradictions of global city-regions: the functional, cognitive and evolutionary context. In A. J. Scott (Ed.), *Global City-regions: Trends, Theory, Policy* (pp. 96–118). Oxford University Press.

Carus, M. (2017). Biobased economy and climate change – Important links, pitfalls, and opportunities. *Industrial Biotechnology (New Rochelle, N.Y.)*, 13(2), 41–51. doi:10.1089/ind.2017.29073.mca

Department of Industry. (2018). *Bioeconomy and Industrial Biotechnology*. Retrieved from Industry.gov.au: <https://industry.gov.au/industry/IndustrySectors/nanotechnology/IndustrialBiotechnology/Pages/BioeconomyandIndustrialBiotechnology.aspx>

Devaney, L. A., & Henchion, M. (2017). If opportunity doesn't knock, build a door: Reflecting on a bioeconomy policy agenda for Ireland. *The Economic and Social Review*, 48(2), 207–229.

Dzidrov, M., Simeonov, S., Cvetkov, S., Dimitrov, S., & Ceravolo, L. S. (2015). Study on the importance of knowledge, innovation and entrepreneurship on the country's progress. *International Journal of Scientific and Engineering Research*, 6(11), 913–917.

El-Chichakli, B., von Braun, J., Lang, C., Barben, D., & Philp, J. (2016). Five cornerstones of a global bioeconomy. *Nature*, 535(7611), 221–223.

Enriquez, J. (1998). Genomics and the world's economy. *Science*, 281(5379), 925–926. doi:10.1126/science.281.5379.925 PMID:9722465

Esposti, R. (2012). Knowledge, technology and innovations for a bio-based economy: Lessons from the past, challenges for the future. *Bio-Based and Applied Economics*, 1(3), 235–268.

Estrin, S., Korosteleva, J., & Mickiewicz, T. (2014). *Entrepreneurial growth aspirations, Innovation Propensity and National Knowledge Intensity: Unveiling the Complexity of the Relationship, using GEM data*. GRINCOH Working Paper Series, Paper No. 3.08.2.

Euapermkiati, A. (2017). *Thailand bioeconomy: Current status, future direction and implication for industrial sectors*. In Biomass to Energy, Chemicals and Functional Materials. Paper presented at the 4th Japan-ASEAN Science, Technology and Innovation Platform (JASTIP), Pathum Thani, Thailand.

European Commission. (2005). *New perspectives on the knowledge-based bio-economy -conference report*. European Commission.

European Commission. (2013). *Bio-economy and sustainability: a potential contribution to the Bio-economy Observatory*. European Commission, Joint Research Centre, Institute for Environment and Sustainability.

European Commission Directorate General Environment. (2009). *The Potential of Market Pull Instruments for Promoting Innovation in Environmental Characteristics*. Final Report.

Evers, H. - D., & Schweißhelm, R. (2005). Knowledge as a factor of production: Southeast Asia's transition towards a knowledge society. *Soziale Welt: Zeitschrift für sozialwissenschaftliche Forschung und Praxis*, 56(1), 37-48.

Fritsche, U. R., & Iriarte, L. (2014). Sustainability criteria and indicators for the bio-based economy in Europe: State of discussion and way forward. *Energies*, 7(11), 6825-6836.

Gawel, E., Pannicke, N., & Hagemann, N. (2019). A path transition towards a bioeconomy - The crucial role of sustainability. *Sustainability*, 11(11), 3005. doi:10.3390/u11113005

German Bioeconomy Council. (2010). *Bioeconomy Innovation*. Author.

Gifford, E., & McKelvey, M. (2019). Knowledge-intensive entrepreneurship and S3: Conceptualizing strategies for sustainability. *Sustainability*, 11(18), 4824. doi:10.3390/u11184824

Global Bioeconomy Summit. (2018). *Communiqué of the Global Bioeconomy Summit 2018. Innovation in the Global Bioeconomy for Sustainable and Inclusive Transformation and Wellbeing*. Authro.

Godfray, H. C., Beddington, J. R., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Pretty, J., Robinson, S., Thomas, S. M., & Toulmin, C. (2010). Food security: The challenge of feeding 9 billion people. *Science*, 327(5967), 812–818. doi:10.1126/science.1185383 PMID:20110467

Golden, J. S., Handfield, R., Pascual-Gonzalez, J., Agsten, B., Brennan, T., Khan, L., & True, E. E. (2018). Indicators of the U.S. biobased economy. Washington, DC: U.S. Department of Agriculture.

Golden, J. S., & Handfield, R. B. (2014). *Opportunities in the emerging bioeconomy*. US Department of Agriculture, Office of Procurement and Property Management.

## **Advancing a Framework for Entrepreneurship Development in a Bioeconomy**

- Gómez-Garay, A., Torrejón, A., Gómez-Flechoso, M. A., Georgieva, F., Pintos, B., Avalos, A., & ... PérezUrria, E. (2015). Bioeconomy based on scientific research and entrepreneurship. *Journal of Small Business and Entrepreneurship Development*, 3(1), 8–18. doi:10.15640/jsbed.v3n1a
- Grossauer, F., & Stoglehner, G. (2020). Bioeconomy—Spatial requirements for sustainable development. *Sustainability*, 12(5), 1877. doi:10.3390/u12051877
- Hakala, H. (2013). Entrepreneurial and learning orientation: Effects on growth and profitability in the software sector. *Baltic Journal of Management*, 8(1), 102–118. doi:10.1108/17465261311291687
- Hamdani, K., & Koubaa, S. (2018, December). *Knowledge-based entrepreneurship: The role of networks*. Paper presented at the International Conference on Advances in Business Management – ICABM, Pune, India.
- Huggins, R., & Thompson, P. (2015). Entrepreneurship, innovation and regional growth: A network theory. *Small Business Economics*, 41(5), 103–128. doi:10.1007/11187-015-9643-3
- Ipate, N., David, K. G., Ipate, I., & Bogdan, A. (2015). The bioeconomy model in future sustainable development. *Studia Universitatis “Vasile Goldis” Arad. Economics Series*, 25(2), 115-123. doi:10.1515/ues-2015-0016
- Isenberg, D. (2010). The big idea: How to start an entrepreneurial revolution. *Harvard Business Review*, 88(6), 40–51.
- Kangas, J., Tikkanen, J., Leskinen, P., Kurttila, M., & Kajanus, M. (2016). Developing hybrid SWOT methodologies for choosing joint bioeconomy co-operation priorities by three Finnish universities. *Biofuels*, 8(4), 459–471. doi:10.1080/17597269.2016.1271625
- Kargytė, V., Värnik, R., & Aleknevičienė, V. (2018). Assessment of bioeconomy development potential from the perspective of innovation economics in European regions. *Management Theory and Studies for Rural Business and Infrastructure Development*, 40(4), 492–513. doi:10.15544/mts.2018.45
- Katila, R., & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behaviour and new product introduction. *Academy of Management Journal*, 45(6), 1183–1194.
- Kircher, M. (2019). Bioeconomy: Markets, implications, and investment opportunities. *Economies*, 7(3), 73. doi:10.3390/economies7030073
- Klarin, T. (2018). The concept of sustainable development: From its beginning to the contemporary issues. *Zagreb International Review of Economics and Business*, 21(1), 67–94. doi:10.2478/zireb-2018-0005
- Kniūkšta, B. (2009). Preconditions for developing a knowledge-based bioeconomy in Lithuania. *Proceedings of the Fourth International Scientific conference - Development*, 4(1), 214-218.
- Koukios, E., Monteleone, M., Texeira Carrondo, M. J., Charalambous, A., Girio, F., López Hernández, E., & ... . (2018). Targeting sustainable bioeconomy: A new development strategy for Southern European countries. The Manifesto of the European Mezzogiorno. *Journal of Cleaner Production*, 172(1), 3931–3941. doi:10.1016/j.jclepro.2017.05.020



- Kuckertz, A. (2020). Bioeconomy transformation strategies worldwide require stronger focus on entrepreneurship. *Sustainability*, 12(7), 2911. doi:10.3390/s12072911
- Kuckertz, A., Berger, E. S. C., & Morales Reyes, C. A. (2018). Entrepreneurial ventures and the bioeconomy. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 273–284). Springer.
- Lainez, M., González, J. M., Aguilar, A., & Vela, C. (2018). Spanish strategy on bioeconomy: Towards a knowledge based sustainable innovation. *New Biotechnology*, 40, 87–95. doi:10.1016/j.nbt.2017.05.006 PMID:28552816
- Lange, L., & Lindedam, J. (2016). *The Fundamentals of Bioeconomy The Biobased Society*. United Federation of Danish Workers 3F.
- Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018). The bioeconomist. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transitions to a sustainable, biobased economy*. Springer., doi:10.1007/978-3-319-68152-8\_12
- Leitão, A. (2016). Bioeconomy: The challenge in the management of natural resources in the 21st century. *Open Journal of Social Sciences*, 4(11), 26–42. doi:10.4236/jss.2016.411002
- Lewandowski, I. (Ed.). (2018). *Bioeconomy: Shaping the transition to a sustainable, biobased economy*. Springer. doi:10.1007/978-3-319-68152-8
- Lewandowski, I., Gaudet, N., Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018a). Bioeconomy concepts and research methods. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 5–16). Springer. doi:10.1007/978-3-319-68152-8\_2
- Lewandowski, I., Gaudet, N., Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018b). Introduction. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 1–2). doi:10.1007/978-3-319-68152-8\_1
- Liavoga, A., Virgin, I., Ecuru, J., Morris, J., & Komen, J. (2016). *Fostering a bio-economy in eastern Africa: Insights from Bio-Innovate*. International Livestock Research Institute.
- Lin, T., Rodríguez, L. F., Davis, S., Khanna, M., Shastri, Y., Grift, T., Long, S., & Ting, K. C. (2014). Biomass feedstock preprocessing and long-distance transportation logistics. *Bioenergy*, 8(1), 160–170.
- Lindner, M., Hanewinkel, M., & Nabuurs, G. (2017). How can a forest-based bioeconomy contribute to climate change adaptation and mitigation? In G. Winkel (Ed.), *Towards a Sustainable European Forest-based Bioeconomy: Assessment and the Way Forward*. European Forest Institute.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172. doi:10.5465/amr.1996.9602161568
- Maciejczak, M. (2015). What are production determinants of bioeconomy? *Scientific Journal Warsaw University of Life Sciences – SGGW Problems of World Agriculture*, 15(30), 137-146.

## **Advancing a Framework for Entrepreneurship Development in a Bioeconomy**

- Malerba, F., & McKelvey, M. (2018). Knowledge-intensive innovative entrepreneurship: Integrating Schumpeter, evolutionary economics, and innovation systems. *Small Business Economics*, 54(2), 503–522. doi:10.1007/11187-018-0060-2
- Malerba, F., & McKelvey, M. (2019). Knowledge-intensive innovative entrepreneurship. *Foundations and Trends in Entrepreneurship Series*, 14(6), 555–681. doi:10.1561/03000000075
- Meyer, R. (2017). Bioeconomy strategies: Contexts, visions, guiding implementation, principles and resulting debates. *Sustainability*, 9(6), 1031. doi:10.3390/u9061031
- Mieczysław, A. (2017). Bio-economy as a concept of development strategies in the European Union. *Journal of International Business Research and Marketing*, 2(4), 7–12. doi:10.18775/jibrm.1849-8558.2015.24.3001
- Mihaela, E. (2009). The knowledge – as production factor. *Studies and Scientific Researches - Economic Edition*, 14, 39-43.
- Mortazavi, S. H., & Bahrami, M. (2012). Integrated approach to entrepreneurship – knowledge based economy: A conceptual model. International Conference on Leadership, Technology and Innovation Management. *Procedia: Social and Behavioral Sciences*, 41, 281–287. doi:10.1016/j.sbspro.2012.04.032
- Mungaray-Moctezuma, A. B., Perez-Nunez, S. M., & Lopez-Leyva, S. (2015). Knowledge-based economy in Argentina, Costa Rica and Mexico: A comparative analysis from the bio-economy perspective. *Management Dynamics in the Knowledge Economy*, 3(2), 213–236.
- Netherlands Offices for Science and Technology. (2013). *The bio-based economy in the Netherlands*. NL Agency Ministry of Economic Affairs.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company. How Japanese companies create the dynamics of innovation*. Oxford University Press.
- O'Reilly, P. (2017). *Making the bioeconomy market: A review of international literature*. A Report of the Bio-Éire Project Funded by the Department of Agriculture, Food and the Marine's Competitive Research Programme.
- Odinokova, T., Bozhinova, M., & Petrova, M. (2018). Promotion of innovative entrepreneurship under sustainable development. E3S Web of Conferences 41, 04015. *IIIrd International Innovative Mining Symposium*. doi: 10.1051/e3sconf/20184104015
- Oguntuase, O. J. (2019). Bioeconomy: An opportunity for entrepreneurial development in Nigeria. *MTU Journal of Entrepreneurship and Sustainable Development*, 1(1), 124–134.
- Oguntuase, O. J. (2020). Academic entrepreneurship, bioeconomy, and sustainable development. In J. G. L. Dantas & L. C. Carvalho (Eds.), *Handbook of research on approaches to alternative entrepreneurship opportunities* (pp. 32–57). IGI Global. doi:10.4018/978-1-7998-1981-3.ch003
- Oguntuase, O. J., & Adu, O. B. (2020). Bioeconomy as climate action: How ready are African countries? In L. W. Leal, N. Ogugu, L. Adelake, D. Ayal, & I. da Silva (Eds.), *African Handbook of Climate Change Adaptation* (pp. 1–15). Springer. doi:10.1007/978-3-030-42091-8\_82-1

- Oguntuase, O. J., Adu, O. B., & Obayori, O. S. (2018). Stimulating diffusion of bio-based products: The role of responsible research and innovation (RRI) approach. *Journal of Research and Review in Science*, 5, 130–135.
- Olsson, O., Bruce, L., Roos, A., Hektor, B., Guissson, R., & Lamers, P. (2016). *Cascading of woody biomass: Definitions, policies and effects on international trade. IEA Bioenergy Task 40*. Retrieved from <http://task40.ieabioenergy.com/wp-content/uploads/2013/09/t40-cascading-2016.pdf>
- Organization of Economic Cooperation and Development. (1996). *The knowledge-based economy*. OECD.
- Palatnik, R. R., & Zilberman, D. (2017). Economics of natural resource utilization - the case of macroalgae. In A. Pinto & D. Zilberman (Eds.), *Modeling, dynamics, optimization and bioeconomics II* (pp. 1–21). Springer. doi:10.1007/978-3-319-55236-1\_1
- Pasculea, M. (2015). Perspectives on developing the bioeconomy sector in Romania. *Annales Universitatis Apulensis Series Oeconomica*, 17(1), 39–45. doi:10.29302/oeconomica.2015.17.1.3
- Patermann, C., & Aguilar, A. (2017). The origins of the bioeconomy in the European Union. *New Biotechnology*, 25, 20–24. doi:10.1016/j.nbt.2017.04.002 PMID:28411152
- Perlack, R. D., Wright, L. L., Turhollow, A. F., Graham, R. L., Stokes, B. J., & Erbach, D. C. (2005). *Biomass as feedstock for a bioenergy and byproducts industry: The technical feasibility of a billion-ton annual supply*. U.S. Department of Energy and U.S. Department of Commerce.
- Pfau, S.F., Hagens J.E., Dankbaar, B., & Smits, A.J.M. (2014). Visions of sustainability in bioeconomy research. *Sustainability*, 6(3), 1222-1249. doi: 10.3390/su6031222
- Philp, J.C. (2018, November). *Realizing the circular bioeconomy*. OECD Science, Technology and Industry Policy Paper No 60.
- Planko, J., Cramer, J., Hekkert, M. P., & Chappin, M. M. H. (2017). Combining the technological innovation systems framework with the entrepreneurs' perspective on innovation. *Technology Analysis and Strategic Management*, 29(6), 614–625. doi:10.1080/09537325.2016.1220515
- Price, D. P., Stoica, M., & Boncella, R. J. (2013). The relationship between innovation, knowledge, and performance in family and non-family firms: An analysis of SMEs. *Journal of Innovation and Entrepreneurship*, 2(1), 14. doi:10.1186/2192-5372-2-14
- Pyka, A., & Prettnner, K. (2018). Economic growth, development, and innovation: The transformation towards a knowledge-based bioeconomy. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 331–342). Springer. doi:10.1007/978-3-319-68152-8\_11
- Qamruzzaman, M., & Ferdaous, J. (2014). Building a knowledge-based economy in Bangladesh. *Asian Business Review*, 4(3), 41–49. doi:10.18034/abr.v4i3.266
- Ramcilovic-Suominen, S., & Pülzl, H. (2018). Sustainable development – A 'selling point' of the emerging EU bioeconomy policy framework? *Journal of Cleaner Production*, 172, 4170–4180. doi:10.1016/j.jclepro.2016.12.157 doi:10.1016/j

## **Advancing a Framework for Entrepreneurship Development in a Bioeconomy**

- Rodino, S., Butu, A., Gheorghe, C., & Butu, M. (2020). Monitoring transformation of bioeconomy entrepreneurship in Romania. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Plesea, & C. Vasiliu (Eds.), *New Trends in Sustainable Business and Consumption* (pp. 879-885). Basiq International Conference, Messina, Italy.
- Rogers, E. M. (1995). *Diffusion of innovations*. The Free Press.
- Scarlat, N., Dallemand, J.-F., Monforti-Ferrario, F., & Nita, V. (2015). The role of biomass and bioenergy in a future bioeconomy: Policies and facts. *Environmental Development*, 15, 3–34. doi:10.1016/j.envdev.2015.03.006
- Schneider, R. (2014). Tailoring the bioeconomy to food security. *The International Journal for Rural Development Rural 21*. [https://www.rural21.com/fileadmin/downloads/2014/en-03/rural2014\\_03-S19-21.pdf](https://www.rural21.com/fileadmin/downloads/2014/en-03/rural2014_03-S19-21.pdf)
- Schurr, U. (2020). Food security and healthy nutrition in the context of the bioeconomy. In J. Pietzsch (Ed.), *Bioeconomy for beginners* (pp. 67–75). Springer. doi:10.1007/978-3-662-60390-1\_3
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217–226. doi:10.5465/amr.2000.2791611
- Sheerwood, J., Clark, J. H., Farmer, T. J., Herrero-Davila, L., & Moity, L. (2016). Recirculation: A new concept to drive innovation in sustainable product design for bio-based products. *Molecules (Basel, Switzerland)*, 22(1), 48. doi:10.3390/molecules22010048 PMID:28036077
- Sirkin, T., & Ten Houten, M. (1994). The cascade chain: A theory and tool for achieving resource sustainability with applications for product design. *Resources, Conservation and Recycling*, 10(3), 213–276. doi:10.1016/0921-3449(94)90016-7
- South African Government. (2013). *The Bio-economy Strategy*. Department of Science and Technology.
- Stenholm, P., Acs, Z. J., & Wuebker, R. (2013). Exploring country-level institutional arrangement on the rate and type of entrepreneurial activity. *Journal of Business Venturing*, 28(1), 176–193. doi:10.1016/j.jbusvent.2011.11.002
- Talavyria, M. P., Lyman, V. V., Baidala, V. V., & Holub, R. T. (2016). Approaches to the definition of production determinants of bio-oriented economy. *Ekonomika APK*, 7, 39–44.
- The White House. (2012). *National bioeconomy blueprint*. [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national\\_bioeconomy\\_blueprint\\_april\\_2012.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national_bioeconomy_blueprint_april_2012.pdf)
- Ting, M. B., & Philp, J. (2018). Revitalization of agricultural biomass for an industrial bio-economy: Case studies on South Africa and Netherlands bio-economy. In W. Leal Filho, D. Pociovălișteanu, P. Borges de Brito, & I. Borges de Lima (Eds.), *Towards a sustainable bioeconomy: Principles, challenges and perspectives*. World Sustainability Series. Springer. doi:10.1007/978-3-319-73028-8\_15
- Urmetzer, S., & Pyka, A. (2017). Varieties of knowledge-based bioeconomies. In S. Dabbert, I. Lewandowski, J. Weiss, & A. Pyka (Eds.), *Knowledge-driven developments in the bioeconomy* (pp. 57-82). *Economic Complexity and Evolution*. Springer. doi:10.1007/978-3-319-58374-7\_4

Urmetzer, S., Schlaile, M. P., Bogner, K. B., Mueller, M., & Pyka, A. (2018). Exploring the dedicated knowledge base of a transformation towards a sustainable bioeconomy. *Sustainability*, *10*(6), 1694. doi:10.3390/s10061694

Van Lancker, J., Wauters, E., & Van Huylenbroeck, G. (2016). Managing innovation in the bioeconomy: An open innovation perspective. *Biomass and Bioenergy*, *90*, 60–69. doi:10.1016/j.biombioe.2016.03.017

Van Renssen, S. (2014). A bioeconomy to fight climate change. *Nature Climate Change*, *4*(11), 951–953. doi:10.1038/nclimate2419

Velea, S., Oancea, F., & Fischer, F. (2018). Heterotrophic and mixotrophic microalgae cultivation. In C. Gonzalez-Fernandez & R. Muñoz (Eds.), *Microalgae-based biofuels and biofuels: From feedstock cultivation to end-products* (pp. 45-65). Kindlington, UK: Woodhead Publishing Series in Energy. doi:10.1016/C2015-0-05935-4

Virgin, I., Fielding, M., Sundell, M. F., Hoff, H., & Granit, J. (2017). Benefits and challenges of a new knowledge-based economy. In I. Virgin, & E.J. Morris (Eds.), *Creating sustainable bioeconomies – the bioscience revolution in Europe and Africa* (pp. 11-25). Routledge Studies in Ecological Economies. Oxon: Routledge.

Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, *24*(13), 1307–1314. doi:10.1002/mj.360

World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.

World Economic Forum. (2010). *The future of industrial biorefineries*. [www3.weforum.org/docs/WEF\\_FutureIndustrialBiorefineries\\_Report\\_2010.pdf](http://www3.weforum.org/docs/WEF_FutureIndustrialBiorefineries_Report_2010.pdf)

Yadav, Y. S., & Yadav, Y. K. (2016). Biomass supply chain management: Perspectives and challenges. In S. Kumar, S. Khanal, & Y. Yadav (Eds.), *Proceedings of the First International Conference on Recent Advances in Bioenergy Research* (pp. 267-281). New Delhi: Springer. 10.1007/978-81-322-2773-1\_20

## **ADDITIONAL READING**

Al-Mubaraki, H. M., Muhammad, A. H., & Busler, M. (2015). *Innovation and Entrepreneurship: Powerful Tools for a Modern Knowledge-based Economy*. Springer Briefs in Business. Cham: Springer.

Braunerhjelm, P., Acs, Z. J., Audretsch, D. B., & Carlsson, B. (2010). The missing link: Knowledge diffusion and entrepreneurship in endogenous growth. *Small Business Economics*, *34*(2), 104–125. doi:10.1007/11187-009-9235-1

Bryden, J., Gezelius, S. S., Refsgaard, K., & Sutz, J. (2017). Inclusive innovation in the bioeconomy: Concepts and directions for research. *Innovation and Development*, *7*(1), 1–16. doi:10.1080/2157930X.2017.1281209

Caloghirou, Y. D., & ... (2014). Exploring knowledge-intensive entrepreneurship in high-tech and low-tech manufacturing sectors: differences and similarities. In H. Hirsch-Kreinsen & I. Schwinge (Eds.), *Knowledge-Intensive Entrepreneurship in Low-Tech Industries*. doi:10.4337/9781783472048.00009

Imbert, E., Ladu, L., Morone, P., & Quitzow, R. (2017). Policy strategies for a transition to a bioeconomy in Europe: The case of Italy and Germany. *MPRA Paper No 78143*.

Jernström, E., Karvonen, V., Kässi, T., Kraslawski, A., & Hallikas, J. (2017). The main factors affecting the entry of SMEs into bio-based industry. *Journal of Cleaner Production*, 141, 1–10. doi:10.1016/j.jclepro.2016.08.165

Purkus, A., Hagemann, N., Bedtke, N., & Gawel, E. (2018). Towards a sustainable innovation system for the German wood-based bioeconomy: Implications for policy design. *Journal of Cleaner Production*, 172, 3955–3968. doi:10.1016/j.jclepro.2017.04.146

Sołtysik, M., Urbaniec, M., & Wojnarowska, M. (2019). Innovation for sustainable entrepreneurship: Empirical evidence from the bioeconomy sector in Poland. *Administrative Sciences*, 9(3), 50. doi:10.3390/admsci9030050

Zhao, F. (2005). Exploring the synergy between entrepreneurship and innovation. *International Journal of Entrepreneurial Behaviour & Research*, 11(1), 25–41. doi:10.1108/13552550510580825

## **KEY TERMS AND DEFINITIONS**

**Bioeconomy:** The sustainable production of renewable biological resources and the conversion of these resources and waste streams into value added products for final and intermediate consumption.

**Entrepreneurship:** The process of designing, launching, and running a new business to generate a profit.

**Framework:** A basic structure underlying a system, concept, or text.

**Innovation:** An idea, method, process, practice, or object that is perceived as new by an individual or other unit of adoption.

**Policy:** A course or principle of action adopted or proposed by an organization or individual

**Sustainable Development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

# Chapter 15

## Academic Entrepreneurship in Portugal: Case Study of Academic Spin-Off Companies

**Oscarina Conceição**

 <https://orcid.org/0000-0001-8072-8250>

*Polytechnic Institute of Cavado and Ave, Portugal & Dinâmia' CET-IUL, Portugal*

**Vanessa Rodrigues**

*Polytechnic Institute of Cavado and Ave, Portugal*

### ABSTRACT

*It is important to understand the role of higher education institutions in promoting entrepreneurship and supporting the creation of new companies to commercialize the knowledge generated in the academic field. The objective of this chapter is to analyze the creation and survival of academic spin-off companies in Portugal from 2005 to 2015. The results show that financial crisis did not change the academic spin-offs dynamics patterns, which shows that, even in crisis period, academic spin-offs maintain creation high levels (perhaps due to necessity-driven) and reveal survival high rates. In addition, a questionnaire was carried out to obtaining the academic entrepreneur's perception about the entrepreneurial process (individual characteristics; organizational resources/capabilities and entrepreneurial orientation). In fact, these results can help policy makers to reflect on the motivations and difficulties of the entrepreneurial process of this type of companies, and thus, develop an effective regional policy agenda in supporting the academic spin-offs development.*

DOI: 10.4018/978-1-7998-4826-4.ch015

## INTRODUCTION

The 2007-09 financial crisis has thrown many European economies into a period of slow growth and high unemployment, specifically in the peripheral countries of Europe such as Portugal, Italy, Ireland Greece and Spain (González-Pernía et al., 2018). Within this context, the entrepreneurial activity is crucial, given its role as main driver of economic recovery and growth. Regarding the impact of the economic crisis on entrepreneurship it is important to note that the effects can be different across countries (González-Pernía et al., 2018; Vegetti & Adăscăliței, 2017). Analyzing data from 25 EU member states from 2006 to 2012, Vegetti and Adăscăliței (2017) demonstrated that the decrease in entrepreneurial activity in the post-crisis period has been stronger in countries where access to finance for SMEs has been more difficult (i.e., Southern EU contexts). Additionally, Reynolds et al. (2002) show that developing territories are associated with higher levels of necessity-driven entrepreneurs, whereas more developed regions evince higher levels of opportunity-driven business start-ups.

Santos and Caetano (2015) analyse the dynamics of entrepreneurship in Portugal and other European Union countries from 2010 to 2014. Their results show that between 2010 and 2013, the total early-entrepreneurship rate in Portugal was the same as the average in EU countries but in 2014 it was higher. The authors highlight that this rise in entrepreneurial activity in Portugal in 2014 was mainly necessity-driven and not improvement-driven. In fact, the proportion of unemployment levels in Portugal have increased from 2008 to 2014, as well as in all EU-15 countries, with the exception of Germany. According to Eurostat data, in 2014 the unemployment rate in Portugal reached 14%, being 8% in 2008 (Millán, Millán, & Román, 2016).

Although many studies have analyzed the impact of the crisis on early entrepreneurship, studies on the impact of this financial crisis on academic entrepreneurship are scarce. How academic entrepreneurs react in times of crisis?

Bridging this gap, the objective of this study is to analyze the dynamics of academic entrepreneurship in the period of the crisis and in the post-crisis in a Southern EU country. For this purpose, we analyze the creation and survival of academic spin-off companies in Portugal in the period from 2005 to 2015.

For data collection, we contacted the technology transfer offices (TTO) of the six largest Portuguese universities in order to obtain information regarding the number of academic spin-offs formally created in the respective universities. We also request academic spin-offs additional information, namely creation year; sectors of activity, location, and activity closure (if applicable).

In a complementary way and considering the particular characteristics of academic entrepreneurs, a detailed questionnaire was carried to the entrepreneurs of the Portuguese academic spin-offs in order to understand their perceptions regarding the entrepreneurial process. Through this questionnaire we intend to obtain the perception of academic entrepreneurs regarding the main factors that influence the success of the spin-off entrepreneurial process: individual characteristics; organizational resources and capabilities and entrepreneurial orientation (Civera, Meoli, & Vismara, 2020; Hossinger, Chen, & Werner, 2020; Hayter, 2011; Ismail et al., 2010; Boehm, 2008)

### **Academic Entrepreneurship: the Role of Academic Spin-offs Companies**

“Developing and promoting entrepreneurship education has been one of the key policy objectives of the EU institutions and Member States for many years. Indeed, in the context of high youth unemployment, economic crises and rapid changes related to our complex knowledge-based economy and society,



transversal skills such as entrepreneurship are essential not only to shape the mindsets of young people, but also to provide the skills, knowledge and attitudes that are central to developing an entrepreneurial culture in Europe” (European Commission, 2016, p. 9).

Higher education institutions (HEIs) play a crucial role as promoters of regional economic and social growth, contributing through the spillover effects of teaching and research but also through universities’ entrepreneurial ventures such as academic spin-offs and graduate start-ups (Lehmann et al., 2020; Rauch & Hulsink, 2015).

The education systems must offer to their students programs and courses oriented to the understanding the entrepreneurial process, and the university should be concerned with promoting an entrepreneurial and commercial environment to bolster the ability to innovate (Bezanilla et al., 2020; Boehm, 2008; Kuratko & Hodgetts, 2004).

Nielsen, Stojanović-Aleksić and Bošković (2020) argue that a close cooperation with industry helps HEIs to backup students developing mind-sets for the job market by driving innovation. According to authors, academic spin-offs constitute an economically important sub-group of high-tech start-up firms and have, consequently, engendered substantial academic interest.

The academic spin-off company is a new company formed to commercially exploit knowledge and technologies developed at university or as a result of university research. They are a mechanism for the exploitation and value transfer of scientific knowledge created in research institutions. Indeed, the academic spin-offs are an important measure of entrepreneurial output of academic research, reflecting the entrepreneurial capacity of HEIs (Rasmussen, Mosey, & Wright, 2011; Marzocchi et al., 2019; Rothaermel, Agung, & Jiang, 2007; Mustar et al., 2006; Clarysse & Moray, 2004; Pirnay, Surlemont, & Nlemvo, 2003).

This type of company, as university -industry technology transfer mechanism, transfers the business idea developed at the university level to the business sphere, facing the strategic challenge of transforming a new technology into a product or service with financial returns and the strengths and weaknesses resulting from the connection to the university (Blankesteyn, Bossink, & van der Sijde, 2020; Thomas et al. 2020; Rothaermel et al., 2007; Mustar et al., 2006; Johansson, Jacob, & Hellstrom, 2005; Pirnay et al., 2003).

Regarding the academic entrepreneurs motivations, Hayter (2011) state that these entrepreneurs do not reveal the traditional motivations of growth and the pursuit of profit. In fact, the results show that the nascent academic entrepreneurs define success in a number of complex, interrelated ways including technology diffusion, technology development, and a large percentage of the respondents have little immediate interest in growth and have instead established their firms to pursue other sources of development funding (Hayter, 2011). Galati et al. (2020) suggest that motivations change over time: while financial aspects become less important, academics give more importance to other issues such as time, experience and financial gain influence the evolution of academic entrepreneurs’ motivations over time. Complementarily, Hayter, Lubynsky, and Maroulis, (2017) find that academic entrepreneur, in the early-stage of university spinoff companies, face unique challenges involving conflicts with faculty advisors and other students. Analyzing the entrepreneurial motivations through the opportunity vs necessity entrepreneurship, Civera et al. (2020) find that necessity-oriented academic spin-offs are associated with higher survival profiles, while opportunity-oriented spin-offs exhibit higher post-entry growth rates.

According to Vohora, Wright and Lockett (2004) academic spin-offs companies, cross a set of phases during its pre-creation and development process: “1st stage research ; 2nd Phase Opportunity framework ; 3rd Pre-organization phase ; 4th Phase State of reorganization ; 5th Phase Sustainable return”

(Vohora et al., 2004, p. 152). This process is characterized by its lack of linearity, the constant need to make decisions and the overcoming of obstacles. In the different phases, the entrepreneurs face critical situations in terms of resources and capabilities that are essential to move to the next stage, emphasizing that they can only move to the next stage when they overcome the previous stage, which may require resuming decisions and activities (Vohora et al., 2004). Academic spin-off companies essentially need to overcome four critical phases to be successful: (A) recognize the opportunity, (B) business commitment, (C) credibility and (D) sustainability (Vohora et al., 2004).

Most of the academic entrepreneurship literature examines the academic spin-offs post-formation (Thomas et al., 2020). Considering the determinants of academic spin-offs performance, the literature highlighting the influence of: i) micro-level factors such as firm location, academic entrepreneurs motivation; academic entrepreneurs previous managerial experience, board of directors composition (namely the presence of non-academic managers within academic spin-offs management teams), and strategic entrepreneurial orientation; ii) macro-level factors such as relationships with Parent university, Parent university status/reputation, Parent university entrepreneurial policies; Incentive systems and regional contexts (Bolzani, Rasmussen, & Fini, 2020; Diáñez-González, Camelo-Ordaz, & Fernández-Alles, 2020; Ferretti et al., 2020; Hossinger et al., 2020; Prencipe et al., 2020; Rothaermel et al., 2007; Di Gregorio & Shane, 2003; Pérez & Sánchez, 2003)

At a macro-level the literature focused on the impact of economics trends on the creation and performance of academic spin-offs are scarce. Breznitz and Clayton (2017) analyze the impact of the global economic recession of 2008-2013 on university output. The authors show that public universities' output, such university publication rate, patents, and licenses, was negatively affected by the reduced state government support. However the effect of economic crisis on entrepreneurial activity may not be entirely negative. Horta et al. (2016) using data on academic spin-offs from Italian universities over the period 1999 to 2013 show that, rather than decreasing the number of spin-offs, an economic downturn will push university graduates or academics to start firms because they see self-employment is a better option during economic downturns. Through the “recession-push”, or necessity entrepreneurship, the authors find a positive linear relationship between levels of relative skilled unemployment and academic spin-off creation, in particular hi-tech spin-offs.

## **PORTUGUESE ACADEMIC SPIN-OFF COMPANIES: EMPIRICAL ANALYSIS**

### **Methodology**

Considering the objective of this chapter, analyzing the dynamics of academic entrepreneurship in the period of the crisis and in the post-crisis in Portugal, we carried out an empirical analysis of academic spin-off companies created in the main Portuguese universities between 2005 and 2015. For this purpose, we compare the creation and survival of academic spin-off companies in Portugal in the period from 2005 to 2015 with: i) Portuguese entrepreneurial activity during the financial crisis (2008-2013); ii) creation and survival pre-crisis trend of Portuguese academic spin-off companies. This study analyzes the academic spin-offs created in the six main Portuguese universities according to the Webometrics Ranking of World Universities ranking: University of Aveiro; University of Coimbra; University of Lisbon; University of Minho; Nova University of Lisbon and University of Porto. For data collection, we contacted the TTOs of these six Portuguese universities in order to obtain information regarding the

number of academic spin-offs formally created in the respective universities. We also request academic spin-offs additional information, namely creation year; sectors of activity, location, and activity closure (if applicable). Despite successive insistences, it was not possible to collect data regarding the academic spin-offs of Nova University of Lisbon, which meant that it was excluded from this analysis and data treatment, thus the sample being constituted only by the remaining five universities. Considering the particular characteristics of academic entrepreneurs, a complementary questionnaire was carried to the entrepreneurs of the Portuguese academic spin-offs in order to understand their perceptions regarding the entrepreneurial process. This detailed questionnaire was carried out to the entrepreneurs of active and registered academic spin-off companies in the period under review at the University of Aveiro, the University of Minho and the University of Porto Through questions such as: “What are the predominant characteristics of the promoter team? What is the process of technology transfer from the Parent university? What is the strategy and business model adopted?”, we intend to obtain the perception of academic entrepreneurs regarding the main factors that influence the success of the spin-off entrepreneurial process: individual characteristics; organizational resources and capabilities and entrepreneurial orientation (Bolzani et al. 2020; Civera, Meoli, & Vismara, 2020; Hossinger, Chen & Werner, 2020; Hayter, 2011; Ismail et al, 2010; Boehm, 2008).

### **Portuguese Academic Spin-offs and 2008-2013 Financial Crisis**

Based on the distinction made by the Webometrics Ranking of World Universities ranking, this study focus on a sample made up of companies created and registered as a spin-off, between 2005 and 2015, in the five main Portuguese universities: University of Aveiro; University of Coimbra, University of Lisbon, University of Minho and University of Porto.

#### **Portuguese Entrepreneurial activity between 2005 -2015: Academic spin-offs vs. others start-ups**

According to Global Entrepreneurship Monitor [GEM] (2013), between 2004 and 2007 there was an increase to more than double the proportion of early-stage entrepreneurs, “early-stage entrepreneurial activity” (TEA) of 4.0% in 2004 and TEA of 8.8% in 2007. This positive breath and dynamism registered in the level of entrepreneurial activity in Portugal in 2007 is followed, however, by a sharp drop, TEA of 5% in 2010, i.e., about five Portuguese are involved in start-ups or in the management of new businesses for every 100 individuals in adulthood. In the following years, between 2010 and 2013, there was an increase and recovery of TEA, setting an average value of 7.8% in the period of these three years (GEM, 2013). The peak of entrepreneurship verified in 2007 is essentially due to reasons of opportunity resulting from the good macroeconomic performance of the country, whereas the growth verified between 2010 and 2011 could be motivated by the necessity, due to the adoption of austerity measures (GEM, 2013). According to the OECD (2017), the global crisis implied sudden changes in access to external financing, culminating in an external aid program for Portugal in 2011.

In 2014, there was a decrease in entrepreneurial activity in Portugal, which may be associated with the improvement of macroeconomic conditions that led to an increase in employment (GEM, 2015)

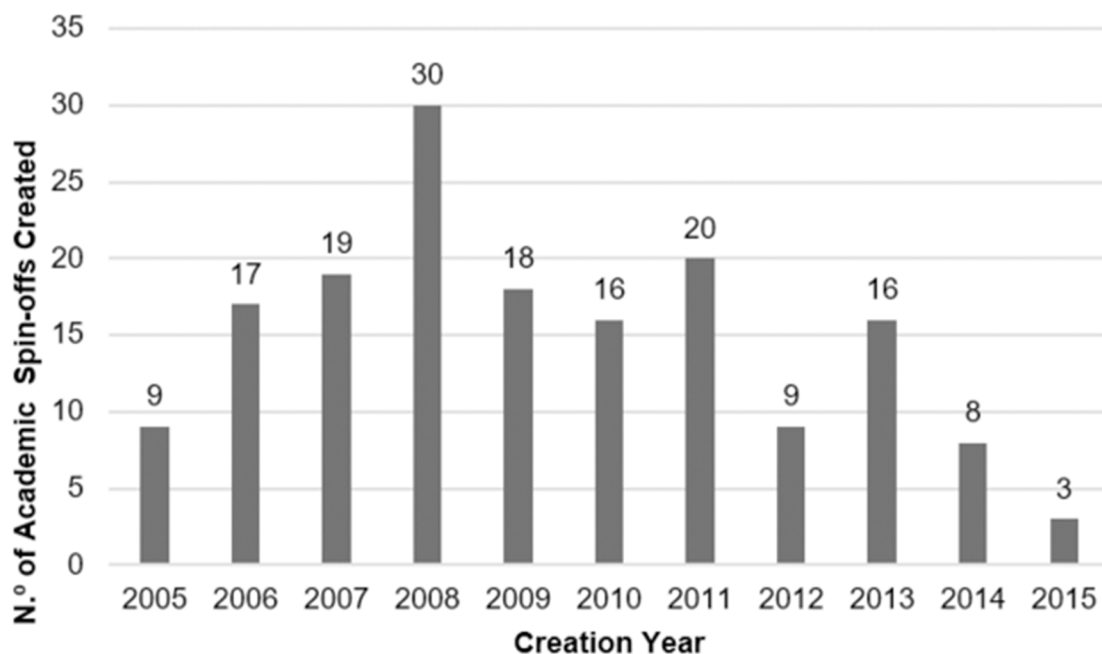
Concerning the academic spin-offs creation, between 2005 and 2015 there were 165 academic spin-offs registered at the five Portuguese universities under analysis. In this period under analysis, the University of Coimbra is the institution with the largest number of spin-offs created, with 67 registered spin-offs,

## Academic Entrepreneurship in Portugal

followed by the University of Minho and the University of Lisbon with 35 and 34 spin-offs created, respectively. The University of Aveiro registers a total of 19 registered spin-offs and the University of Porto registers 10 spin-offs created.

Analyzing the evolution of the academic spin-off's creation between 2005 and 2015 (Figure 1) we found that its evolution follows the "trend" of Portuguese TEA. In fact, from 2005 to 2008 there was a positive evolution in the spin-offs creation, reaching the highest value in 2008 with the constitution of 30 academic spin-off companies. In the following years there was a 46.67% drop in the formation of academic spin-offs, this drop can be explained taking into account the economic crisis that Portugal was going through, however until 2013 this drop is not constant and linear since in 2011 and 2013 there was a slight increase compared to previous years, but from 2013 to 2015 there is a significant drop, as registered in the Portuguese TEA.

Figure 1. Number of Academic Spin-off created by creation year  
Source: Own Elaboration



Analyzing the number of Portuguese companies that closed their activity in the period from 2005 to 2015, and according to Banco de Portugal (2015), the exit rates have steadily increased over the crisis period and the periods of economic recovery have not been followed by lower exit rates. The results also indicate that a considerable fraction of new companies closed activity in their early years and that only about 48% of new companies survive over the sample period.

Analyzing the exit rate of the academic spin-offs under study, it can be seen that of the 165 academic spin-offs registered in the period under analysis, 133 remain active and 32 formally closed their activity, thus registering an exit rate of 19.4%.

These results are in line with the survival literature. According to Geroski et al. (2010) the macro-economic conditions are important for the survival of companies. However, with regard to academic spin-offs the empirical literature evidence that these companies exhibit lower death risks than other entrants in the same industry (Conceição et al. 2014; Smith & Ho, 2006; Callan, 2001).

### Portuguese Academic spin-offs Evolution: pre- crisis vs. crisis period

Academic spin-offs are created and distributed in different sectors of activity. Previous studies of Portuguese academic spin-offs show that these companies are distributed in six sectors of activity, namely, software, biotechnology, energy, electronics, engineering and services. The software area represents 45.11% of this type of companies, followed by the biotechnology area 14.90%, energy 12.90%, electronics 11.66%, services with 10.23% and finally engineering with 5,19% (Conceição, Faria, & Fontes, 2017; Conceição & Faria, 2014).

Regarding the academic spin-offs created during the period under analysis, it appears that the most important sectors of activity remain the software with 38%, followed by the biotechnology area (32%), which is in line with the trend of the previous study.

The location of academic spin-offs is considered an important factor for their performance. Being located in a metropolitan area or in a municipality with a large industrial or technological affluence seems to be an important factor and has a direct influence on the survival of academic spin-offs (Conceição and Faria, 2014). On the other hand, the proximity between companies and other actors that stimulate entrepreneurship such as universities, entrepreneurship support offices, public entities that support entrepreneurship facilitate the use of information, qualified work, technology and capital (Conceição et al. 2017; Conceição & Faria, 2014; Heblich & Slavtchev 2014).

Regarding the Portuguese academic spin-offs location, previous studies show that being close to the university, university incubators and / or university research parks is considered a relevant aspect to explain the distribution of this type of companies by the municipalities (Conceição et al., 2017; Conceição & Faria, 2014).

In the present study we found that, of the 165 academic spin-offs created between 2005 and 2015, 89% decided to locate their headquarters in the same district as the university of origin and 72% in the same municipality, that is, in large cities, thus benefiting from their technological and business activity, and from proximity to the university benefiting from its support and services, in line with what was evidenced by previous studies.

Regarding the survival rate of Portuguese academic spin-offs, Conceição and Faria (2014) concluded that the sector of activity of the academic *spin-off* company have an influence on the company's probability of survival, specifically, they concluded that the biotechnology, energy and electronics areas face lower risks of mortality than academic spin-offs that work in the services area.

According to table 1, we found that for Portuguese academic spin-offs created between 2005 and 2015, the mortality rate of academic *spin-offs* is also different according to the sector of activity. Similar to previous studies we found that the sectors of activity with the lowest mortality rates are the environment and energy (14.29%) and *software* (17.46%), with consultancy being the sector of activity with the highest mortality rate (33.33%).

Regarding the 19 academic spin-offs registered at the University of Aveiro in the period under analysis, it appears that the sector with the greatest weight is biotechnology (42.1%) followed by *software* (21.05%). Of these 19 spin-off companies, 13 are active and 6 have already closed, resulting in a 32%

## Academic Entrepreneurship in Portugal

Table 1. Academic spin-off companies Mortality Rate by sector of activity

Sector	Number of Academic Spin-off companies created	Number of Active Academic Spin-off companies	Number of Academic Spin-off companies closed	Mortality Rate
Environment and Energy	14	12	2	14.29%
Electronics and Instrumentation	17	13	4	23.53%
Software	63	52	11	17.46%
Biotechnology	52	42	10	19.23%
Consultancy	9	6	3	33.33%
Engineering	10	8	2	20.00%
<b>TOTAL</b>	<b>165</b>	<b>133</b>	<b>32</b>	

Source: Own Elaboration

mortality rate. Comparing the number and companies created and their closure, we find that companies in the Software and Engineering sectors did not register any closures, in contrast with the academic spin-offs in the Environment and Energy and Consulting sectors, in which all companies closed their activity in the period under analysis.

Regarding the 67 academic spin-offs registered at the University of Coimbra, it appears that the sector with the greatest weight is Software with 46.27%, followed by Biotechnology 26.86%. It should be noted that in the period under review, no engineering academic spin-off company was registered. Of the 67 academic spin-off companies formed, 48 are active and 19 have closed, resulting in a 28% mortality rate. In the specific case of the spin-offs from the University of Coimbra, and comparing the number of companies created and their closure, we find that companies in the Biotechnology sector registered a better performance, with a survival rate of 89% (of the 16 spin-offs that started operations only 2 have closed, in the period under review). The sector of activity with the highest number of closures is Electronics and Instrumentation with a mortality rate of 60% (represented by the closure of 3 companies from the 5 companies) registered in the period under analysis.

With regard to the 34 academic spin-offs registered at the University of Lisbon in the decade under analysis, it was found that the sectors of activity with the greatest weight are *Software* and *Biotechnology* (35.3% and 32.4%, respectively). It should be noted that in the period under review, no academic spin-off company was registered in the Consulting sector. Of the 34 academic spin-off companies formed, 31 are active and 3 have already closed, with a mortality rate of 9%. Considering the closure of the activity in the period under analysis, it appears that the only Engineering academic spin-off company registered at the University of Lisbon closed activity (mortality rate of 100%) and that 18.18% of Biotechnology companies closed activity.

In the decade under analysis, 35 academic spin-offs were registered at the University of Minho, verifying that the sectors of activity with greater weight are, equally, *Software* and *Biotechnology* (37.14% and 34.29%, respectively). Of the 35 spin-off companies formed, 31 are active and 4 have already closed, thus registering a mortality rate of 11%. Analyzing the number of spin-offs that closed their activity at the University of Minho, we found that only the Biotechnology and Engineering sectors closed (25% and 16.7%, respectively).

Of the 10 academic spin-offs registered at the University of Porto, in the period under analysis, the sectors of activity with the greatest weight are Software and Biotechnology (both with 30%). It should be noted that there was no academic spin-off company in the Consulting sector. Analyzing the closure of spin-offs, we found that no company ended its activity during the decade under analysis (mortality rate of 0%).

## Discussion

Analyzing the dynamics of academic entrepreneurship in in the period of the crisis and in the post-crisis in Portugal (between 2005 and 2015), we found that there were 165 academic spin-offs registered at the five Portuguese universities under analysis.

Comparing the creation and survival of academic spin-off companies in Portugal in the period from 2005 to 2015 with Portuguese entrepreneurial activity during the financial crisis (2008-2013), the results show that the Portuguese academic spin-offs creation follows the “trend” of Portuguese TEA. Indeed, both reveal a peak of business creation in 2007/2008, resulting from the good macroeconomic performance of the country, followed by a decrease in entrepreneurship levels until 2010. After 2010 there is a recovery in the levels of Portuguese entrepreneurial activity and also academic spin-off companies’ creation – this growth could be motivated by the necessity, due to the adoption of austerity measures. In 2013/2014, there was a decrease in entrepreneurial activity in Portugal and also in the academic spin-off companies’ creation, which may be associated with the improvement of macroeconomic conditions that led to an increase in employment (GEM, 2015).

With regard to exit rates, the results show that Portuguese academic spin-offs, in the crisis and post-crisis periods, as in the pre-crisis period, continue to show lower mortality rates than other start-ups companies.

Comparing the levels of creation and survival of academic spin-off companies in Portugal in the crisis and post-crisis periods with the creation and survival in the pre-crisis period, the results show that the crisis did not change the patterns previously verified. In fact, during crisis and post crisis periods, Portuguese academic spin-offs continue, as in the pre-crisis period, to be created preferentially in the software and biotechnology sectors and continue to prefer to be located in the same district as the Parent university. Concerning the mortality rate by sector of activity, the results show that the services sector presents, in the periods of crisis and post-crisis, the highest mortality rates, as seen in the pre-crisis period.

## **PORTUGUESE ACADEMIC ENTREPRENEURS PERCEPTIONS REGARDING THE ENTREPRENEURIAL PROCESS**

Considering the particular characteristics of academic entrepreneurs, a complementary questionnaire was carried to the entrepreneurs of the Portuguese academic spin-offs in order to understand their perceptions regarding the entrepreneurial process. This detailed questionnaire was carried out to the entrepreneurs of active and registered academic spin-off companies in the period under review at the University of Aveiro, the University of Minho and the University of Porto- in a total of 54 spin-offs, 13 from the University of Aveiro, 31 from the University of Minho and 10 from the University of Porto.

The questionnaires were sent to the entrepreneurs of the academic spin-off companies via email using the Google Forms. Of the 54 questionnaires sent, 30 valid responses were obtained, representing a

response rate of 55.56%. Of the 30 responses we found that: 17 responses belong to spin-off companies registered at the University of Minho (response rate of 54.84%), 8 responses belong to spin-off companies registered at the University of Aveiro (response rate of 61.54%), and 5 responses belong to spin-off companies registered at the University of Porto (response rate of 50.00%).

In these questionnaire we intend to obtain the perception of academic entrepreneurs regarding the main factors that influence the success of the spin-off entrepreneurial process: individual characteristics; organizational resources and capabilities and entrepreneurial orientation (Civera, Meoli, & Vismara, 2020; Hossinger, Chen, & Werner, 2020; Hayter, 2011; Ismail et al, 2010; Boehm, 2008).

### **Individual Characteristics of the Entrepreneurs**

Analyzing the entrepreneurs of the 30 academic spin-off companies that answered our questionnaire, the results show that 81.31% are male compared to only 18.69% female. In detail we can see that, in relation to the respondent entrepreneurs, the male entrepreneurs on spin-offs companies of University of Aveiro, the University of Porto and the University of Minho represent 88.24%, 85.71% and 76.27% respectively. In fact, and according to GEM (2012), in Portugal, there is a higher incidence of male entrepreneurs in relation to the female, with male entrepreneurs corresponding to 9.2% of the adult male population and female entrepreneurs to 6.1% of the adult female population.

Regarding the entrepreneurs age, in the present study we found that the majority of the respondent entrepreneurs were aged between 30 and 40 years (63.33%). In the individual analysis by university of origin it was found that the interval from 30 to 40 years old is likewise the interval with the highest percentage of entrepreneurs being represented by 47% at the University of Minho, 100% at the University of Porto and 75% at Aveiro University. According to GEM (2012) the age group with the highest TEA in Portugal was 25 to 44 years old, with the lowest TAE interval being 55 to 64 years old.

Analyzing the entrepreneurs' qualifications, the results show a high weight of entrepreneurs with a PhD in the entrepreneur's team (46.08%). Considering the Parent university of the respondent spin-offs companies, we found that in relation to the University of Aveiro, 29.03% of the entrepreneurs are graduates, 19.35% are masters and 51.61% are PhDs; in relation to the University of Minho, 20.69% are graduates, 41.38% masters, 37.93% are PhDs. At the University of Porto 30.77% are masters, 69.23% are PhDs. In academic spin-offs, given their role as a mechanism for transferring knowledge and technology, there is a high proportion of entrepreneurs with a PhD. Thus, the presence of doctorates in the team promoting this type of company is not considered a differentiating aspect for their survival (Conceição & Faria, 2014).

Regarding the number of entrepreneurs per team at the time of creation, we found that, on average, the respondent academic spin-offs have 3.57 entrepreneurs. Analyzing the team of entrepreneurs according to the university of origin we find that the University of Aveiro is the university with the highest average entrepreneurs (4.25), followed by the University of Minho (3.47) and finally the University from Porto (2.8).

Considering the exclusivity regime that the entrepreneurs have in relation to the activity developed in the academic spin-off company, we find that 43.33% of the respondent academic spin-offs have entrepreneurs working in another organization in addition to the academic spin-off company and only 30% of the companies academic spin-offs have teams of entrepreneurs on an exclusive basis.

At the University of Aveiro 50% of the academic spin-offs have entrepreneurs working in another organization in addition to the academic spin-off company, 37.50% have exclusive promotion teams and 12.50% of the companies have all the entrepreneurs to work in another organization.



At the University of Minho 35.29% of the academic spin-offs have entrepreneurs working in an organization other than the academic spin-off, 29.41% have exclusive promotion teams and 35.29% of the companies have all entrepreneurs working in another organization.

At the University of Porto, 60% of the academic spin-offs have entrepreneurs working in another organization in addition to the academic spin-off company, 20% have exclusive promotion teams and 20% of the companies have all the entrepreneurs working in another organization.

In view of the entrepreneurs' withdrawal during the development of academic spin-off companies, we find that, in relation to the Parent university, the University of Aveiro is the university with the highest record of dropouts by the entrepreneurs of its academic spin-offs with a dropout rate of 29.41%, followed by the University of Porto with a dropout rate of 28.57% and finally the University of Minho with a dropout rate of 13.56%.

## **Organizational Resources and Capabilities**

### **Origin of the academic spin-off company's technology**

Considering the origin of the technology of the academic *spin-off* company, that is, if it was developed at the university of origin and transferred formally or informally to the company or if it was developed in cooperation with organizations other than the university of origin, we find that 46, 67% of respondent spin-offs reported that the technology of the academic spin-off company was developed at the university of origin and formally transferred to the company; 36.67% indicate that the technology was developed at the home university and transferred informally to the company, and only 10% indicate that it was developed in collaboration with organizations other than the home university. It should be noted that 2 companies (6.66%) did not answer this question.

In the case of spin-offs registered at the University of Aveiro, we found that in 87.50% of academic *spin-offs* the technology was developed at the university of origin and formally transferred to the company and 12.50% by technology developed at the university of origin and transferred informally to the company.

Regarding spin-offs registered at the University of Minho, 17.65% of the companies indicated that their technology was developed at the home university and formally transferred to the company, 58.82% indicated that the technology was developed at the home university and informally transferred to the company, 11.76% that the technology was developed in collaboration with organizations other than the university of origin and 11.76% of the companies did not answer this question.

Analyzing the spin-offs registered at the University of Porto, we find that 80% of the companies report that the technology was developed at the home university and formally transferred to the company and 20% have their technology developed in collaboration with other organizations in addition to the home university.

### **Collaboration with the Parent university**

As mentioned in the literature review, the Parent university plays a crucial role in the process of formation and development of academic spin-offs, following the company since the beginning of the entrepreneurial process, however over the years and with the maturity of the company there is a decrease in this connection (Bolzani et al., 2020; Pérez & Sánchez, 2003).

## **Academic Entrepreneurship in Portugal**

Regarding the 30 respondent academic *spin-offs*, we found that 80% continue to collaborate with the home university and only 5 companies claim to no longer collaborate with the home university (representing 16.67%). It should be noted that 1 academic spin-off company did not answer this question.

Considering the Parent university of the respondent academic *spin-offs*, we find that in the case of the University of Aveiro, 87% of the academic spin-offs continue to collaborate with the home university and 13% no longer collaborate with the home university. Regarding the University of Minho, 76% of academic spin-offs continue to collaborate with the home university, 18% no longer collaborate with the home university and 6% have not answered this question. With regard to the University of Porto, 80% of academic spin-offs continue to collaborate with the university of origin and 20% no longer collaborate with the university of origin.

In order to analyze the role played by the university of origin in supporting the academic spin-off company, that is, the support provided by the university of origin in the process of formation and development of the company, an question consisting of a set of seven options was elaborated, being allowed to select more than one option. In the matter, the following incentives were listed: access to infrastructure (incubator, laboratory facilities and others), access to technology (patents or others), support in patent applications (or other forms of protection of Intellectual Property), analysis of the viability of the technology, preparation of the business plan, financing and other support (calls for tenders, identification of funding sources and partners, management skills).

Access to infrastructures, being one of the 9 structural conditions for entrepreneurship defined by the Global Entrepreneurship Monitor, is considered by Portuguese specialists to be the structural condition with the most positive impact, being seen as a facilitating factor for entrepreneurship (GEM, 2012).

In accordance with the GEM study (2012), “access to infrastructure” was indicated by respondent academic spin-offs, as the fundamental support provided by the Parent university (16.67%). In 12 of the 30 responses to the questionnaire, either alone or in conjunction with other options, the option “access to infrastructure” was selected, which is arguably the support provided by the Parent university most recognized by the entrepreneurs of academic spin-offs.

## **Entrepreneurial Orientation**

### **Business model of the academic spin-off company**

The definition of the business model is crucial for the good development of the company since it highlights the activities carried out by the company, it includes the definition of the company’s activity i.e. what it does and how it does it (Ferreira et al., 2010) .

We analyzed the business model of the academic spin-off company, based on three models: i) development of a product or service and commercialize it; ii) development of a technology and commercialize or license it; iii) “hybrid” model (includes the two previous models).

Considering the 30 respondent academic *spin-offs*, we found that 50% have the development and commercialization of a product or service as their business model, 3.33% the development and commercialization or licensing of a technology, 40% the combination of the two. It should be noted that 2 academic spin-offs did not answer this question (6.67%).

Analyzing the university of origin of the respondent academic *spin-offs* we find that at the University of Aveiro 37% of the academic spin-offs claim to have the development and commercialization of a product or service as their business model and 63% the combined business model. In the case of the University

of Minho, 65% of the respondent academic spin-offs have as their business model the development and commercialization of a product or service, 6% the development and commercialization or licensing of a technology, 17% the combined business model and 12% of academic spin-offs did not answer this question. At the University of Porto, 20% of respondent academic spin-offs have a business model for the development and commercialization of a product or service and 80% have a combined business model.

### Technology / product ready to be marketed by the academic spin-off company

Of the 30 respondent academic spin-offs, we found that 83.33% consider having technology / products ready to be traded in the market.

Of the 8 academic spin-offs registered at the University of Aveiro, 87.5% say they are in a position to commercialize the technology / products. Similarly, 82.35% of the academic spin-offs analyzed at the University of Minho say they are able to commercialize the technology / products. Finally, and accordingly, of the 8 academic spin-offs registered at the University of Porto Aveiro, 80% are able to commercialize the technology / products.

Regarding the effective commercialization of technology / products, 66.67% of the academic spin-offs analyzed (20 out of the 25 that responded) have already introduced technology / products to the market and 5 consider that this introduction will occur next year.

### Business strategy

The objective of a company's strategy is to achieve a competitive advantage over its competitors, and the company must select the most appropriate strategy to improve its competitiveness (Ferreira et al., 2010).

The differentiation strategy consists of creating/developing the activity with a focus on distinction, since doing it differently from others and competing for prices have as their central point reaching the lowest cost in relation to the competition. However, this desire for low cost can in many cases lead to a price war, margin reduction or company bankruptcy (Ferreira et al., 2010).

For the 30 academic spin-offs analyzed, the strategy of differentiation by technological innovation represents 50% and the strategy of competition for prices represents only 3.33%

At the University of Aveiro, 75% of academic *spin-offs* define a strategy for differentiation through technological innovation and 25% a strategy for differentiation by quality / reliability.

At the University of Minho 35.29% of academic *spin-offs* define a differentiation strategy by technological innovation, 47.06% a differentiation strategy by quality / reliability, 5.88% a differentiation strategy by *design* / project, 5.88% a price competition strategy and 5.88% did not answer this question.

At the University of Porto, 60% of academic *spin-off* companies define a differentiation strategy through technological innovation, 20% a differentiation strategy through quality / reliability and 20% a differentiation strategy through *design* / project.

Analyzing the internal measures considered a priority for the 30 academic spin-offs under study (table 2), we can see that "Getting partnerships to market your 'idea' / product / service" is considered an extreme priority for 36.67% of the companies, closely followed by a high level of priority on "Create / develop marketing / commercial service" and "Get partnerships for the production of your 'idea' / product / service".

*Table 2. Internal Priority measures for the next three years*

Measures	Classification Status:	Average rating
Get partnerships to market your 'idea' / product / service	Extreme Priority	36.67%
Create / develop marketing / commercial service	High Priority	40.00%
Get partnerships for the production of your 'idea' / product / service	High Priority	36.67%
Hire qualified R&D personnel	High Priority	26.67%
Make the <i>scale-up</i> of technology	Medium Priority	26.67%
Purchase equipment	Low Priority	43.33%
Hire qualified staff for management team	Low Priority	26.67%
Set up own facilities / laboratories	No Priority	33.33%
Others	No Priority	6.67%

Source: Own Elaboration

## DISCUSSION

Considering the individual characteristics, it appears that regardless of the university of origin, the entrepreneurs have similar characteristics. Indeed, in all three Parent universities the entrepreneurs are men with age range predominantly set between 30 to 40, being the doctorate the most prevalent academic qualification while it is also determined that the majority of the promoting teams do not exercise their function in an exclusive regime with the academic spin-off company.

Regarding organizational resources and capabilities, the results show that the formal transfer of technology from the Parent university to an academic spin-off company is the main option for these companies and access to infrastructure is the most acknowledged university incentive by the entrepreneurs of academic spin-offs, as the vast majority of them still maintain a relationship with the university of origin.

The business model shows that most academic spin-offs are modeled on the development and commercialization of a product or service. Regarding the effective commercialization of technology / products, 66.67% of the academic spin-offs analyzed (20 out of the 25 that responded) have already introduced technology / products to the market. Finally, the strategic measure considered to be extremely important for academic spin-offs is the development of partnerships to commercialize their idea / product / service.

Thus, in the three dimensions under analysis: individual characteristics; organizational resources and capabilities and entrepreneurial orientation it seems that there is a very similar perception of academic entrepreneurs regarding the main factors that influence the success of the spin-off entrepreneurial process.

## CONCLUSIONS

The 2007-09 financial crisis has thrown many European economies into a period of slow growth and high unemployment, specifically in the peripheral countries of Europe such as Portugal, Italy, Ireland Greece and Spain (González-Pernía et al., 2018). Within this context, the entrepreneurial activity is crucial, given its role as main driver of economic recovery and growth. Although many studies have analyzed the impact of the crisis on early entrepreneurship, studies on the impact of this financial crisis on academic entrepreneurship are scarce. How academic entrepreneurs react in times of crisis?

Bridging this gap, the objective of this study is to analyze the dynamics of academic entrepreneurship in the period of the crisis and in the post-crisis in a Southern EU country. Analyzing the dynamics of academic entrepreneurship in the period of the crisis and in the post-crisis in Portugal (between 2005 and 2015), we found that there were 165 academic spin-offs registered at the five Portuguese universities under analysis.

The results show that, in the crisis and post-crisis periods, the Portuguese academic spin-offs creation follows the “trend” of Portuguese TEA. With regard to exit rates, the results show that Portuguese academic spin-offs, in the crisis and post-crisis periods, as in the pre-crisis period, continue to show lower mortality rates than other start-ups companies, which is in line with literature.

Regarding the levels of creation and survival of academic spin-off companies in Portugal in the crisis and post-crisis periods compared with the creation and survival in the pre-crisis period, the results show that the crisis did not change the patterns previously verified. In fact, during crisis and post crisis periods, Portuguese academic spin-offs continue, as in the pre-crisis period, to be created preferentially in the software and biotechnology sectors and continue to prefer to be located in the same district as the Parent university. Concerning the mortality rate by sector of activity, the results show that the services sector presents, in the periods of crisis and post-crisis, the highest mortality rates, as seen in the pre-crisis period.

Considering the perception of academic entrepreneurs regarding the main factors that influence the success of the spin-off entrepreneurial process (individual characteristics; organizational resources and capabilities and entrepreneurial orientation), the results show that, in the three dimensions under analysis, there is a very similar perception of academic entrepreneurs. The results show that the academic entrepreneurs do not exercise their function in an exclusive regime with the academic spin-off company. Regarding organizational resources and capabilities, the results show that the formal transfer of technology from the Parent university to an academic spin-off company is the main option for these companies and access to infrastructure is the most acknowledged university incentive by the entrepreneurs of academic spin-offs, as the vast majority of them still maintain a relationship with the university of origin. The business model shows that most academic spin-offs are modeled on the development and commercialization of a product or service. In fact, 66.67% of the academic spin-offs analyzed have already introduced technology / products to the market.

Overall, the results show that the crisis did not change the academic spin-offs creation and survival patterns, which shows that, even in periods of crisis, academic spin-offs companies maintain high levels of creation (perhaps due to necessity-driven) and reveal high rates of survival. It is thus important for policymakers to develop an effective regional policy agenda in supporting the development of academic spin-offs. On the other hand, the perception results of academic entrepreneurs can help policy makers to reflect on the motivations and difficulties of the entrepreneurial process of this type of companies. In fact, a higher engagement of the actors of the regional ecosystem is a critical prerequisite to foster academic spin-off growth.

Regarding the limitations of this work, it is important to highlight that the data collection was restricted to academic spin-off companies formally registered as such in the universities of origin. When performing data collection based on this criterion, we are aware that we are under-evaluating the phenomenon of creating academic spin-offs because we may have companies that are able to be considered academic spin-offs but that have not formalized this situation with the Parent universities.

In future research it is also important understand what support systems are available in our country to promote this type of phenomena. Indeed, the identification of the determinants of the entrepreneurial process of these academic *spin-offs* companies is crucial from a policy definition point of view.

## **Academic Entrepreneurship in Portugal**

Academic *spin-offs* companies are one of the results of academic entrepreneurship promotion, leading to new opportunities, combating unemployment and increasing economic growth thus, it should be an activity promoted in the academic field.

## **REFERENCES**

- Banco de Portugal. (2015). *Análise Setorial das Sociedades Não Financeiras em Portugal 2010-2015*. Banco de Portugal.
- Bezanilla, M., García-Olalla, A., Paños-Castro, J., & Arruti, A. (2020). Developing the Entrepreneurial University: Factors of Influence. *Sustainability*, 12(3), 842. doi:10.3390/u12030842
- Blankesteyn, M., Bossink, B., & van der Sijde, P. (2020). Science-based entrepreneurship education as a means for university-industry technology transfer. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-019-00623-3
- Boehm, J. (2008). *Entrepreneurial Orientation in Academia*. Springer Science & Media.
- Bolzani, D., Rasmussen, E., & Fini, R. (2020). Spin-offs' linkages to their parent universities over time: The performance implications of equity, geographical proximity, and technological ties. *Strategic Entrepreneurship Journal*, sej.1359. doi:10.1002/ej.1359
- Breznitz, S., & Clayton, P. (2017). *The Impact Of The 2008-2013 Financial Crisis On University Research Output*. Innovation Policy White Paper Series 2017-02, University of Toronto.
- Callan. (2001). Generating spin-offs: evidences from across the OECD. *STI Review*.
- Civera, A., Meoli, M., & Vismara, S. (2020). Engagement of academics in university technology transfer: Opportunity and necessity academic entrepreneurship. *European Economic Review*, 123, 103376. Advance online publication. doi:10.1016/j.euroecorev.2020.103376
- Clarysse, B., & Moray, N. (2004). A process study of entrepreneurial team formation: The case of a research-based spin-off. *Journal of Business Venturing*, 19(1), 55–79. doi:10.1016/S0883-9026(02)00113-1
- Conceição, O., & Faria, A. (2014). *Determinants of research-based spin-offs survival*. Working Paper, 2014/21. Braga: NIPE – Universidade do Minho.
- Conceição, O., Faria, A., & Fontes, M. (2017). Regional variation of academic spinoffs formation. *The Journal of Technology Transfer*, 42(3), 654–675. doi:10.1007/10961-016-9508-1
- Di Gregorio, D., & Shane, S. (2003). Why do some universities generate more start-ups than others? *Research Policy*, 32(2), 209–227. doi:10.1016/S0048-7333(02)00097-5
- Diáñez-González, J., Camelo-Ordaz, C., & Fernández-Alles, M. (2020). Drivers and implications of entrepreneurial orientation for academic spin-offs. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-020-00652-3
- European Commission. (2016). *Entrepreneurship Education at School in Europe*. European Commission.

- Ferretti, M., Ferri, S., Fiorentino, R., Parmentola, A., & Sapio, A. (2020). What drives the growth of academic spin-offs? Matching academics, universities, and non-research organizations. *The International Entrepreneurship and Management Journal*, 16(1), 137–163. doi:10.100711365-018-0497-4
- Galati, F., Bigliardi, B., Passaro, R., & Quinto, I. (2020). *Why do academics become entrepreneurs? How do their motivations evolve? Results from an empirical study*. International Journal of Entrepreneurial Behavior & Research. doi:10.1108/IJEER-11-2019-0619
- Geroski, P., Mata, J., & Portugal, P. (2010). Founding Conditions and the Survival of New Firms. *Strategic Management Journal*, 31, 510–529.
- Global Entrepreneurship Monitor. (2012). *GEM Portugal 2012 - Estudo sobre o Empreendedorismo*. GEM Portugal.
- Global Entrepreneurship Monitor. (2015). *GEM 2015/16 Global Report*. GEM Portugal.
- González-Pernía, J., Guerrero, M., Jung, A., & Pena-Legazkue. (2018). Economic recession shake-out and entrepreneurship: Evidence from Spain. *Business Research Quarterly*, 21(3), 153-167.
- Hayter, C. (2011). In search of the profit-maximizing actor: Motivations and definitions of success from nascent academic entrepreneurs. *The Journal of Technology Transfer*, 36(3), 340–352. doi:10.100710961-010-9196-1
- Hayter, C., Lubynsky, R., & Maroulis, S. (2017). Who is the academic entrepreneur? The role of graduate students in the development of university spinoffs. *The Journal of Technology Transfer*, 42(6), 1237–1254. doi:10.100710961-016-9470-y
- Heblich, S., & Slavtchev, V. (2014). Parent universities and the location of academic startups. *Small Business Economics*, 42(1), 1–15. doi:10.100711187-013-9470-3
- Horta, H., Meoli, M., & Vismara, S. (2016). Skilled unemployment and the creation of academic 38 spin-offs: A recession-push hypothesis. *The Journal of Technology Transfer*, 41(4), 798–817. doi:10.100710961-015-9405-z
- Hossinger, S., Chen, X., & Werner, A. (2020). Drivers, barriers and success factors of academic spin-offs: A systematic literature review. *Management Review Quarterly*, 70(1), 97–134. doi:10.100711301-019-00161-w
- Ismail, K., Mason, C., Cooper, S., Omar, W., & Majid, I. (2010). University Spin-off Formations: How decision-making process has been made? *International Journal of Business and Social Science*, 1(2), 103–123.
- Johansson, M., Jacob, M., & Hellstrom, T. (2005). The strength of strong ties: University spin-offs and the significance of historical relations. *The Journal of Technology Transfer*, 30(3), 271–286. doi:10.100710961-005-0930-z
- Kuratko, D., & Hodgetts, R. (2004). *Entrepreneurship: Theory, Process, Practice*. Thomson/South-Western.

- Lehmann, E., Meoli, M., Paleari, S., & Stockinger, S. (2020). The role of higher education for the development of entrepreneurial ecosystems. *European Journal of Higher Education*, 10(1), 1–9. doi:10.1080/21568235.2020.1718924
- Marzocchi, C., Kitagawa, F., & Sánchez-Barrioluengo, M. (2019). Evolving missions and university entrepreneurship: Academic spin-offs and graduate start-ups in the entrepreneurial society. *The Journal of Technology Transfer*, 44(1), 167–188. doi:10.1007/10961-017-9619-3
- Millán, A., Millán, J., & Román, C. (2016). The role of start-up incentives on entrepreneurship dynamics in a post-crisis era: Evidence from European countries. CESifo DICE Report, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München.
- Monitor, G. E. (2013). *Uma década de Empreendedorismo em Portugal*. Lisboa: GEM Portugal.
- Mustar, P., Renault, M., Colombo, M., Piva, E., Fontes, M., Lockett, A., Wright, M., Clarysse, B., & Moray, N. (2006). Conceptualising the heterogeneity of research-based spin-offs: A multi-dimensional taxonomy. *Research Policy*, 35(2), 289–308. doi:10.1016/j.respol.2005.11.001
- Nielsen, J., Stojanović-Aleksić, V., & Bošković, A. (2020). Promoting Entrepreneurship in HEIs: Leading and Facilitating University Spin-Off Ventures. In V. Babic & Z. Nedelko (Eds.), *Handbook of Research on Enhancing Innovation in Higher Education Institutions* (pp. 216–238). IGI Global. doi:10.4018/978-1-7998-2708-5.ch010
- OECD. (2017). *Relatórios económicos da OCDE Portugal*. Organisation for Economic Co-operation and Development - Economic Surveys.
- Pérez, M. P., & Sánchez, A. M. (2003). The development of university spin-offs: Early dynamics of technology transfer and networking. *Technovation*, 23(10), 823–831. doi:10.1016/S0166-4972(02)00034-2
- Pirnay, F., Surlemont, B., & Nlemvo, F. (2003). Toward a Typology of University Spin-offs. *Small Business Economics*, 21(4), 355–369. doi:10.1023/A:1026167105153
- Prencipe, A., Corsi, C., Rodríguez-Gulías, M., Fernández-López, S., & Rodeiro-Pazos, D. (2020). Influence of the regional entrepreneurial ecosystem and its knowledge spillovers in developing successful university spin-offs. *Socio-Economic Planning Sciences*. doi:10.1016/j.seps.2020.100814
- Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin-off venture emergence. *Journal of Management Studies*, 48(6), 1314–1345. doi:10.1111/j.1467-6486.2010.00995.x
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning & Education*, 14(2), 187–204. doi:10.5465/amle.2012.0293
- Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., Lopez-Garcia, P., & Chin, N. (2005). Global entrepreneurship monitor: Data collection design and implementation 1998-2003. *Small Business Economics*, 24(3), 205–231. doi:10.1007/11187-005-1980-1
- Rothaermel, F., Agung, S., & Jiang, L. (2007). University entrepreneurship: A taxonomy of the literature. *Industrial and Corporate Change*, 16(4), 691–791. doi:10.1093/icc/dtm023



- Santos, S. C., Caetano, A., Spagnoli, P., Costa, S. F., & Neumeyer, X. (2017). Predictors of entrepreneurial activity before and during the European economic crisis. *The International Entrepreneurship and Management Journal*, 13(4), 1263–1288. doi:10.1007/11365-017-0453-8
- Smith, H., & Ho, K. (2006). Measuring the performance of Oxford University, Oxford Brookes University and the government laboratories' spin-off companies. *Research Policy*, 35(10), 1554–1568. doi:10.1016/j.respol.2006.09.022
- Thomas, V. J., Bliemel, M., Shippam, C., & Mainel, E. (2020). Endowing university spin-offs pre-formation: Entrepreneurial capabilities for scientist-entrepreneurs. *Technovation*, 96-97, 102153. Advance online publication. doi:10.1016/j.technovation.2020.102153
- Vegetti, F., & Adăscăliței, D. (2017). The impact of the economic crisis on latent and early entrepreneurship in Europe. *The International Entrepreneurship and Management Journal*, 13(4), 1289–1314. doi:10.1007/11365-017-0456-5
- Vohora, A., Wright, M., & Lockett, A. (2004). Critical Junctures in the Development of University High-Tech Spinout Companies. *Research Policy*, 33(1), 147–174. doi:10.1016/S0048-7333(03)00107-0

# Chapter 16

## Life in a Bag: Sustainability, Green Economy, and Business Strategy – A Case Study

**Beatriz Cunha Nunes**

*Porto Business School, Portugal*

**Juciely Pimentel**

*Porto Business School, Portugal*

**Joana Malheiro**

*Porto Business School, Portugal*

**Marisa R. Ferreira**

*CIICESI, ESTG, Polytechnic of Porto, Portugal*

**João F. Proença**

*Faculty of Economics, University of Porto, Portugal & ADVANCE/CSG, ISEG, University of Lisbon, Portugal*

### ABSTRACT

*Capacity for innovation is mainly the courage to try. A couple from the municipality of Vila Nova de Famalicão, Portugal, started growing a vegetable garden at home in 2013, hardly knowing that this would become the project of their lives. The experiments that this professional designer and this computer engineer carried out were successful with family and friends, and so, motivated on entrepreneurial spirit, they decided to encourage others to grow their own food, even in confined spaces. That is how the company Life in a Bag was born. This chapter discusses the strategic dimension of the company and its relationship with the market, through the application of the model of Porter's Five Forces, Bowman's Strategy Clock, and the types of diversification. This analysis was enriched by company document analysis and a meeting with the owners of the startup to gather more details.*

DOI: 10.4018/978-1-7998-4826-4.ch016

## INTRODUCTION

*Life in a Bag* is a Portuguese brand founded in 2013 when the adoption of more sustainable lifestyles and biological products started to trend among the population, giving rise to the so-called green economy movement. Green economy can be defined as the improvement of people's well-being due to a greater concern for social equity, environmental risks and the scarcity of natural resources (Commission of the European Communities, 2002).

At the same time, the company also presents the beginning of a new venture and the exploitation of a potentially prosperous business idea (Mergemeier, Moser, & Flatten, 2018), materializing the concept of nascent entrepreneurship, considered as individuals involved in setting up a business they will own or co-own (Nishimura & Tristán, 2011), being that, for this case, pursuing an opportunity (Hmieleski & Lerner, 2016) seems central, rather than the fast ownership of a given resource.

Bearing this context in mind, consumer awareness regarding the role of food in their general health and well-being has grown, thus contributing for the growth in demand for healthier food. *Life in a Bag* took this opportunity to develop a truly innovative concept by combining the demand for healthier products with more sustainable options that promote a healthier lifestyle.

This chapter describes *Life in a Bag*'s implementation and growth strategy through a market analysis using Porter's Five Forces model (Porter, 2008) to evaluate the internal and external variables of this startup. This market analysis is complemented by Bowman's Strategic Clock, which allows us to analyze the competitiveness of the company. *Life in a Bag* is also characterized on the scope of diversification strategies, which shows if a business adds or expands its existing product lines or markets (Rong & Xiao, 2017).

An analysis of the competition is also performed through the analysis of several factors, such as the origin of their products, the foundation year, financial resources, brand characteristics, price policy, competitive advantages and disadvantages, for a clearer understanding on how innovative and distinctive *Life in a Bag* is.

This chapter intends to answer four main questions: (1) how is *Life in a Bag*'s industry sector characterized?; (2) how did the opportunity to enter the market arise?; (3) how is the implementation and development strategy of the company defined in a green market context and as a startup?; and finally, (4) considering the success of the current business model and its position in an increasingly competitive market, what is the brand's growth strategy for the upcoming years?

## BACKGROUND

Some key factors influencing individuals' willingness to start up new businesses are related with flexibility, persistence or self-confidence (Klyver & Schenkel, 2013; Nishimura & Tristán, 2011). Of course, economic aspects influence entrepreneurship, and individuals may be looking for income opportunities, as well as, a strong believe in their ideas as potential innovations (Zanakis, Renko, & Bullough, 2012). At the same time, the entrepreneur's confidence in his/her ability to face market challenges is important for moving a business past the startup phase to operation.

The effects of sustainability and/or green economy in the corporate strategy may be subject to a debate, although in less specific contexts the relationship with organizational commitment, reflecting the business's responsibilities towards all its stakeholders, is undisputed (Gallardo-Vázquez & Sanchez-

Hernandez, 2014). At the same time, the negative business shocks resulting from environmental disasters or poor labor protections are clearly harmful, with strongly negative market reactions (Dupire & M'Zali, 2018). The green economy movement brought a change in market and consumer behavior – the green market – aiming at improving the lives of individuals, communities, society, and the natural ecosystem (Guyader, Ottosson, Frankelius, & Witell, 2019). This market change includes a transformation of the productive process, and considerations of sustainability bring further complexity (Vickers & Lyon, 2014), carrying the concepts of sustainability, environmental impact, and responsibility, among others. Consumer behavior has changed and is now increasingly putting pressure on companies to address environmental issues (Elkington, 2013), since an accurate profile of the green consumer cannot be constructed without considering environmental consciousness (Diamantopoulos, Schlegelmilch, Sinkovics, & Bohlen, 2003).

As a growing trend, a large proportion of European consumers are buying healthy, organic, vegetarian and “free-from” foods (IRi, 2017). According to the data and analysis provided, 70% of European consumers say they are buying healthy foods with reduced amounts of salt, sugar, fat and calories. The same report enquired 2,600 buyers in Italy, Greece, Spain, Germany, France, the UK and the Netherlands about their attitudes and buying behavior of wellness food, and the results of the survey also highlight a significant increase in the number of people who are buying organic products: a 35% increase in just three years, with Germany leading this organic consumption behavior, with 67% of consumers saying they prefer to buy organic food (IRi, 2018).

Behind each prosperous product or service existing in the market today there is a considerable market analysis on competitors and customers. It is the first and the most significant step in the development of any product and/or service. We are not yet living in a world where everything is explicit. It is very interesting to notice that a lot of people worried with sustainability, for instance, have difficulties in finding guidelines for the appropriate business strategy (Dupire & M'Zali, 2018; Yu & Choi, 2016). So, market analysis is the systematic process of data collection and a successful market analysis can help in getting a valuable understanding into changes in the economy, competitors, ongoing market trends, demographics, and customer' spending behavior. Market analysis is one of the fundamental mechanisms to help businesses with all the necessary information for making wise business decisions (Gries & Naudé, 2009).

## **What is Driving Demand for a Green Economy?**

In recent years, supply chain partnerships and alliance relationships have increasingly become essential and supply chains are embedded in a complex network of relationships with suppliers, distributors, customers, and a number of other stakeholders (Vo & Nguyen, 2017). Buyers have reported a greater awareness of the role that food plays in general health and well-being. 51% of respondents said that general well-being was the reason they bought wellness-related foods (IRi, 2018). As the demand for healthy food – as well as organic, vegetarian and “free from” options – is increasing, there is a significant opportunity for food manufacturers to highlight the benefits of their products or introduce new and healthier product lines (Deci & Ryan, 2008). A balanced healthy eating that includes organic, gluten-free or lactose-free and vegetarian food is no longer a niche market to be promoted in the back of a supermarket aisle. There is a huge opportunity for manufacturers to innovate and for retailers to make more room on the shelves for healthier food choices, including white label goods. There is undoubtedly a considerable increase in demand for these foods (IRi, 2018) and the same report mentions that 60% of respondents said that eating fruits and vegetables was the most important aspect of a healthy diet.

## **Innovation**

Clearly, entrepreneurship contributes to economic performance by also introducing innovations (Nishimura & Tristán, 2011). Another important aspect from the business point of view is that the green economy is closely linked to innovation, meaning that organizations must seek innovative solutions to develop an ethical responsibility toward the three dimensions of the triple bottom line and to overcome possible tensions and enhance synergies (Longoni & Cagliano, 2018). Evidence shows that sustainability not only helps a business strategy getting stronger, but also embraces a sustainability agenda which can stimulate innovation, pushing companies to rethink their operations, products and business models (Baziana & Tzimitra-Kalogianni, 2016). Both technological and innovation management present new ways of producing, managing or doing business, allowing targeting untapped markets and redefining existing production and marketing strategies. Although this sector has developed very positively in recent years, mainly in terms of increasing market share, consumer awareness and consumer paradigm have shifted. By being directly linked to the global low carbon market and energy efficiency technologies, this market will triple by 2020, reaching US\$ 2.2 billion (Ekins, Gupta, & Boileau, 2019).

## **LIFE IN A BAG IN DETAIL**

Several factors enabled the entrepreneurial project *Life in a Bag* to shift from an idea to a winning project for innovation and sustainability. This section details the most important aspects, including the development of a strategy from a startup perspective, market analysis and product/distribution strategy.

## **Strategy**

*Life in a Bag's* implementation and growth strategy resembled that of most of the Portuguese startups that often start with few financial resources and are unsure of how they intend to do business, and just want to see if all their efforts are worth the while. Prior to this project, the company owners had some unsuccessful businesses, so they leveraged on that experience to make better decisions. Thus, instead of a traditional plan, they adopted an experimental approach and created a testing concept, which included:

- **The idea**
- **Value proposition for clients**
- **An offer**
- **Minimal marketing activity to test the concept**

The development model applied here can be described as lean startup, a technological approach based upon the well-known lean concept and focused on delivering value to the customer. The lean startup is a methodology which gathers concepts from several areas in an attempt to reduce the uncertainty when developing a startup (Mansoori, Karlsson, & Lundqvist, 2019). It is a cyclical methodology that has users as its central focus, where potential customers are offered a prototype that contains information collected from that test (opinions, reviews, compliments, hardships in using), making the most of them to enhance the prototype and conduct further tests. The aim is to repeat the process until the final product(s) is/are reached.

## Market Analysis – Porter’s Five Forces

Using Porter’s Five Forces model (Porter, 2008) to analyze the skills of *Life in a Bag* allows us to deeply understand and evaluate the internal and external variables of this startup. Porter’s model contemplates the following five competitive forces that help a business entity develop an efficient corporate strategy:

1. Threat of New Entry
2. Threat of Substitution
3. Buyer Power
4. Supplier Power
5. Competitive Rivalry

In the context of this work, *Life in a Bag* was analyzed considering each of the competitive forces listed above. The results of this analysis for each of the forces is the following:

1. **Threat of New Entry:** The idea was imported by the owners of *Life in a Bag*. The concept did not exist in Portugal and involved sustainability, innovation and convenience components that were not yet present in the Portuguese market. So there were no such threats when penetrating in the Portuguese market.
2. **Threat of Substitution:** No threat of substitution was identified since the brand entered the market. Although there are competitors in the market, with products that are close to the ones developed by *Life in a Bag*, none of them compete with it in its ecological component.
3. **Buyer Power:** The company owners consider that the buyer power is low, as there are no direct competitors in the market. Thus, the consumer does not have a wide variety of products to choose from. For ethical and environmental reasons, the buyer of these products prefers to pay a higher price and buy national products that use national raw materials and deliver similar value in terms of sustainability and convenience.
  - a. The target audience of *Life in a Bag* is mostly females, aged between 25 and 50 years old, belonging to the middle and upper classes, living in big cities, in houses or apartments without much space to grow their own products, with medium or higher qualifications and with a strong environmental and health awareness (Life in a Bag, 2019). The sustainable market target audience of *Life in a Bag* is a consumer willing to pay a little extra for a product that consumes minimal natural resources during its life cycle, as the awareness for a conscious consumption is slowly growing in the European culture.
  - b. Is important to highlight that the conscious consumer is not deprived from a comfortable consumption (Vickers & Lyon, 2014). This conscious consumer is a type of individual who wants to consume, but also understands that the product should be reused or recycled. Therefore, he/she understands that the producer should address these concerns along the production process. *Life in a Bag* stands out for its differentiated product, providing the consumer with specific added values (possibility of an indoor garden with biological plants, a conscious and sustainable consumption in reusable and recyclable packaging). The consumer ends up searching for these products with these ideas in mind, and there are no relevant or similar alternatives in other physical stores. The only alternative are international options, with associated shipping costs, or more expensive choices, which most of the times are less sustainable.

4. **Supplier Power:** The company owners consider that the supplier power of *Life in a Bag* is high, depending on the type of raw materials used. Take cork, for example, which is also used on *Life in a Bag*'s products: this raw material with unique characteristics has been extremely demanded by the national and international markets, inflating prices even more. Although cork is a raw material produced in Portugal, it is scarce for such a great demand (considering its slow production process: each cork tree can be harvested around 17 times along its life cycle, more or less every 9 years), which also contributes for the high supplier power.

National production of recycled cotton is very small, which means that it has to be imported. So, we must add the values of the importation to the value of the raw material itself, which makes it more expensive.

On the other hand, national production of recycled paper and clay is rather high, giving room for more negotiation with the producers/retailers (the product is available at a short distance and usually in big quantities, enabling the purchase at the best prices).

5. **Competitive Rivalry:** In the sector in which *Life in a Bag* operates, and at the time of its foundation, the competitive rivalry was not necessarily a big concern. Although it was not a brand-new concept, it was new in Portugal, and so the company was able to settle in the market without considerable restraint.

In face of the social and environmental demands of the market (an increasing demand for sustainable products as consumers became more aware of environmental issues), a vital step for *Life in a Bag*'s competitive advantage was the presentation of an action proposal that linked the consumers to environment protection through their products.

## Competition




Even though some products/concepts were identified in Portugal as being similar to the ones marketed by *Life in a Bag*, which are listed below, the company owners consider that they do not have any competition in the country. According to them, they have a strong competitor in French company Homi, which has been operating in the French market for more than 20 years, but that did not prevent them to place their products in stores and big retail chains such as Altermundi and Botanic (also from France).

There are also other more seasonal competitors, such as a greenhouse sold at Lidl supermarkets in the end of the winter/beginning of spring. This type of greenhouse is available not only in supermarkets at this time of year, but it can also be found in other stores that have specific sections dedicated to gardening throughout the year (i.e. Leroy Merlin, DeBorla, etc.). They are more accessible than the ones marketed by *Life in a Bag*, but, once again, this aspect does not compete with the ecological component presented by *Life in a Bag*.

After this analysis, the authors understand the reason why the founders of *Life in a Bag* believe so firmly that they do not have competition: none of the alternative products available in the market is able to attain this level of ecology since they continue to use plastics and electricity as important parts of the growing process. By contrast, *Life in a Bag* prides itself on the use of recyclable and biodegradable materials, which makes this brand so special and unique.

## Life in a Bag

Table 1. Competitors identified in Portugal

	Click & Grow	IKEA	Life in a Bag
			
Origin	Estonia	Sweden	Portugal
Foundation Year	2011	1943	2013
Financial Resources	Several rounds of funding on crowdfunding services	Multinational, great financial availability.	Direct funding of the business
Brand	Not well-known	Great recognition	New
Pricing Policies	High	Affordable	Affordable
Competitive Advantage	High-tech Automatic (irrigation and light) Convenience (just add seeds in the container)	Well-known brand, accessible in physical stores, accessible price.	Convenience – just add water Affordable price Sustainability
Competitive Disadvantage	Use of plastics and electricity	Use of plastics and electricity Lower level of innovation and need of early intervention	Not a well-known brand Focus on e-commerce

## Market Analysis – Bowman’s Strategic Clock

Bowman’s Strategic Clock is a strategic model used to determine the competitiveness of the companies based on the product’s price and perceived value (Bowman & Faulkner, 1997). It is a strategic model that explores the options for the positioning of a product to reach the best results in the market and its purpose is to illustrate that a business will have a wide range of options when positioning the product based upon two dimensions – price and value/benefits perceived by the consumer (Arshad & Yazdanifard, 2017). By combining these two dimensions in the best way possible, the company creates a competitive advantage.

It is important to pay attention to *Life in a Bag*’s strategy of prices and the value perceived by the consumer. Considering all the elements that constitute the final product, we can easily understand that the final price includes a set of values that goes way beyond a simple plant. Some dirt, seeds, clay and instructions in a bag for €9 will be considered cheap by only a few. Indeed, *Life in a Bag* also sells soil refills or, in other words, dirt: about 200 gr for €2. The consumer can acquire the products separately for a lower price. However, the brand’s advantage lies precisely there – it saves the consumer all the trouble, concern and time. Without this valuable help, the consumer does not have time to be a “traditional” gardener or farmer, and so it becomes a differentiating product, a new offer, precisely because it offers everything one needs to grow different species in a confined space without much effort.

Focusing on Bowman’s Strategic Clock, we consider that *Life in a Bag* is positioned between differentiation and focalized differentiation. As for the differentiation, its goal is to offer added value to customers. In this specific case, the branding and quality of the product play a very important role, because a quality product, along with a great recognition of the brand and consumer loyalty can provide



a great return on investment and the value perception required by a strategy of differentiation. But in the case of a focalized differentiation we are dealing with the ambition of positioning a product in the higher price levels in which costumers buy the products because of their perceived high value. This is the strategy chosen mainly by luxury brands that try to reach premium prices through a well-focused and even restrictive segmentation, as well as the promotion and distribution. If this positioning is well-thought through, this strategy can lead to very high profit margins, but only the best products and brands can maintain this as a long-term strategy.

Is *Life in a Bag* a luxury brand? Can we consider its prices as premium? To answer these questions, it is better to look at the brand's target audience, essentially women aged between 25 and 50 years old, belonging to the middle and upper classes and living in big cities. Will these women perceive this product as expensive? The company owners believe they would not, because this type of consumer does not have time to buy each one of the elements that come in the packs marketed by *Life in a Bag* (for example, a mini garden), as can be seen in the figure below.

*Figure 1. One of the best-sellers of Life in a Bag, Mini Garden (Life in a Bag, 2019)*



How many times should it be watered? And where should it be placed? *Life in a Bag* simplifies the whole process, and the added price ends up justifying and making the entire experience worthwhile. Thus, the positioning strategy of *Life in a Bag* can be considered as being a differentiation strategy.

### **Market Analysis: Related Diversification**

On the scope of diversification strategies – when a business adds or expands its existing product lines or markets (Rong & Xiao, 2017) –, we can consider *Life in a Bag* as implementing a related strategy of diversification characterized by the sharing of resources between the company's several products. *Life in a Bag* presents a portfolio of distinct products that share the same basis: the seeds of aromatic herbs or microgreens. These are then presented as greenhouses, pencils that can be planted when they no longer

## ***Life in a Bag***

meet their main purpose and are transformed into flowers of aromatic herbs, “little bugs” that children can plant, etc. The strategy of related diversification can be an advantage in the strategic decision of a company (Mahroum & Al-Saleh, 2013) and, in this case, it clearly helped *Life in a Bag* enhance its differentiation through its unique products.

This strategy only succeeds when anchored on a strong sense of corporate identity, and *Life in a Bag* has followed a clear strategic mission since its foundation.

In the future, the dream of *Life in a Bag*'s founders is to create a space (like a vegetable garden) where they could not only sell their products, but also promote events (workshops) for families and companies, and even a space where their products could be tasted. When that goal is achieved, *Life in a Bag* will have a diversification strategy with horizontal integration, as it will offer a new service by using the same business base, which will attract the current target audience of the company, or others that are more attracted by this new format.

## **Available Products**

Every product sold by *Life in a Bag* is composed of reusable and biodegradable materials and is simple and easy to use, as can be seen in Figure 2.

*Figure 2. Description of the process of planting with Grow Bags (Life in a Bag, 2019)*



The products currently available on the market can be divided into 4 categories:

1. **Grow** – Aromatic herbs or microgreens that will grow in paper bags, cork or metal containers, and even in agar-agar jelly.
2. **Children** – Kits that make the little ones want to learn how to grow their own food in an educational and fun way, or even “little bugs” made of 100% cotton paper pulp, which they can see transform into small leaves of arugula or basil.
3. **Plants** – Edible flowers in wool pots, aerial plants in cork stoppers that only need water and air to survive, or even plants in a glass container with a very original self-watering system.
4. **Stationery** – Calendars, postcards, personalized invitations made of seed-impregnated paper.

According to the company owners, their main products are the Grow Bag (Figure 3) and the Grow Cork (Figure 4), which are their top sellers.

*Figure 3. Grow Bag: The end result of a bag containing thyme seeds (Life in a Bag, 2019)*



*Figure 4. Grow Cork: Basil leaves, cork pot edition with a special design (Life in a Bag, 2019)*



## The Present: The Brand and Customer Recognition of its “Green Awareness”

Green awareness among customers can be boosted on the basis of the perceived value of green initiatives, a value reflected, for example, on the fact that organic production processes do not damage environments and habitats (Alamsyah & Muhammed, 2018). Sometimes it is difficult for ordinary consumers to identify the green products' specific environmental attributes, so product developers need to use efficient information systems and many green product manufacturers have applied for green product certification (Ma et al., 2018).

*Life in a Bag* prides itself for being a company that sells products that are recognized as Portuguese and biological. All their products bear the label stamp “Portugal sou eu” (Portugal it's me), which distinguishes Portuguese products that bring value to Portugal and promote the idea that buying Portuguese products is the best way to contribute to the economy of the country. Furthermore, they have a *Certis* certification for their biological production. They have also won several prizes and nominations, which shows not only the quality of the products, but also the result of their corporate commitment.

## Internationalization Strategy

The global market can be considered a volatile environment and the internationalization of a firm through the adoption of any entry mode may result in the need to innovate or adapt its business, and in recent years many firms have been increasingly expanding their activities outside their home countries (Alamsyah & Muhammed, 2018).

In August 2015, *Life in a Bag* invested heavily in its internationalization, by presenting its products in Belgium, France, Spain and the United Kingdom. The goal was to leverage the company into new European markets. By the end of 2018, they were present in brands such as Printemps (France) or John Lewis (United Kingdom), thus showing a continuous desire to expand the brand. However, the company showed a bigger commitment to proximity events (Christmas markets, for example) and stores across its homeland (Portugal).

In 2019, *Life in a Bag* was present in small countries such as Lithuania, even if only in some small boutiques. But that is precisely how the owners make *Life in a Bag* evolve, through these little “tests” that allow them to evaluate the reaction of each market before moving towards a greater investment.

There was also the intention to develop a mobile app to help customers caring their plants. The aim was to place small sensors on the dirt that would send messages to the person whenever the plant needed water, light or nutrients. However, this app ended up not being implemented. The owners came to the conclusion that the users did not respond well to constant notifications on their smartphone. The company is determined to follow the path of compromise and growth via the development of more technological solutions and rethink the real value to be delivered to the customer.

## Innovation

After analyzing the origin, structure and specific details of *Life in a Bag*, we can strongly say that this is an innovative company with a concept that is fashionable and deemed very appealing to all stakeholders and the company itself. Furthermore, companies have been showing a genuine concern regarding this topic. Schumpeter's (Śledzik, 2013) widely used theory of innovation is aligned with other investment theories of the business cycle and advocates that the shift in investment accompanied by a monetary

expansion are the biggest factors behind business fluctuations. By innovation, Schumpeter considers the changes in methods of production and logistics, the production of another product, changes in the organization of the industry, the launch into a new market, among other factors. Innovation does not mean, and should not be mistaken with, an invention, as it is a wider concept and reflects the application of a new technology, a new material, new methods or new energy sources in the market. And, for *Life in a Bag*, innovation is undoubtedly the key of this project's success.

Based upon Schumpeter's studies, there are other types of innovation, and the authors have studied the OECD and Eurostat classification presented in the "The Oslo Manual", where 4 types of innovation are defined:

- **Product innovation:** a product or service that is new or significantly improved. We can include here remarkable technical improvements, components and material specifications, software improvements on a users' perspective and other functional characteristics.
- **Process innovation:** new or improved product or method of delivery. Includes also changes in technique, equipment or software.
- **Marketing innovation:** a new marketing method that involves visible changes in a product's design or packaging, positioning, promotion, or its price.
- **Organization innovation:** a new way of organizing internal and business policies, working area organization or external relations.

*Life in a Bag* is undoubtedly an excellent example of marketing innovation. First of all, the product is not new, the owners did not innovate by discovering parsley or pansy. It is not the final product that changes and so we cannot consider it as product innovation. The process is the same: the company still uses soil to plant these products, waters them with water and exposes them to the sunlight. There is a little of process innovation, as the method of delivery reaches us in the comfort of our homes via mail and transportation companies.

The biggest innovation is the method of conception for the consumer by delivering the package with everything prepared for anyone to grow, anywhere, through an innovative packaging that is totally usable, as it is in this packaging that the plant or flower grows. At the same time, through marketing, the company has a strong presence on social networks, including influencers, the traditional media and mostly online, where a considerable part of the sales are made.

As for the organization innovation, we cannot say that a startup is much of an innovation these days. However, it is worth mentioning that *Life in a Bag* has established partnerships with the Portuguese Association of Nutrition, Street Animals Association, Simbiotico.eco and The Porto Protocol, institutions that have the improvement of the public health among their own goals, the concern about street animals, the exposure of valuable projects that promote sustainability or the reduction of the impact of climate changes. Therefore, it ends up being a company that also innovates as an organization.

## **A Green Business Model**

A business model is portrayed as a structural template that describes the transactions between focus firms and external organizations in the production factor market and the product factor market. In the context of green product innovation, the design of efficiency business models can bring many advantages, and we can even say that it is beneficial to firm performance (Ma et al., 2018). By operating within the

## ***Life in a Bag***

structure of a green business model, *Life in a Bag* is a company that does not have a negative impact on local or global environment, either on the community or on the economy, promotes a sustainable way of thinking and advocates environmental concerns. In its mission, the objective is to match the design with sustainability, being close and caring about the state of the environment. We can also say that its impact on the environment is positive, which goes beyond the concept of a green business model. Besides, having a very low impact regarding its production processes, it stimulates a sustainable lifestyle and the desire of being ever eco-friendlier.

A business model perspective may be expected to contribute to a sustainable innovation agenda by opening up new approaches to overcoming internal and external barriers. Considering business models and sustainability issues, we can mention the existence of three streams which appear to be most important regarding sustainable business models: technological, organizational, and social innovation (Ma et al., 2018).

*Life in a Bag* has a social basis, because, above all, it focuses on improving the state of the environment through social awareness, as it does not bring any revolutionary technological enhancement, as would be the case if, for example, *Life in a Bag* offered the consumer machinery or tools to water the plants autonomously. Or if this company did the management of gardening personnel or agronomists that would assist the costumers, in a kind of tailor-made gardening course.

*Life in a Bag* benefits the environment as it promotes the growing of several plant species and the exclusive use of biological products that are harmless for the soil, thus reducing the ecological footprint. Apart from that, it has a positive impact on society by raising consumers' awareness to practice a sustainable lifestyle; also, by establishing the aforementioned partnerships, the company creates synergies between institutions and organizations that share the common goal of protecting the environment. Additionally, the fact that there are ranges of products and subproducts that are specifically targeted to youngsters is the proof of that influence on society, instigating the values of a sustainable lifestyle in an early stage. The company is seen as a green business, and that is accomplished through market positioning as a niche, creating an opportunity inside a specific business. Having innovation in line with the differentiating concept of the product and a positive image of the company, the key to the success is unlocked.

## **FUTURE RESEARCH DIRECTIONS**

The 2030 Agenda for Sustainable Development endorsed the centrality of environmental sustainability as the context within which economic and social development will take place, with significant repercussions for the future. Among these repercussions we can mention the development of new business models emerging in the circular economy, as well as the implications of innovation, green technology and changing consumption patterns, being that all these topics need future research.

So, broadly speaking, future research should include a wide-ranging and open debate about what the green economy is, what it represents, and the transformative processes being approved under its auspices; and, particularly, future research should look at the specificities of businesses similar to our case study and understand the internal and external advantages and disadvantages, a focus on analysis of the particular settings in which transitions are embedded and evolve, and on the socio-spatial surrounding of conditions that encourage and support green business models, new policies and sustainability transitions.

## CONCLUSION

The demand for healthier food and general well-being arising among the population propelled a house-based idea into what *Life in a Bag* currently is. This success is due to several reasons, some of which are highlighted in this chapter.

*Life in a Bag* positions itself in a growing industry by matching innovation with the desire for an ever more sustainable environment and economy, having entered the market almost by chance at an early stage but later following the demands of the market. This strategy is concerned with the future and the adjustment of some behaviors that affect the whole world. It has been proven that *Life in a Bag* has reached a great deal of success and has by far accomplished all objectives that were set out, and is currently doing very well. The company should keep on betting on a strategy that focuses on the protection of the environment and promotes a healthier lifestyle, connected to nature, in the national and international markets.

The company owners believe that *Life in a Bag* was created at a key time, as it grew and developed closely with the green movement that has been taking place over the recent years. It was able to achieve a much-wanted recognition and is nowadays clearly ahead on the Portuguese market, besides showing clear signs of success abroad.

## ACKNOWLEDGMENT

The authors would like to extend their deepest gratitude to Alexandra Silva and Pedro Veloso (CEOs of *Life in a Bag*) for their enthusiasm and availability.

Marisa R. Ferreira gratefully acknowledges financial support from FCT- Fundação para a Ciência e Tecnologia (Portugal), national funding through project UIDB/04728/2020.

João F. Proença gratefully acknowledges financial support from FCT- Fundação para a Ciência e Tecnologia (Portugal), national funding through research grant UID/SOC/04521/2020.

## REFERENCES

- Alamsyah, D. P., & Muhammed, H. A. A. (2018). Antecedents of Green Awareness for Increased Consumption of Eco-Friendly Products. *ASEAN Marketing Journal*, 10(2), 109–126. Retrieved from <http://journal.ui.ac.id/index.php/amj/article/viewFile/8425/67546336>
- Arshad, A., & Yazdanifard, R. (2017). Investigative Synopsis of Sony Inc.'s Strategic Management Issues / Failures and How to Overcome Them. *International Journal of Management, Accounting & Economics*, 4(9), 917–936. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=uh&AN=126496031&site=ehost-live>
- Baziana, S., & Tzimitra-Kalogianni, E. (2016). Investigation of Consumer Behavior. *International Journal of Social Ecology and Sustainable Development*, 7(1), 50–61. doi:10.4018/IJSESD.2016010103
- Bowman, C., & Faulkner, D. O. (1997). *Competitive and corporate strategy*. Irwin.

## **Life in a Bag**

Commission of the European Communities. (2002). Corporate Social Responsibility: A business contribution to Sustainable Development. In *Communication From the Commission*. Retrieved from [http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc\\_127374.pdf](http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc_127374.pdf)

Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, *49*(1), 14–23. doi:10.1037/0708-5591.49.1.14

Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, *56*(6), 465–480. doi:10.1016/S0148-2963(01)00241-7

Dupire, M., & M'Zali, B. (2018). CSR Strategies in Response to Competitive Pressures. *Journal of Business Ethics*, *148*(3), 603–623. doi:10.1007/10551-015-2981-x

Ekins, P., Gupta, J., & Boileau, P. (2019). *GEO-6 - Healthy Planet Healthy People*. Retrieved from <https://wedocs.unep.org/bitstream/handle/20.500.11822/275>

Elkington, J. (2013). Enter the triple bottom line. *The Triple Bottom Line: Does It All Add Up*, *1*(1986), 1–16. doi:10.4324/9781849773348

Gallardo-Vázquez, D., & Sanchez-Hernandez, M. I. (2014). Measuring Corporate Social Responsibility for competitive success at a regional level. *Journal of Cleaner Production*, *72*, 14–22. doi:10.1016/j.jclepro.2014.02.051

Gries, T., & Naudé, W. (2009). Entrepreneurship and regional economic growth: Towards a general theory of start-ups. *Innovation (Abingdon)*, *22*(3), 309–328. doi:10.1080/13511610903354877

Guyader, H., Ottosson, M., Frankelius, P., & Witell, L. (2019). Identifying the resource integration processes of green service. *Journal of Service Management*. Advance online publication. doi:10.1108/JOSM-12-2017-0350

Hmieleski, K. M., & Lerner, D. A. (2016). The Dark Triad and Nascent Entrepreneurship: An Examination of Unproductive versus Productive Entrepreneurial Motives. *Journal of Small Business Management*, *54*, 7–32. doi:10.1111/jsbm.12296

IRi. (2017). *Natural*. Trends and Drivers in the Self-care Space.

IRi. (2018). *IRI European Shopper Insights Survey*. Retrieved from <https://www.iriworldwide.com/gr-GR/Insights/news/Healthy-eating-trend-boost-for-vegetarian,-free-from-and-organic-food-producers-el>

Klyver, K., & Schenkel, M. T. (2013). From Resource Access to Use: Exploring the Impact of Resource Combinations on Nascent Entrepreneurship. *Journal of Small Business Management*, *51*(4), 539–556. doi:10.1111/jsbm.12030

Life in a Bag. (2019). *About Us*. Retrieved from <https://www.lifeinabag.pt/en/>

Longoni, A., & Cagliano, R. (2018). Sustainable Innovativeness and the Triple Bottom Line: The Role of Organizational Time Perspective. *Journal of Business Ethics*, *151*(4), 1097–1120. doi:10.1007/10551-016-3239-y



- Ma, Y., Yin, Q., Pan, Y., Cui, W., Xin, B., & Rao, Z. (2018). Green product innovation and firm performance: Assessing the moderating effect of novelty-centered and efficiency-centered business model design. *Sustainability (Switzerland)*, *10*(6), 1–13. doi:10.3390/u10061843
- Mahroum, S., & Al-Saleh, Y. (2013). Demand-led related diversification: An innovation policy approach to economic diversification and development. *Science & Public Policy*, *40*(3), 406–418. doi:10.1093/cipolcs126
- Mansoori, Y., Karlsson, T., & Lundqvist, M. (2019). The influence of the lean startup methodology on entrepreneur-coach relationships in the context of a startup accelerator. *Technovation*, *84–85*(June–July), 37–47. doi:10.1016/j.technovation.2019.03.001
- Mergemeier, L., Moser, J., & Flatten, T. C. (2018). The influence of multiple constraints along the venture creation process and on start-up intention in nascent entrepreneurship. *Entrepreneurship and Regional Development*, *30*(7–8), 848–876. doi:10.1080/08985626.2018.1471163
- Nishimura, J. S., & Tristán, O. M. (2011). Using the theory of planned behavior to predict nascent entrepreneurship. *Academia (Caracas)*, *46*, 55–71.
- Porter, M. E. (2008). The Five Competitive Forces that Shape Strategy. *Harvard Business Review*, *86*, 78–93. <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=28000138&site=eds-live> PMID:18271320
- Rong, Z., & Xiao, S. (2017). Innovation-Related Diversification and Firm Value. *European Financial Management*, *23*(3), 475–518. doi:10.1111/eufm.12110
- Śledzik, K. (2013). *Schumpeter's View on Innovation and Entrepreneurship*. SSRN Electronic Journal., doi:10.2139/ssrn.2257783
- Vickers, I., & Lyon, F. (2014). Beyond green niches? Growth strategies of environmentally-motivated social enterprises. *International Small Business Journal*, *32*(4), 449–470. doi:10.1177/0266242612457700
- Vo, T. L. H., & Nguyen, T. L. A. (2017). CSR collaboration in multi-level supply chains : A conceptual model. *Logistique & Management*, *25*(2), 96–106. doi:10.1080/12507970.2017.1326857
- Yu, Y., & Choi, Y. (2016). Stakeholder pressure and CSR adoption: The mediating role of organizational culture for Chinese companies. *The Social Science Journal*, *53*(2), 226–235. doi:10.1016/j.sosci.2014.07.006
- Zanakis, S. H., Renko, M., & Bullough, A. (2012). Nascent entrepreneurs and the transition to entrepreneurship: Why do people start new businesses? *Journal of Developmental Entrepreneurship*, *17*(1), 1–25. doi:10.1142/S108494671250001X

## KEY TERMS AND DEFINITIONS

**Sustainability:** Means meeting our own needs without compromising the ability of future generations to meet their own needs. In addition to natural resources, we also need social and economic resources.

# Chapter 17

## The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship

**Cat-My Dang**

*University of Bremen, Germany*

### **ABSTRACT**

*This chapter investigates the interaction between legitimacy and nascent ethnic entrepreneurship in the country of residence. The study relies on institutional theory to demonstrate that host institutions and ethnic institutions play different roles in the early stages of second-generation ethnic entrepreneurship. The qualitative data in this study demonstrate that second-generation ethnic entrepreneurs are firmly embedded in the mainstream community and, therefore, earn proper legitimacy in various industries in the mainstream market. On the one hand, the prevailing connections between entrepreneurs and their ethnic communities provide second-generation ethnic entrepreneurship with the legitimacy to contribute to society. On the other hand, ethnic society legitimates the entrepreneurial activities of second-generation ethnic entrepreneurs because of these contributions. Moreover, the results of this study illustrate the reciprocal process in which institutions recognize the legitimacy of nascent second-generation ethnic entrepreneurship in different contexts.*

### **INTRODUCTION**

In recent decades, entrepreneurship by immigrants has attracted the interest of scholars and policymakers. Awareness of the important role of ethnic entrepreneurship is increasing as this entrepreneurship can impact the structuring and development of the society at both the community and institution levels (Baron & Harima, 2019; Portes, 2001; Razin & Langlois, 1996).

DOI: 10.4018/978-1-7998-4826-4.ch017

## ***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

The number of international migrants rose to almost 258 million in 2017 (OECD, 2018), affecting many aspects of the structure and daily life of cities and regions (OECD, 2016). Immigrants and their descendants contribute significantly to the global economy by creating new businesses in a wide range of sectors and occupations, including innovative areas (OECD, 2010). To attract and support immigrant entrepreneurs, policymakers in the Organization for Economic Cooperation and Development (OECD) countries have implemented several measures (Nikolka, 2012). In 2018, Canada became the first country to provide an unconditional start-up visa along with its permanent resident permit for successful applicants of the start-up program. The OECD's labor-force age structure identifies two groups: young workers from 15 to 24 years old and the core working-age group of individuals from 25 to 54 years old. In this paper, the term "second-generation immigrant" refers to native-born children who have at least one foreign-born parent and who arrive in the receiving country before the age of 15, the minimum age required to participate in the labor force (OECD, 2020). They are citizens who have received their entire education in the receiving country (Felfe, Rainer, & Saurer, 2016; Vermeulen, 2010).

In 2017, approximately 4% of the adult population (14 to 64 years old) in European countries were nascent entrepreneurs, compared to 6.1% in OECD countries. Wennekers, Van Wennekers, Thurik, and Reynolds (2005) argue that the "natural rate" of nascent entrepreneurship is related to economic development. Societal legitimation is one of the crucial factors that influence the increase of nascent entrepreneurship in an economy (De Clercq & Voronov, 2009). Through the process of legitimation, a new venture acquires legitimacy. Überbacher (2014) argues that society does not legitimate different ventures in the same way, which can influence the entrepreneurial performance of new ventures. Previous studies have analyzed the positive, not negative, consequences of legitimacy on a new venture.

Ethnic entrepreneurial activities require specific ethnic resources (Rath & Swagerman, 2011). For example, ethnic entrepreneurs must have access to ethnic networks. While the advantages are clear for first-generation immigrants who leverage their strong ties to these networks and resources, the influence of weak ethnic ties on ethnic entrepreneurship of second-generation immigrants remains to be addressed. Moreover, studies have discussed the involvement and networking among ethnic entrepreneurs and the differences among generations of ethnic entrepreneurs. However, research on the legitimacy and legitimation of ethnic entrepreneurship is still insufficiently explored.

Emphasizing the mutual relationship between ethnic legitimation and the entrepreneurial activities of nascent second-generation ethnic entrepreneurs, this study applies, as a conceptual lens, the institutional theory and the legitimation process "whereby an organization justifies to a peer or superordinate system its right to exist." (Maurer, 1971, p. 361) This concept explains how the institutional structure and social embeddedness of nascent second-generation ethnic entrepreneurs can influence their entrepreneurship (Bruton, Ahlstrom, & Li, 2010; Scott, 2007). The existing research on ethnic entrepreneurs often portrays their dual embeddedness in two communities: the ethnic community and the mainstream community (cf. Achidi Ndofo & Priem, 2011; Aldrich & Waldinger, 1990a; Kariv, Menzies, Brenner, & Filion, 2009). The descendants of immigrants are often characterized by a dual identity, and their ethnic identities can be changed through entrepreneurial activities (Dang & Harima, 2020). The underlying assumption of this study is that nascent second-generation ethnic entrepreneurs have dual legitimacy due to their mixed embeddedness, which facilitates the creation of new ventures in both the ethnic and national markets. Additionally, through their entrepreneurial activities, nascent second-generation ethnic entrepreneurs can contribute significantly to the ethnic community, which increases the ethnic legitimation of their entrepreneurial activities.

This study applies an explorative qualitative research methodology to analyze the case of nascent second-generation Vietnamese ethnic entrepreneurs in Germany. Eight semi-structured interviews were conducted with nascent second-generation Vietnamese ethnic entrepreneurs.

## **NASCENT SECOND-GENERATION ETHNIC ENTREPRENEURSHIP AND ETHNIC LEGITIMATION**

### **Nascent Second-generation Ethnic Entrepreneurship**

Ethnic entrepreneurship is identified based on ethnic involvement (Chaganti & Greene, 2002). Ethnic entrepreneurs are defined as immigrants in the countries [of concern] or children or grandchildren of immigrants (Smallbone, 2005). Previous research has demonstrated that ethnic culture and social structure can shape the entrepreneurial process of ethnic entrepreneurs (Cederberg & Villares-Varela, 2019). Ethnic communities significantly influence the venture-creation process and serve to nurture ethnic entrepreneurial activities (Tavassoli & Tripl, 2019).

The mixed embeddedness model examines the impact of the host country's institutions on ethnic entrepreneurship activities (Kloosterman & Rath, 2001, 2018). Researchers often apply this concept to investigate the activities of ethnic entrepreneurs in home and host markets (Bagwell, 2018; Ram & Jones, 2008; Storti, 2014). However, despite the mixed-embeddedness model's comprehensive explanation for the impact of the host's institutions on the entrepreneurial process, it does not explain the wide-ranging, inter-ethnic variation in entrepreneurial concentration observed among immigrant groups in the host context (Peters, 2002).

Second-generation immigrants are characterized by their cultural dualism (Nguyen & Benet-Martínez, 2007). On the one hand, the descendants of immigrants are recognized as citizens in many receiving countries and have full access to local resources (Clark & Drinkwater, 2000). On the other hand, second-generation ethnic entrepreneurs rely more on connections to the communities with which they share an ethnic identity. For example, belonging to a visible ethnic minority enhances the ethnic identity of Asian Americans (Pyke & Dang, 2003). Moreover, Wilson et al. (2004) state that ethnic identity can increase the entrepreneurial aspirations of younger generations. Individuals in an ethnic group with a positive perception towards self-employment express greater interest in starting their businesses.

Previous studies on second-generation ethnic entrepreneurship have emphasized the differences in comparison to first-generation ethnic entrepreneurship (Beckers & Blumberg, 2013; Efendic & Wenberg, 2016). Such studies have concluded that second-generation ethnic entrepreneurs enjoy more advantages than both their parents' generation and local entrepreneurs (Beckers & Blumberg, 2013; Xu & Wu, 2016). For example, Rasel (2014) found that the offspring of immigrants are opportunity-driven entrepreneurs who are motivated by positive pull factors and benefits (Abada, Hou, & Lu, 2014). Some authors have also suggested that second-generation ethnic entrepreneurs have moved beyond the ethnic market to seek new opportunities (Kacar & Essers, 2019).

Nascent entrepreneurship is "the process of being engaged in new venture creation, either by a single person or with others, with the expectation of being owners or part owners of the new firm" (Nair, 2016, p. 216). According to the Global Entrepreneurship Monitor, in the total early-stage entrepreneurial activity (TEA), nascent entrepreneurs are involved in establishing a business. Davidsson and Honig (2003) have emphasized the role of human and social capital in increasing the probability of an

individual becoming a nascent entrepreneur. While human capital cannot predict the success of a new venture, social capital, including the encouragement of family, close friends, and neighbors in the same business, can effectively predict the success of a venture. Obschonka et al. (2011) have concluded that not only entrepreneurial competence in adolescence but also nascent founders' human and social capital affect progress in the venture creation process. Moreover, the self-efficacy of nascent entrepreneurs can influence their entrepreneurial performance (Brändle, Berger, Golla, & Kuckertz, 2018). Nascent entrepreneurs who identify with a self-interested understanding of entrepreneurship feel more capable of applying entrepreneurial skills than their counterparts. However, entrepreneurs who identify with a mission to change the world or target society at large are not likely to experience higher levels of entrepreneurial self-efficacy (Brändle et al., 2018).

## **Legitimation and Ethnic Entrepreneurship**

The connection between legitimacy and entrepreneurship is one of the main streams of institutional theory study (Bruton et al., 2010). This stream emphasizes society's role in providing entrepreneurial firms access to secure resources. Ma, Guo, and Shen (2019) state that new ventures face pressure to be similar to their peers to gain legitimacy while striving for differences that provide a competitive advantage. Stakeholders and society often grant access to a firm based on its performance. Such legitimation of newcomers as entrepreneurs is salient in societal discourses and images associated with entrepreneurs and entrepreneurship (Bensemman, Warren, & Anderson, 2018; Downing, 2005; Fisher, Kuratko, Bloodgood, & Hornsby, 2017). However, it is problematic for a nascent entrepreneurial venture to be legitimated because of its limited or non-existent records (Bruton et al., 2010).

Legitimacy is not a one-way process but instead a reciprocal process between an individual and the structure of the field (Bensemman et al., 2018; De Clercq & Voronov, 2009). An entrepreneur's awareness of society significantly influences their venture's performance. As previously reported in the literature, a focal firm's formal ties to prominent organizations within a community can impart legitimacy to the venture along various dimensions, ultimately enhancing its performance. Moreover, external relationships are important for entrepreneurial ventures, not only for their functional benefits but also for their legitimating potential. Organizations that follow institutional models of exchange and that display ties to prominent institutions in their environment are more likely to be seen as "desirable, proper, and appropriate" (Suchman, 1995) by their constituents (Tolbert, David, & Sine, 2011).

Legitimation is a key factor that simultaneously affects the preferences, the constraints, and the resource allocation of an entrepreneurial venture (Etzioni, 1987). Through the process of legitimation, new ventures acquire legitimacy through five perspectives: an institutional perspective, a cultural entrepreneurship perspective, an ecological perspective, an impression management perspective, and a social movement perspective (Überbacher, 2014). In the case of ethnic entrepreneurship, it is necessary to be legitimated by ethnic communities in order to gain easier access to ethnic resources.

There are two modes of ethnic legitimation: natural legitimation based on traditional naturalization rules and experiential legitimation based on life experience (Dion, Sitz, & Rémy, 2012). While one's place of birth and family ties define natural legitimation, an individual's life experiences and their involvement in the community construct experiential legitimation. For example, the market legitimates the products and services of ethnic entrepreneurial ventures based on the entrepreneurs' identities (Webb, Tihanyi, Ireland, & Sirmon, 2009). In addition, a recent study by Dang and Harima (2020) illustrates the mutual influence between ethnic entrepreneurs' involvement in ethnic communities and their ethnic

identity. However, the existing research has not indicated precisely how ethnic communities legitimate nascent ethnic entrepreneurship through their entrepreneurial activities.

## **METHODOLOGY**

In this study, we adopted a qualitative approach to delineate the characteristics of Vietnamese entrepreneurs and to explore how institutions influence their ethnic entrepreneurship endeavors in host countries across generations. Yin (2010) states that a qualitative approach enables researchers to investigate the mutual relationships among contextual conditions—social, institutional, and environmental—that influence people’s lives. Moreover, a qualitative-inductive approach allowed the researcher to capture various ethnic resources on an individual level. In addition, the qualitative findings illuminate the people behind the numbers and “add faces” to the statistics for a more in-depth understanding (Patton, 2005). This method provides detailed illustrations of the life experience of individual entrepreneurs and of how prevailing discourses are understood and interpreted (Berglund, 2007; Manen, 2016).

Nascent second-generation Vietnamese ethnic entrepreneurship in Germany is relevant to the research because of the prevalence of Vietnamese entrepreneurship in Germany. Most first-generation Vietnamese immigrants are necessity-driven entrepreneurs who became self-employed in the 1990s to finance themselves and their families. However, the entrepreneurial stories of their children are different. This second-generation has been recorded as one of the most well-integrated immigrant groups in Germany, consisting of predominantly opportunity-driven entrepreneurs with high-achieving academic backgrounds. This different setting enables a diversity of accessible resources that ethnic entrepreneurs can use during the early stages of establishing and developing their entrepreneurship.

For data collection, this study utilized the snowball sampling method. Snowball sampling aims to identify cases that are rich in information about a particular subject and is typically used when it is difficult to determine the population from which to select informants (Neergaard & Uhløi, 2007). The selection criteria were defined before interviewing potential candidates. To meet the aims of this research, only second-generation Vietnamese ethnic entrepreneurs who had been self-employed for less than one year were selected. Moreover, these businesses were required to have certain connections to the ethnic communities. The first interviewee was introduced to the author by an expert working for the Vietnamese Business Association in Germany. The first interviewee was asked to recommend nascent second-generation ethnic entrepreneurs, as were the subsequent interviewees. The author also contacted potential interviewees through the business information on the platform of the Vietnamese community in Germany. Through this method, two interviews were conducted in 2019 through Skype. Additionally, further information about the interviewees’ businesses was collected through different platforms such as company homepages and interactions with customers on other platforms such as Facebook and Instagram. This information was collected before and after the interviews, documented, and organized into categories.

This study relies on in-depth interviews as the primary data collection method. A set of open-ended questions was designed as a guideline for the interviews. Based on the initial information from the potential interviewees, the author also prepared additional questions to investigate the life experience of the interviewees. At the beginning of the interviews, the interviewees learned that disclosure of their identity would not take place at any point during the research process. The author also emphasized that all the questions were open and that answers could be neither right nor wrong. Interviewees were asked

to offer responses based on their own experiences. Anonymity and authenticity were important for facilitating situations in which interviewees were encouraged to talk about their emotions and identity as well as difficult experiences within their family and community.

In addition, the results of previous studies on Germany's Vietnamese community were considered as secondary data. This preexisting data was collected primarily by sociologists and researchers in integration fields. These results provided the first insight into the Vietnamese people and their activities in Germany.

We applied thematic analysis to assess the collected data. The data and codes were analyzed using the MAXQDA 12 (MAX qualitative data analysis) software as a qualitative data analysis tool. The coding system was built inductively. The line-by-line coding method (Charmaz, 2006) was performed by condensing (i.e., paraphrasing) the interviewees' responses. In terms of quality assurance, the empirical research process was dependent on two test interviews, including one interview with second-generation ethnic entrepreneurs and the other with an ethnic entrepreneur from the first-generation immigrant group. These interviews do not involve in the analyzing process. Following these interviews, the author analyzed the weaknesses of the interview design and made the necessary revisions (Kvale, 2007). The revised interview guidelines framed the subsequent interviews. Moreover, depending on the profile of the individual entrepreneur and their venture, specific adjustments to the questions allowed the research to delve further into different aspects of the topic (DiCicco-Bloom & Crabtree, 2006). The coding and analysis process were performed according to the structure in Figure 1. The information of interviewees was presented in Table 1.

## **THE MUTUAL RELATIONSHIP BETWEEN ETHNIC LEGITIMACY AND NASCENT SECOND-GENERATION ETHNIC ENTREPRENEURSHIP**

### **The Dual Legitimacy of Second-generation Ethnic Entrepreneurs**

Second-generation immigrants who were born or received their entire education in the host country have a sufficient understanding of the national legal system. Their comprehensive understanding of the local system helps them connect to professional consulting services from the mainstream community for particular issues. Therefore, second-generation immigrants can create a brand-new business model without regulative boundaries.

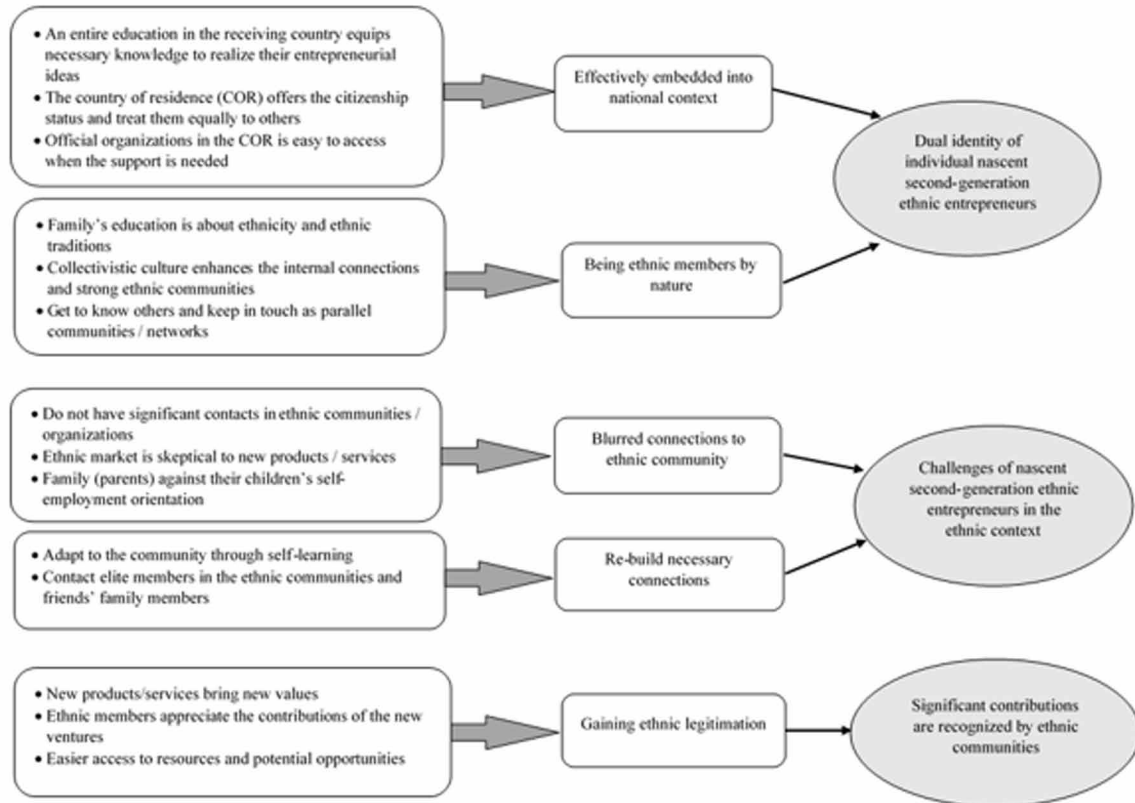
*No, we don't have any problems registering and operating our business. We have worked with a law company from the beginning, and they give us legal advice in different situations ... We also discuss various options to find the best solutions—You know, [a] win-win strategy. (Entrepreneur A)*

*There is a lawyer [they work with]. He consults me [on] how to deal with legal issues such as registering the copyright for our new publication, writing the corporation contract, and so on. (Entrepreneur B)*

Due to Germany's immigration policy, second-generation Vietnamese immigrants have either German citizenship by birth or German citizenship through naturalization. This status provides them with opportunities to do business as locals, and citizenship allows them to work in various fields without restrictions.

## The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship

Figure 1. Coding system and analyzing process (three main levels)  
(Source: Own illustration)



*To open a law company in Germany, you must have the equivalent certificates and certain skills. The team that you work with is also critical. [...] There are some offices of the people from the first-generation consulting ethnic people about legal issues, but that's it. They cannot present as lawyers; they do not have German certificates. (Entrepreneur B)*

Vietnamese second-generation immigrants embed themselves in diverse contexts, including mainstream, ethnic, and co-ethnic communities. First, Vietnamese second-generation immigrants can integrate well in the local context due to the education they received from the host country. Second, living in Germany allows them to engage in other cultural contexts, or a broader cultural context, such as the Asian community. In addition, most Vietnamese families raise their children in the ethnic community and preserve their ethnic customs. Therefore, second-generation Vietnamese are well prepared in various cultural contexts, which enhances the success of their entrepreneurial ventures.

*We speak Vietnamese at home.... Our parents always celebrate the traditional New Year and teach us about Vietnamese traditions. Our grandmother took care of us since my parents were too busy. She always cooked for us, and her food inspired me to become a chef and have my own Vietnamese restaurant. (Entrepreneur C)*



**The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship**

*Table 1. The information of interviewees and their entrepreneurial activities*

Interviewee	Age	Year of establishment	Entrepreneurial activities
Entrepreneur A	30	2017 (interview 2017)	Entrepreneur A (EA) is the co-founder of an IT company in Germany and Vietnam established by a team that originated from a student project. The company focuses on the German market in general rather than a specific ethnic group. EA is seeking entrepreneurial opportunities, as he would like to contribute to the ethnic market. EA's goal is to start his own company in Vietnam.
Entrepreneur B	35	2015 (interview 2016)	Entrepreneur B (EB) owns a law company in Germany – EB worked for an international law company for three years before establishing her own company in partnership with three other lawyers. EB works with a Vietnamese assistant who is responsible for contacting and consulting Vietnamese customers.
Entrepreneur C	32	2016 (interview 2017)	Entrepreneur C (EC) is the co-founder of a street-food restaurant with an authentic design and recipes. EC graduated with a degree in design and co-founded the restaurant with his brother, who has a certificate in cooking. EC is responsible for designing and marketing through his networks with international friends and journalists, while the brother is responsible for internal management. They plan to have a restaurant chain with different styles to serve different groups of customers, from street food to royal food. The business is the first enterprise to develop a food chain in the future.
Entrepreneur D	29	2016 (interview 2016)	Entrepreneur D (ED) company specializes in organizing events for young Vietnamese people who are students abroad or descendants of immigrants. ED has experience as an organizer for Asian events and parties. With the new company, ED wants to develop services that focus on Vietnamese customers and style. ED is also working on a project to open an establishment that serves Vietnamese food and drinks.
Entrepreneur E	30	2015 (interview 2016)	Entrepreneur E (EE) has a coffee and restaurant company. EE used to work for an international coffee company. He realized that Vietnamese raw coffee beans were of high quality, but the quality was reduced during the production process. EE decided to import the raw coffee beans from Vietnam and worked with German engineers to have the entire production process in Germany. EE collaborated with other second-generation Vietnamese immigrants to build the project and establish their first shop in Berlin. The team's goal is to operate under a Business to Customer (B2C) business model in which the company will work directly with Vietnamese farmers and help them implement sustainable production processes.
Entrepreneur F	34	2015 (interview 2016)	Entrepreneur F (EF) owns a law company that cooperates with three other lawyers. EF graduated in legal from Leipzig University and completed his internship in Vietnam for two years. After receiving a law certificate, EF worked for several years for an international law company. EF decided to establish a company to help the ethnic community. EF emphasized that he wants to contribute to the development of the ethnic community while doing his job. "It's a win-win strategy."
Entrepreneur G	23	2018 (interview 2019)	Entrepreneur G (EG) is a master's student in business administration and owner of a coffee company. EG had the idea to establish a company to import raw coffee beans from Vietnam when she was an undergraduate student, but EG's parents did not support the plan. Without the parents' financial support, EG postponed her plan until she had enough savings. The current company was established from EG's student savings and the investment of the co-founder, who also invests in other start-up projects.
Entrepreneur H	23	2018 (interview 2019)	Entrepreneur H (EH) owns a sport and online courses company. EH worked part-time as an individual coach while completing her master's degree in business. EH started the company with her partner, who was a professional coach. EH's goal is to expand the business by offering wellness services.

(Source: Own data)

## **The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship**

*I have some friends. They are not Vietnamese but Asian; we met at school. They [have] helped me [whenever] I needed their support in my business. (Entrepreneur B)*

Moreover, Vietnamese culture is strongly collectivistic, which fosters strong relationships in which everyone takes responsibility for the fellow members of their group. Thus, as a part of society, second-generation ethnic entrepreneurs can receive useful support from other ethnic community members.

*With my parents, the family is not only our family members, including parents and children, but also my aunts, my uncles, and my cousins. (Entrepreneur A)*

*Some of them (business partners) know my father; they consider me as a family member and do not ask me for extra fees to advertise my events at their restaurants. (Entrepreneur D)*

Growing up in this culture, children of Vietnamese immigrants learn about their ethnicity and build connections to ethnic community members. Through their businesses, they can not only broaden their current network but also create new networks.

*I met [the] children of my mother's friends, and we became good friends afterward. Whenever I need support for my business, they are willing to help, and they also introduce me to new potential customers who are not Vietnamese but in Asian communities here. (Entrepreneur D)*

*At the beginning, I refused to come with my parents since there were only old people there, and they just danced or sang Vietnamese songs the whole time. But I met some of their children and, gradually, we have begun to hang out together more often.... We now prefer to meet up only with the second-generation and have our own network. (Entrepreneur E)*

These connections help second-generation ethnic entrepreneurs identify unexploited entrepreneurial opportunities, which motivate them to establish new ethnic businesses or extend their entrepreneurial activities to the ethnic market.

*We did offer the legal consulting service before.... At that time, I cooperated with only German lawyers.... My assistant has more connections to Vietnamese communities here.... I talked to her, and we decided to offer our service to Vietnamese people here. Then, they become our new target customers, and everything is going very well now. (Entrepreneur B)*

## **Ethnic Community Partially Legitimizes Nascent Second-generation Ethnic Entrepreneurship**

Although nascent second-generation ethnic entrepreneurs have connections to the ethnic community, some second-generation Vietnamese immigrants have lost these connections, which makes accessing information and ethnic resources more challenging. Thus, they must learn about the ethnic community to rebuild the bridges.

## **The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship**

*I don't have any contact with Vietnamese people here (in Germany), partially because there were no Vietnamese students in my schools, and we lived in a very small village in which we were the only Vietnamese family.... We speak Vietnamese at home, but ... only in simple contexts. So, I have to learn almost everything from the beginning about the country, people, [and] culture.... This would help me to come closer to my ethnic customers. (Entrepreneur A)*

*Yes, speaking fluent Vietnamese helps me to understand my customers comprehensively. Especially in terms of legal issues. (Entrepreneur B)*

*My Vietnamese was not that good when I started my business.... I was practicing whenever I had [the chance].... It helps me a lot [with updating] the information and the investing trends of Vietnamese customers. Also, I cannot make friends with important people being in [the] Vietnamese delegation with [poor] language skills. (Entrepreneur F)*

Members of the ethnic community, who are often first-generation immigrants, expect their children to pursue protected, professional, and salaried careers rather than self-employment. The parents of nascent second-generation ethnic entrepreneurs, therefore, do not support their children in the early phases of entrepreneurship. Parents' objections may cause difficulties for nascent entrepreneurs, particularly if they are not financially independent (e.g., students).

*My parents were shocked when I told them that I would leave my job and establish my own business. They refused to support me and hoped that I would give up after facing challenges. They tried to convince me that my decision would ruin my future life [...] It was a difficult time between my parents and me; we did not talk as much as we used to. (Entrepreneur C)*

*My parents [stopped] financing me when I told them that I would like to start my business while I was [enrolled at] the University. It was a tough time [...] I had to wait one more year [until] I [had] saved enough for starting up. (Entrepreneur F)*

Without the support of their families, nascent second-generation ethnic entrepreneurs search elsewhere for support when faced with the challenges of re-connecting to ethnic communities. For entrepreneurs, personal networks, including connections with elite ethnic members, serve as the primary resource for ethnic entrepreneurs seeking support.

*To be honest, I did not know many ethnic people, especially people in my parents' generation. [...] I talked to my friends, and they introduced me to their parents. That is how I got to know them and rebuild my ethnic connection. (Entrepreneur D)*

*I [would] rather contact the leaders of those organizations than others. It was easier for me, and they could connect me to the people that might help my business [...] I would like to present myself as a partner of those organizations [and not just] a member. (Entrepreneur A)*

## **Nascent Second-generation Ethnic Entrepreneurship Receives Legitimations From Ethnic Communities Through Their Contributions**

Although second-generation ethnic entrepreneurs have connections to ethnic communities, their entrepreneurial ventures often need time to gain ethnic legitimation. Ethnic customers are often skeptical about nascent ventures that offer new products and services to the traditional ethnic market.

*There were Vietnamese who worked as legal consultants [...] They did not have certificates to work as lawyers in Germany. When I opened my office, people [also] came to me for consulting; they did not expect that I could also represent them as their lawyer. It took time.... They prefer to get information from their peers who [have] used our services [...] After several cases, more customers [now] visit the office. They learn that I can handle the situation from the beginning, and they do not have to pay for another lawyer if [their case] becomes complex and [must go to] court. (Entrepreneur F)*

Ethnic communities legitimate the entrepreneurship of nascent second-generation entrepreneurs through their contributions to the communities. As nascent second-generation ethnic entrepreneurs do not follow traditional ethnic entrepreneurship, they offer new values to the ethnic market. These values improve not only the ethnic image but also the quality of ethnic products and services.

*We are doing our best to keep the authentic taste of Vietnamese cuisine [...] We decorated the restaurants with Vietnamese photos, and many decorations imported directly from Vietnam ... and many Vietnamese people appreciate that.... They are becoming our loyal customers. (Entrepreneur C)*

Therefore, ethnic communities legitimate the nascent entrepreneurship of second-generation ethnic entrepreneurs. Having legitimation from ethnic communities provides nascent second-generation entrepreneurs access to resources and community support.

*I talked to the leader of [the] Vietnamese Business Association in Berlin. He was very interested in my idea to import the raw bean from Vietnam [and] produce and sell the final products here. Some members of the association were here when we had the opening ceremony, and they were happy with the good quality of our Vietnamese coffee [...] They introduced my business to some partners in Vietnam and offered to support [me] whenever I need. (Entrepreneur E)*

## **DISCUSSION**

From the entrepreneurship research perspective, regulatory legitimacy occurs when laws and regulations help safeguard the right to exist (Tolbert et al., 2011). The details of the strategic behavior that entrepreneurs exhibit in different countries may differ somewhat due to variations in their respective institutional environments. However, most receiving countries recognize the descendants of immigrants as their citizens, and through national legitimacy, these individuals are granted entry into particular industries (Alba, 2005). Kacar and Essers (2019) state that, having been born and educated in the country of residence, the descendants of immigrants are well-educated, multilingual, and financially independent. Furthermore, a comprehensive understanding of a regulative move can provide alternative resources that enhance the

business environment (Scott, 2007). The empirical data shows that nascent second-generation ethnic entrepreneurs can enter different industries that require essential legal status and professional certificates. They have full access to formal institutions and learn about the entire system during schooling. Previous studies have stated the strong effects of teaching national policy and have found that the students are well prepared by the education system (Cannella, 1997; Darling-Hammond, 1996). As stated by Kibler et al. (2014), the full understanding of institutional legitimacy can enhance the entrepreneurial motivations of potential entrepreneurs. Furthermore, attaining legitimacy in the early stage of a venture can provide access to potential resources (Aldrich & Fiol, 1994). As the institutional context within which nascent second-generation ethnic entrepreneurs are embedded becomes broader, the more opportunities become available to them (Lounsbury & Glynn, 2001). In summary, the national legitimacy increases the willingness of nascent second-generation ethnic entrepreneurs to pursue their business ideas and create new ventures. When afforded with national legitimacy, nascent second-generation ethnic entrepreneurs gain access to new industries that are limited to outsiders. In addition, these entrepreneurs can access the resources needed to consolidate entrepreneurial opportunities.

**Proposition 1:** The regulatory legitimacy of the country of residence provides nascent second-generation ethnic entrepreneurs access to explore and exploit resources in a particular industry.

Previous studies have revealed the dual embeddedness of second-generation ethnic entrepreneurs. On the one hand, Kacar and Essers (2019) state that the descendants of immigrants are well-educated, multilingual, and financially independent. Huynh et al. (2011) and Nguyen and Benet-Martínez (2013) emphasize that the descendants of immigrants are bicultural individuals who can adjust their identities between ethnic and national identity. Although it is evident that the ethnic characteristics and cultures have transferred through generations of the ethnic minority, these identities might be blurred and become less salient (Alba, 2005; Platt, 2014). On the other hand, the literature shows that second-generation immigrants in visible ethnic minorities often retain certain connections to their co-ethnic community due to the negative effects of potential discrimination (Alba, 2005). The empirical findings suggest that second-generation ethnic entrepreneurs face difficulties in connecting to the ethnic community. As a consequence of blurred ethnic ties, in the early stages of entrepreneurship, second-generation ethnic entrepreneurs often face challenges in forging significant ethnic connections. These ethnic ties and community support are an important resource, specifically for ethnic entrepreneurial activities (de Vries, Hamilton, & Voges, 2015; Peters, 2002). Bruton et al. (2010) state that society legitimates entrepreneurship based on the entrepreneur's performance and record. However, nascent second-generation ethnic enterprises, as new ventures in the market, does not have those records, which can make it challenging for them to attain legitimacy.

Moreover, the awareness of ethnic communities around the self-employment of young ethnic community members can also influence ethnic legitimation. On the one hand, strong ties, such as those derived from family relationships, provide secure and consistent access to the resources required for the development of nascent entrepreneurship (Davidsson & Honig, 2003). In addition, previous studies on ethnic entrepreneurship emphasizes family support as one of the crucial factors that positively influence successful ethnic entrepreneurship (Danes, Lee, Stafford, & Heck, 2008; Rath & Kloosterman, 2000). Family members can serve as either "free labor" or as investors in the entrepreneurship (Flap, Kumcu, & Bulder, 2000; Rath & Kloosterman, 2000). Furthermore, the study on nascent entrepreneurship and institutions states that encouragement from family is important for nascent entrepreneurs (Brändle et

## ***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

al., 2018). On the other hand, a previous study on immigrant communities demonstrates that successful ethnic entrepreneurs expect their children to have stable professional careers and salaries (Metcalf, Modood, & Virdee, 1996). The empirical findings go beyond the results in which the parents of nascent second-generation ethnic entrepreneurs do not support their self-employment. Family has a significant role in bridging their children to the ethnic communities (Portes & Rumbaut, 2001). Objection from family members causes difficulties in obtaining the necessary ethnic resources. To overcome the lack of ethnic connections, nascent second-generation ethnic entrepreneurs must seek support from those in their network, such as peers who share their immigrant background and elites in ethnic communities.

**Proposition 2:** Nascent second-generation ethnic entrepreneurs face challenges in becoming legitimated by their ethnic society. As the families of second-generation ethnic entrepreneurs do not support self-employment, members from their networks and elites in the ethnic community assist these entrepreneurs with building connections to ethnic communities.

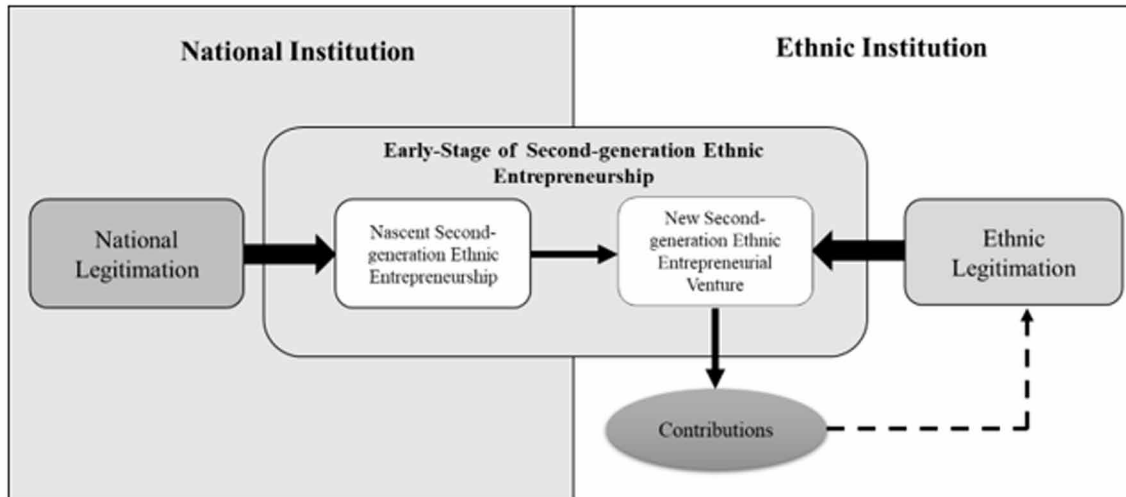
As discussed above, despite the challenges, nascent second-generation ethnic entrepreneurship can become embedded into both national and ethnic communities. This dual embeddedness of nascent second-generation ethnic entrepreneurs helps them in gaining dual legitimacy. This embeddedness results in broad, rich, accessible networks that give entrepreneurs more possibilities for gaining information and resources (Klinthäll & Urban, 2014). Additionally, Bagwell (2006) concludes that descendants of immigrants have legitimacy derived from their contacts within both the ethnic and host-country networks, resulting in a wide network of different contacts. The independence of network contacts enables second-generation entrepreneurs to become aware of business opportunities. Furthermore, they can determine the potential of these opportunities (Moran, 2005). Legitimacy allows entrepreneurship to benefit from the knowledge, resources, and information owned by the network. Entrepreneurs can then apply these factors to improve their ethnic business activities, which leads to a favorable impact on the entrepreneurial activities of nascent second-generation immigrants.

However, to earn legitimation from ethnic institutions, nascent second-generation ethnic entrepreneurs need time to prove their contributions. Dowling and Pfeffer (1975) state that legitimacy connotes “congruence between the social values associated with or implied by activities and the norms of acceptable behavior in the larger social system.” This statement is in line with DiMaggio and Powell (1991), who argue that cultural accounts provide the explanations for an organization’s existence. Others have shown that a society’s legitimation is constructed relative to industry life cycles and the process of entrepreneurship (Lounsbury & Glynn, 2001). The empirical data from this study emphasize the same situation with nascent second-generation ethnic entrepreneurship. As this form of entrepreneurship offers products and services from the mainstream markets that did not already exist in the ethnic market, nascent second-generation ethnic entrepreneurship enhances the access of ethnic members to products and services. Moreover, these products and services can enhance the quality of life within the ethnic community.

**Proposition 3:** Because of its dual legitimacy, nascent second-generation ethnic entrepreneurship offers unique and valuable contributions to the ethnic community; therefore, such entrepreneurship is able to gain ethnic legitimation to a broad extent.

The relationships between nascent second-generation ethnic entrepreneurship and both ethnic and national legitimation are presented in the following framework.

Figure 2. Mutual influence between legitimacy and nascent second-generation ethnic entrepreneurship  
(Source: Own illustration)



## CONCLUSION AND IMPLICATIONS

This chapter investigates the manner in which dual legitimacy enhances the venture-creation process for nascent second-generation ethnic entrepreneurs and how entrepreneurs gain legitimacy from the ethnic community. Different interpretations and framings of legitimacy among a group of nascent second-generation ethnic entrepreneurs with similar backgrounds result in diverse intersections of entrepreneurship and ethnic legitimacy.

A key implication of this chapter is that the ethnic legitimation of nascent second-generation ethnic entrepreneurs is constructed based on particular perceptions within the ethnic community. To be able to operate and succeed as ethnic entrepreneurs, second-generation immigrants use their dual legitimacy to construct an entrepreneurial identity. This identity works for them within the respective entrepreneurial opportunities that they can contribute to the community. Because of these contributions, the ethnic community legitimates the entrepreneurship of second-generation immigrants. Through this interaction process, the nascent second-generation ethnic entrepreneurs receive support not from family members but from elite ethnic members and others in their personal networks.

This study demonstrates that the study of ethnic entrepreneurship can be advanced by focusing on the descendants of immigrants who are at the nascent stage of venture creation. While the study of ethnic entrepreneurship has lamented the lack of intersections between ethnic entrepreneurial activities and national policies and institutional forces (Nazareno, Zhou, & You, 2019), it is clear that the theory of legitimacy can contribute to our understanding of ethnic entrepreneurial activities. The entrepreneurial factors including new actors in the ethnic markets, emerging opportunities, accessible resources, and more generally, development within the ethnic community have been reforming the ethnic entrepreneurship. While the mixed embeddedness and dual identity of second-generation immigrants are frequently discussed, relatively little attention has been paid to the mixed legitimacy by which these entrepreneurs and firm leaders seek to establish their identity and gain legitimacy for their enterprises.

## ***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

For the study of ethnic entrepreneurship, this study identifies a diverse feedback process between the ethnic entrepreneurial activities of nascent second-generation ethnic entrepreneurs and their ethnic and national institutions. This study illustrates how nascent second-generation ethnic entrepreneurs shape entrepreneurial opportunities based on the legitimacy standards of their ethnic and host countries. While the regulatory legitimacy conferred by the country of residence grants nascent second-generation ethnic entrepreneurship full access to the desired industry, the ethnic community's objection can deter nascent second-generation ethnic entrepreneurs from becoming self-employed. This study found that the processes of entrepreneurial decision-making and opportunity recognition of nascent second-generation ethnic entrepreneurs are strongly influenced by their legitimacy, which in turn derives from their social embeddedness and identity.

Furthermore, this study contributes to the institutional theory and legitimacy study on entrepreneurship. Since the individual actors such as entrepreneurs, venture managers, and reference persons influence the legitimacy of new ventures, their background significantly regulates the ethnic legitimation of the nascent entrepreneurship. The portrait of a nascent second-generation ethnic entrepreneur is defined by their immigrant background and mixed identity. The study results in the constructive ethnic legitimation of nascent second-generation ethnic entrepreneurship. Furthermore, nascent second-generation ethnic entrepreneurs contribute to their communities through their entrepreneurial activities. These contributions, which enhance the ethnic legitimation of their entrepreneurship, are broadly consistent with the literature on legitimation, which argues that it is a reciprocal process (De Clercq & Voronov, 2009).

This study also holds two important practical implications. First, this study found that the diversity of ethnic connections through second-generation networks can offer positive effects to an ethnic community in the host country. On the one hand, the entrepreneurial activities of nascent second-generation ethnic entrepreneurs in new industries enhance the visibility of ethnic communities. On the other hand, the products and services contribute to the diversity of ethnic markets and thereby improve the competition and quality within these markets. Second, understanding the challenges faced by nascent second-generation ethnic entrepreneurs helps policymakers and organizations in offering respective support programs. These programs and activities aim to hasten the legitimation process and thus enhance the contributions of nascent second-generation ethnic entrepreneurship to the national economy.

This study has several limitations. First, the paper does not consider the immigrant backgrounds of the entrepreneurs' families. For instance, Hillmann (2007) emphasizes that Vietnamese immigrants from the refugee wave differ from their peers in the contract-worker groups with respect to the integration process. Second, the study did not investigate the non-entrepreneurial experience of the nascent second-generation ethnic entrepreneurs before they established their businesses. The knowledge and skills gained in the early stages of venture creation may determine the identity and the embeddedness of individual entrepreneurs as well as their entrepreneurship. Third, the empirical data were gathered from only a single ethnic minority group: Vietnamese immigrants in Germany.

Further work is needed to determine whether nascent second-generation ethnic entrepreneurs in different ethnic groups face similar opportunities and challenges in gaining their respective legitimacy. Moreover, the longitudinal studies can examine the further stages of nascent second-generation ethnic entrepreneurship to highlight how legitimation affects the entrepreneurial processes of second-generation ethnic entrepreneurs. An attempt at quantifying the factors that impact the legitimacy of nascent second-generation ethnic entrepreneurship is needed as well.



## REFERENCES

- Abada, T., Hou, F., & Lu, Y. (2014). Choice or necessity: Do immigrants and their children choose self-employment for the same reasons? *Work, Employment and Society*, 28(1), 78–94. doi:10.1177/0950017013511870
- Alba, R. D. (2005). Bright vs. blurred boundaries: Second-generation assimilation and exclusion in France, Germany, and the United States. *Ethnic and Racial Studies*, 28(1), 20–49. doi:10.1080/0141987042000280003
- Aldrich, H. E., & Fiol, C. M. (1994). Fools Rush in? The Institutional Context of Industry Creation. *Academy of Management Review*, 19(4), 645–670. doi:10.5465/amr.1994.9412190214
- Aldrich, H. E., & Waldinger, R. D. (1990). Ethnicity and Entrepreneurship. *Annual Review of Sociology*, 16(1), 111–135. doi:10.1146/annurev.so.16.080190.000551
- Bagwell, S. (2006). UK Vietnamese Businesses: Cultural Influences and Intracultural Differences. *Environment and Planning, C, Government & Policy*, 24(1), 51–69. doi:10.1068/c058
- Bagwell, S. (2018). From mixed embeddedness to transnational mixed embeddedness: An exploration of Vietnamese businesses in London. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 104–120. doi:10.1108/IJEER-01-2017-0035
- Baron, T., & Harima, A. (2019). The role of diaspora entrepreneurs in start-up ecosystem development - a Berlin case study. *International Journal of Entrepreneurship and Small Business*, 36(1/2), 74. doi:10.1504/IJESB.2019.096968
- Beckers, P., & Blumberg, B. F. (2013). Immigrant entrepreneurship on the move: A longitudinal analysis of first- and second-generation immigrant entrepreneurship in the Netherlands. *Entrepreneurship and Regional Development*, 25(7–8), 654–691. doi:10.1080/08985626.2013.808270
- Bensemman, J., Warren, L., & Anderson, A. (2018). Entrepreneurial engagement in a depleted small town: Legitimacy and embeddedness. *Journal of Management & Organization*, 1–17. doi:10.1017/jmo.2018.63
- Berglund, H. (2007). Researching entrepreneurship as lived experience. In H. Neergaard & J. P. Ulhøi (Eds.), *Handbook of Qualitative Research Methods in Entrepreneurship* (pp. 75–93). Edward Elgar. doi:10.4337/9781847204387.00011
- Brändle, L., Berger, E. S. C., Golla, S., & Kuckertz, A. (2018). I am what I am - How nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights*, 9, 17–23. doi:10.1016/j.jbvi.2017.12.001
- Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice*, 34(3), 421–440. doi:10.1111/j.1540-6520.2010.00390.x
- Cannella, G. S. (1997). *Deconstructing early childhood education : social justice and revolution*. P. Lang.

## ***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

Cederberg, M., & Villares-Varela, M. (2019). Ethnic entrepreneurship and the question of agency: The role of different forms of capital, and the relevance of social class. *Journal of Ethnic and Migration Studies*, 45(1), 115–132. doi:10.1080/1369183X.2018.1459521

Chaganti, R., & Greene, P. G. (2002). Who Are Ethnic Entrepreneurs? A Study of Entrepreneurs' Ethnic Involvement and Business Characteristics. *Journal of Small Business Management*, 40(2), 126–143. doi:10.1111/1540-627X.00045

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative research*. SAGE Publications.

Clark, K., & Drinkwater, S. (2000). Pushed out or pulled in? Self-employment among ethnic minorities in England and Wales. *Labour Economics*, 7(5), 603–628. doi:10.1016/S0927-5371(00)00015-4

Danes, S. M., Lee, J., Stafford, K., & Heck, Z. (2008). The Effects of Ethnicity, Families and Culture on Entrepreneurial Experience : An Extension of Sustainable Family Business Theory. *Journal of Developmental Entrepreneurship*, 13(3), 229–268. doi:10.1142/S1084946708001010

Dang, C.-M., & Harima, A. (2020). Dual Embeddedness and Entrepreneurial Activities of Second-Generation Ethnic Entrepreneurs: Multiple Case Studies with Vietnamese Entrepreneurs in Germany. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 239395751988755(1), 84–113. Advance online publication. doi:10.1177/2393957519887554

Darling-Hammond, L. (1996). The Right to Learn and the Advancement of Teaching: Research, Policy, and Practice for Democratic Education. *Educational Researcher*, 25(6), 5–17. doi:10.3102/0013189X025006005

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. doi:10.1016/S0883-9026(02)00097-6

De Clercq, D., & Voronov, M. (2009). The Role of Domination in Newcomers' Legitimation as Entrepreneurs. *Organization*, 16(6), 799–827. doi:10.1177/1350508409337580

de Vries, H. P., Hamilton, R. T., & Voges, K. (2015). Antecedents of Ethnic Minority Entrepreneurship in New Zealand: An Intergroup Comparison. *Journal of Small Business Management*, 53, 95–114. doi:10.1111/jsbm.12195

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314–321. doi:10.1111/j.1365-2929.2006.02418.x PMID:16573666

DiMaggio, P. J., & Powell, W. W. (1991). Introduction. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 1–38). University of Chicago Press.

Dion, D., Sitz, L., & Rémy, É. (2012). Legitimacy and Authenticity of Ethnic Affiliations: The Case of Regionalism. [English Edition]. *Recherche et Applications en Marketing*, 27(1), 59–76. doi:10.1177/076737011202700103

Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review*, 18(1), 122–136. doi:10.2307/1388226

***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

Downing, S. (2005). The social construction of entrepreneurship: Narrative and dramatic processes in the coproduction of organizations and identities. *Entrepreneurship Theory and Practice*, 29(2), 185–204. doi:10.1111/j.1540-6520.2005.00076.x

Efendic, N., & Wennberg, K. (2016). Growth in first- and second-generation immigrant firms in Sweden. *International Small Business Journal*, 34(8), 1028–1052. doi:10.1177/0266242615612533

Etzioni, A. (1987). Entrepreneurship, adaptation and legitimation. A macro-behavioral perspective. *Journal of Economic Behavior & Organization*, 8(2), 175–189. doi:10.1016/0167-2681(87)90002-3

Felfe, C., Rainer, H., & Saurer, J. (2016). Why Birthright Citizenship Matters for Immigrant Children: Impacts on Parental Educational Choices (SSRN Scholarly Paper No. ID 2845276). Rochester, NY: Social Science Research Network.

Fisher, G., Kuratko, D. F., Bloodgood, J. M., & Hornsby, J. S. (2017). Legitimate to whom? The challenge of audience diversity and new venture legitimacy. *Journal of Business Venturing*, 32(1), 52–71. doi:10.1016/j.jbusvent.2016.10.005

Flap, H., Kumcu, A., & Bulder, B. (2000). The Social Capital of Ethnic Entrepreneurs and their Business Success. In J. Rath (Ed.), *Immigrant Business: The Economic, Political and Social Environment* (pp. 142–161). Macmillan Press. doi:10.1057/9781403905338\_9

Hillmann, F. (2007). Riders on the storm: Vietnamese in Germany's two migrant systems. In E. Spann, F. Hillmann, & T. van Naerssen (Eds.), *Asian Migrants and European Labour Markets: Patterns and Processes of Immigrant Labour Market Insertion in Europe* (pp. 80–100). Taylor & Francis.

Huynh, Q.-L., Nguyen, A.-M. D., & Benet-Martínez, V. (2011). Bicultural identity integration. In S. J. Schwartz, K. LUYcky, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 827–844). New York: Springer. doi:10.1007/978-1-4419-7988-9\_35

Kacar, S. O., & Essers, C. (2019). The interplay between identity construction and opportunity structures: Narratives of Turkish migrant women entrepreneurs in the Netherlands. *International Small Business Journal: Researching Entrepreneurship*, 37(7), 713–731. doi:10.1177/0266242619856809

Kariv, D., Menzies, T. V., Brenner, G., & Fillion, L. J. (2009). Transnational networking and business performance: Ethnic entrepreneurs in Canada. *Entrepreneurship and Regional Development*, 21(3), 239–264. doi:10.1080/08985620802261641

Kibler, E., Kautonen, T., & Fink, M. (2014). Regional Social Legitimacy of Entrepreneurship: Implications for Entrepreneurial Intention and Start-up Behaviour. *Regional Studies*, 48(6), 995–1015. doi:10.1080/00343404.2013.851373

Klinthäll, M., & Urban, S. (2014). Second-Generation Immigrants in the Small-Business Sector in Sweden. *Journal of Immigrant & Refugee Studies*, 12(3), 210–232. doi:10.1080/15562948.2013.827768

Kloosterman, R. C., & Rath, J. (2001). Immigrant entrepreneurs in advanced economies: Mixed embeddedness further explored. *Journal of Ethnic and Migration Studies*, 27(2), 189–201. doi:10.1080/13691830020041561

## ***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

Kloosterman, R. C., & Rath, J. (2018). Mixed Embeddedness Revisited: A Conclusion to the Symposium. *Sociologica*, 12(2), 103–114. doi:10.6092/issn.1971-8853/8625

Kvale, S. (2007). Introduction to Interview Research. In *Doing Interviews* (pp. 2–10). SAGE Publications, Ltd., doi:10.4135/9781849208963.n1

Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6–7), 545–564. doi:10.1002/mj.188

Ma, H., Guo, H., & Shen, R. (2019). Organisational regulatory legitimacy, entrepreneurial orientation, and SME innovation: An optimal distinctiveness perspective. *Technology Analysis and Strategic Management*, 31(7), 833–847. doi:10.1080/09537325.2018.1555320

Maurer, J. G. (1971). *Readings in organization theory: open-system approaches*. Random House.

Metcalf, H., Modood, T., & Virdee, S. (1996). *Asian self-employment: The interaction of culture and economics in England*. Policy Studies Institute.

Moran, P. (2005). Structural vs. relational embeddedness: Social capital and managerial performance. *Strategic Management Journal*, 26(12), 1129–1151. doi:10.1002/mj.486

Nair, S. R. (2016). Women entrepreneurship across nations. In *Handbook of Research on Entrepreneurship in the Contemporary Knowledge-Based Global Economy* (pp. 189–216). IGI Global., doi:10.4018/978-1-4666-8798-1.ch009

Nazareno, J., Zhou, M., & You, T. (2019, August 13). Global dynamics of immigrant entrepreneurship: Changing trends, ethnonational variations, and reconceptualizations. *International Journal of Entrepreneurial Behaviour and Research*. doi:10.1108/IJEER-03-2018-0141

Ndofor, H. A., & Priem, R. L. (2011). Immigrant Entrepreneurs, the Ethnic Enclave Strategy, and Venture Performance. *Journal of Management*, 37(3), 790–818. doi:10.1177/0149206309345020

Neergaard, H., & Ulhøi, J. P. (2007). *Handbook of qualitative research methods in entrepreneurship*. Edward Elgar. doi:10.4337/9781847204387

Nguyen, A.-M. D., & Benet-Martínez, V. (2007). Biculturalism unpacked: Components, measurement, individual differences, and outcomes. *Social and Personality Psychology Compass*, 1(1), 101–114. doi:10.1111/j.1751-9004.2007.00029.x

Nguyen, A.-M. D., & Benet-Martínez, V. (2013). Biculturalism and Adjustment: A Meta-Analysis. *Journal of Cross-Cultural Psychology*, 44(1), 122–159. doi:10.1177/0022022111435097

Nikolka, T. (2012). *Admission Criteria and Policies for Immigrant entrepreneurs in OECD Countries*. Academic Press.

Obschonka, M., Silbereisen, R. K., Schmitt-Rodermund, E., & Stuetzer, M. (2011). Nascent entrepreneurship and the developing individual: Early entrepreneurial competence in adolescence and venture creation success during the career. *Journal of Vocational Behavior*, 79(1), 121–133. doi:10.1016/j.jvb.2010.12.005

OECD. (2018). *International Migration Outlook 2018*. OECD., doi:10.1787/migr\_outlook-2018-

***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

- OECD. (2020). *Working age population (indicator)*. doi:10.1787/d339918b-en
- Patton, M. Q. (2005). Qualitative Research. In *Encyclopedia of Statistics in Behavioral Science*. Chichester, UK: John Wiley & Sons, Ltd. doi:10.1002/0470013192.bsa514
- Peters, N. (2002). Mixed embeddedness: Does it really explain immigrant enterprise in Western Australia (WA)? *International Journal of Entrepreneurial Behaviour & Research*, 8(1/2), 32–53. doi:10.1108/13552550210423705
- Platt, L. (2014). Is there assimilation in minority groups' national, ethnic and religious identity? *Ethnic and Racial Studies*, 37(1), 46–70. doi:10.1080/01419870.2013.808756
- Portes, A. (2001). Introduction: The debates and significance of immigrant transnationalism. *Global Networks*, 1(3), 181–194. doi:10.1111/1471-0374.00012
- Portes, A., & Rumbaut, R. G. (2001). *Legacies : the story of the immigrant second generation*. University of California Press.
- Pyke, K., & Dang, T. (2003). “FOB” and “Whitewashed”: Identity and Internalized Racism Among Second Generation Asian Americans. *Qualitative Sociology*, 26(2), 147–172. doi:10.1023/A:1022957011866
- Ram, M., & Jones, T. P. (2008). Ethnic-minority businesses in the UK: A review of research and policy developments. *Environment and Planning. C, Government & Policy*, 26(2), 352–374. doi:10.1068/c0722
- Rasel, B. U. A. (2014). *Opportunity-driven Immigrant Entrepreneurship*. University of Oslo.
- Rath, J., & Kloosterman, R. C. (2000). Outsiders' Business: A Critical Review of Research on Immigrant Entrepreneurship. *The International Migration Review*, 34(3), 657–681. doi:10.2307/2675940
- Rath, J., & Swagerman, A. (2011). Promoting ethnic entrepreneurship in European cities. *Network (Bristol, England)*. Advance online publication. doi:10.1177/1745691612459060
- Razin, E., & Langlois, A. (1996). Metropolitan Characteristics and Entrepreneurship among Immigrants and Ethnic Groups in Canada. *The International Migration Review*, 30(3), 703–727. doi:10.1177/019791839603000303
- Scott, W. R. (2007). *Institutions and organizations : ideas, interests, and identities* (1st ed.). SAGE Publications, Inc.
- Smallbone, D. (2005). *Entrepreneurship by Ethnic Minorities: Institutions* (Background paper). Brussels: Academic Press.
- Storti, L. (2014). Being an entrepreneur: Emergence and structuring of two immigrant entrepreneur groups. *Entrepreneurship and Regional Development*, 26(October), 521–545. Advance online publication. doi:10.1080/08985626.2014.959067
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, 20(3), 571–610. doi:10.5465/amr.1995.9508080331
- Tavassoli, S., & Tripl, M. (2019). The impact of ethnic communities on immigrant entrepreneurship: Evidence from Sweden. *Regional Studies*, 53(1), 67–79. doi:10.1080/00343404.2017.1395007

***The Mutual Influence Between Legitimacy and Nascent Second-Generation Ethnic Entrepreneurship***

Tolbert, P. S., David, R. J., & Sine, W. D. (2011). Studying Choice and Change: The Intersection of Institutional Theory and Entrepreneurship Research. *Organization Science*, 22(5), 1332–1344. doi:10.1287/orsc.1100.0601

Überbacher, F. (2014, June 1). Legitimation of New Ventures: A Review and Research Programme. *Journal of Management Studies*. doi:10.1111/joms.12077

van Manen, M. (2016). *Researching Lived Experience* (2nd ed.). Routledge., doi:10.4324/9781315421056

Vermeulen, H. (2010). Segmented assimilation and cross-national comparative research on the integration of immigrants and their children. *Ethnic and Racial Studies*, 33(7), 1214–1230. doi:10.1080/01419871003615306

Webb, J. W., Tihanyi, L., Ireland, R. D., & Sirmon, D. G. (2009). You Say Illegal, I Say Legitimate: Entrepreneurship in the Informal Economy. *Academy of Management Review*, 34(3), 492–510. doi:10.5465/amr.2009.40632826

Wennekers, S., Van Wennekers, A., Thurik, R., & Reynolds, P. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, 24(3), 293–309. doi:10.1007/11187-005-1994-8

Wilson, F., Marlino, D., & Kickul, J. (2004). Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity. *Journal of Developmental Entrepreneurship*. Advance online publication. doi:10.1016/S0072-9752(10)97001-2


Xu, D., & Wu, X. (2016). The rise of the second generation: Aspirations, motivations and academic success of Chinese immigrants' children in Hong Kong\*. *Journal of Ethnic and Migration Studies*, 9451(April). Advance online publication. doi:10.1080/1369183X.2016.1245132

Yin, R. K. (2010). *Qualitative Research from Start to Finish*. The Guilford Press.


## Chapter 18

# Entrepreneurship and Happiness: Which Is the Link?


**Helena I. B. Saraiva**

 <https://orcid.org/0000-0003-1734-1250>  
*Guarda's Polytechnic Institute, Portugal*


**Vítor M. S. Gabriel**

 <https://orcid.org/0000-0003-3530-7080>  
*Guarda's Polytechnic Institute, Portugal*


**Jose C. Sánchez-García**

 <https://orcid.org/0000-0002-2264-0696>  
*Universidad de Salamanca, Spain*

**Brizeida Raquel Hernández-Sánchez**

 <https://orcid.org/0000-0001-5397-1546>  
*Universidad de Salamanca, Spain*

**Giuseppina Maria Cardella**

 <https://orcid.org/0000-0002-8422-6466>  
*Universidad de Salamanca, Spain*

### ABSTRACT

*Subjective well-being and happiness have taken on increasing interest and relevance. Recently some governments and entities have been presenting, developing, and supporting happiness indexes. Regarding entrepreneurial activity, the presentation of global indexes has been developed for some more years until now. However, despite the existence of these two kinds of analysis, few studies have, so far, focused on comparing the evolution of the two sets of indicators, as well as on the hypothetical relationship between them, which prefigures a gap in the literature. In the present work, an exploratory analysis is performed on this theme, trying to establish the basis for identifying the existence of relationship between both types of indicators, using the comparison between two of the main open access databases, namely data from the World Happiness Report (WHR) and from the Global Entrepreneurship Index (GEI).*

DOI: 10.4018/978-1-7998-4826-4.ch018

## INTRODUCTION

Subjective well-being and happiness have assumed in recent years an increasing importance both in economic and political terms and also as an emerging theme in academia (Huang, 2016; Naudé et al., 2014; Naudé, 2010; Stiglitz et al., 2009; UNSDSN, s/d).

Due to the growing interest in the topic, some governments and entities have been developing, contributing to and supporting Happiness Indexes. According to the sources identified (GNH, s/d.), Bhutan was the forerunner on this topic, creating one of these indexes: the Gross National Happiness – GNH Happiness Index, which will have been the first to define the concept of happiness index, in the 1970s.

Subsequently, the Organization for Economic Cooperation and Development (OECD) publishes the Better Life Index, starting in 2011, and the United Nations (UN) begins publishing the World Happiness Report starting in the following year.

The World Happiness Report (WHR) is conducted annually and published since 2012, based on a general survey of the state of global happiness. It is usually released on the 20th of March, when the International Day of Happiness is celebrated.

According to the UN, since its first edition the report has gained global recognition as governments, organizations and civil society increasingly use happiness indicators to inform their decision-making (UNSDSN, s/d).

As in other situations and fields of knowledge (Saraiva & Carqueja, 2018), the UN has created a sub-structure dedicated to the study of this topic: the Sustainable Development Solutions Network (SDSN). This entity was created in 2012 and operates under the aegis of the UN Secretary-General. In accordance with its Vision and Organization, the SDSN mobilizes global scientific and technological knowledge to promote practical solutions for sustainable development, including the implementation of Sustainable Development Goals (SDGs) and the Paris Climate Agreement (SDSN, s/d).

This entity relies on the collaboration of specialists in a variety of fields – economics, psychology, national statistics, health, public policies, among others – which describe how welfare measures can be used effectively to evaluate the progress of nations. The reports review the state of happiness in today's world and show how the new approach to happiness explains personal and national variations of happiness.

On the other hand, within the entrepreneurship-related literature, positive feelings and states of mind, as well as satisfaction with life, have been linked to the possibility of generating positive effects when it comes to task performance, goals and productivity, and these benefits seem to apply also to entrepreneurs (Baron, 2015; Williams & Shepherd, 2016; Ryan & Deci, 2017; Shir et al., 2019).

The issue of life satisfaction and psychological and subjective well-being seem to be important topics of discussion regarding the perception of the quality of life of individuals (Florida et al., 2013; Ryan & Deci, 2017; Shir et al., 2019). Furthermore, life satisfaction seems to facilitate entrepreneurship and the ability to innovate in-site by attracting highly qualified human resources (Glaeser et al., 2010; Smith et al., 2013).

Subjective wellbeing seems to be important for several aspects related to different types of entrepreneurship, for example the level of wellbeing perceived in certain cities and regions (Acs et al., 2014; Audretsch & Belitski, 2015).

The relation between these two fields is yet somehow unexploited. Although there is a vast amount of studies that focus on entrepreneurship, studies that relate entrepreneurship and happiness or well-being are much more scarce (Gonçalves, 2018).



Thus, the purpose of this chapter is to verify the existence of a correlation between entrepreneurship and happiness, using available data on entrepreneurship and happiness indexes. This is the main subject of investigation. On the other hand, if there is a relation, the subsequent question is to understand what kind of relation exists, namely which of the variables may have a greater explanatory value than others.

Regarding the indexes, we take as reference the values of the WHR and the values of the Global Entrepreneurship Index (GEI), respectively for happiness and entrepreneurship, as will be clarified below.

The structure of this paper will follow the following points: a literature revision, presented in Literature Review section, analyzing the main contributions identified on the evolution of entrepreneurship and the relationship between happiness and socio-economic factors, on the influence of entrepreneurship on happiness and also on comparisons between levels of entrepreneurship and happiness.

In the following section, Methodology and Data Analysis, we will move on to a quantitative exploratory analysis, establishing a comparison between the indexes. Finally, in the Conclusion, we will present the discussion and conclusions of the work.

## **BACKGROUND AND LITERATURE REVIEW**

This section of the chapter will be subdivided according to the various themes identified in the literature: a first sub-section will analyze the evolution of entrepreneurship concept in a brief way, a second sub-section will present contributions identified to base the relationship between happiness and economic factors, in a more traditional and chronologically broad perspective, since here the issues related to the criteria for measuring happiness will be covered, seeking to cover their genesis; a third sub-section will identify, in works that have been published mostly in more recent periods, the ways in which entrepreneurship can affect happiness; in this sub-section there were also some indications of works that concluded in the opposite direction, that is, how happiness affects entrepreneurship, but in a more restricted number; in a fourth sub-section an attempt was made to systematize, within the narrower theme of the relationship between happiness and entrepreneurship, the contributions of the works identified, namely and in a more in-depth way, those that focused on comparisons between indexes of entrepreneurship and happiness.

### **Brief Review on the Emergence of the Phenomenon of Entrepreneurship in Today's Society**

Once we have made, in the Introduction, a presentation of a brief review on how Happiness concept has emerged and evolved in the recent years, we consider that we should also present a brief review on the theme of entrepreneurship phenomenon emergence and its actual relevance in the actual Society and more intensely in the area of public policies development (Sánchez-García et al., 2017; Saraiva & Paiva, 2020).

Schumpeter (1934) was, in our view, one of the first economists to present a coherent theory of development that attributes to the creator of companies the role of inducing change in the economic system through innovation. Innovation was understood by him as the introduction of new inventions on the market that alter the behavior of companies and consumers, increasing productivity and well-being.

Schumpeter (1934) defines entrepreneurship as a force for creative reconstruction where previously established ways of doing things are destroyed, emerging in new and better ways, which create more economic wealth.

## ***Entrepreneurship and Happiness***

Apart from some initiatives coming from several authors in the past (Cantillon, 1755; Smith, 1776; Say, 1816; Stuart-Mill, 1848; Menger, 1871; Schumpeter, 1911; 1934) the study of entrepreneurship resurfaced with some intensity in the 1970s. At that point the relevance of the phenomenon within national economies was emphasized: the figure and the function assumed by the entrepreneur, conceiving the concept that entrepreneurship assumed centrality in order to explain economic development and economic cycles. The entrepreneur was considered as an agent that initiates changes, identifies and generates new opportunities.

Until the nineties of the 20th century the entrepreneur was defined in the manner previously described. However, during that specific decade, the introduction of innovation as an essential aspect to evolve the economy, assumed a preponderant role. Then, the phenomenon of entrepreneurship was identified as a way of creating innovation and introducing this innovation into society. In this sense, from the nineties onward, innovation also includes the incorporation of technology and information technologies in the products and in production processes and was assumed as essential to the creation of wealth, particularly in the most developed countries.

Between the nineties and the beginning of the next century, some concepts on entrepreneurship and on the role of the entrepreneur arose, such as those presented by Bygrave (1993), Baumol (1993), Lowrey (2003), Stevenson and Lundström (2005). However, the main idea has not changed, as the question of the importance of innovation for economic development has remained central

Another perspective on the phenomenon of entrepreneurship arose brought by the Global Entrepreneurship Monitor (GEM), which in the early years of the 21st century defines entrepreneurship as a way of thinking and acting, obsessed with opportunities, with a holistic approach and balanced in terms of leadership. The entrepreneurial activity was then defined with the aim of increasing wealth putting the focus on the creation of new businesses or initiatives, on self-employment, on new businesses organization or the expansion of existing ones, by an individual, team of individuals or business established (Acs et al., 2005). Here were already considered the personal characteristics of entrepreneurs.

In more recent years, according to the GEM, four types of entrepreneurship can be identified (GEM, 2017):

- early stage entrepreneurial activity associated with small businesses, which involves a person who is on the process of starting a new business;
- early stage entrepreneurial activity associated with established businesses or start up entrepreneurship, that involves a person who has paid salaries, or any other payments, focusing on highly innovated products;
- entrepreneurial employee activity, which involves a person who when in the state of employee has launched new products, services or set up a new establishment and large company entrepreneurship, that most grow through sustaining innovation, offering new products; and
- social entrepreneurial activity, which encompasses an innovate business whose focus is on creating products or services that has as ultimate goal solve social needs and problems.

So, since the beginning of the 21st century, the definition of entrepreneurship is almost always due to the reference to attitudes towards the environment and the capacity to respond to it, in order to construct solutions that add value to society.

This trend is growing, notably for reference institutions such as the European Union (EU), the OECD (OECD 2019), the United Nations (UNCTAD, 2012). In fact, these entities, apparently assume in a majority way the phenomenon of entrepreneurship as a tool of public policies to achieve certain social, environmental, economic and even cultural objectives.

At this point we can highlight that in a world that has to face a profound crisis like that we are facing actually with the COVID-19 pandemic, it must be certain that entrepreneurship phenomenon will be called upon to help in solving various problems and situations for which it will be necessary to find innovative solutions.

It can be stated that happiness is a predominantly subjective phenomenon, being subordinated more to psychological and sociocultural traits than to external factors (Naudé et al., 2014). However some authors point that entrepreneurship might be related to higher levels of happiness, satisfaction with life or increased well-being (Morris et al., 2012; Binder & Coad, 2013).

According to Conkle (2008), there is preliminary evidence that people who score higher on the well-being scales have better social and work relationships; make more money; live longer, healthier lives; and are more contributory societal citizens. In sum, they seem to be more adjusted to assume an entrepreneurial attitude that those who don't score high.

Some other authors (Douglas & Shepherd, 2014; Natarajan & Angur, 2014; Dijkhuizen et al., 2016), stated that entrepreneurs score higher levels of happiness than non-entrepreneurs (employees), and that self-employed are more satisfied with their professional status than wage-earners.

But, really... what is the link? Is it from happiness to entrepreneurship? Or is the opposite: those who act in a more entrepreneurial way, became happier? That is what we will try to figure.

## **Main Contributions to Substantiate the Relationship Between Happiness And Socio-Economic Factors**

Happiness, when measured, is usually evaluated from three types of perspective (Frey & Stutzer, 2002a):

- personal and demographic perspectives: age, gender, family circumstances, nationality, education and health;
- economic outlook: employment and unemployment, income level, inflation;
- political and citizenship perspective: possibility and level of participation in politics, government decentralisation.

However, according to several authors (Helliwell, 2001; Frey & Stutzer, 2002a; Stutzer & Frey, 2010): the per capita income of different nations has a very limited effect on reported subjective welfare.

In this section of the paper we begin by making a systematization, presented in Table 1, of the main contributions identified in the economic literature concerning the theme of happiness.

After the precursor studies made by Cantril (1961; 1965) and also by Easterlin (1974), in some others econometric relations were identified between the measurement of happiness and the determinants of happiness (Frey & Stutzer, 2002a).

Experiences of measuring happiness have been verified on the basis of the analysis of Eurobarometer data (Frey & Stutzer, 2002a), or those of the US General Social Surveys (Frey & Stutzer, 2002a), or those of the World Values Survey (Frey & Stutzer, 2002a).

## Entrepreneurship and Happiness

Table 1. Contributions identified in the economic literature related to happiness

Contribution	Authors
Definition of a scale for measuring happiness; first international comparisons of levels of happiness; relationship: happiness accompanies income level	Cantril (1961; 1965)
Differentiation between countries in assessing the level of happiness; the fact that income increases does not systematically imply that happiness increases; association is not consistent between countries and is not constant within each country	Easterlin (1974)
Effect of institutional factors on levels of happiness: political and citizen participation	Frey & Stutzer (2000)
Per capita income has a very limited effect on reported subjective wellness	Helliwell (2001)
Effect of socio-economic factors on happiness levels: unemployment, income level and inflation level	Frey & Stutzer (2002; 2002a)
The ways of obtaining income may be relevant because job satisfaction is an important component and a predictor of happiness or satisfaction with life	Seligman (2002)
Established that material progress in the West has not been accompanied by continuous increases in happiness levels; there is a level of income above which additional increases no longer increase happiness.	Stutzer & Frey (2010)
States that material progress has not been accompanied by continuous increases in happiness levels: there is a level of income above which no longer increase happiness	Layard (2011)
More inclusive institutions, affect the level of perceived and expressed happiness.	Acemoglu & Robinson (2012)

Source: compilation by the authors

As for the effect of income level on happiness level Frey & Stutzer (2002a), it is stated that:

- income, when taken as a whole, has an effect on the level of well-being - on average, people living in richer countries are happier than those living in poorer countries; on the other hand, there is evidence that in countries where the level of income grows significantly, the same does not happen with the level of subjective well-being and that, namely in higher income countries, the increase in the level of income no longer has an impact on the increase in the level of well-being;
- income, when the individual sphere is considered, the authors state that it is a robust and general result, that richer people, on average, report a higher level of subjective well-being (Blanchflower & Oswald, 2000; Frey and Stutzer, 2000; Di Tella et al., 2001; Easterlin, 2001); however, it is also true that additional levels of income do not imply an increase in happiness levels and that income is not a determinant of happiness (Diener et al., 1993; Ng, 2001).

Still Frey and Stutzer (2002a), discuss the effect of inflation on happiness: the increase in inflation levels causes a decrease in happiness levels, according to a study by Di Tella et al. (2001), in twelve European countries.

As for the political and citizenship perspective, the direct influence of democracy on happiness has been proven (Frey & Stutzer, 2000), the main explanatory variable being the possibility of individual political participation through voting. Also the decentralization of decision making by governments takes effect in the levels of happiness according to the same authors (Frey & Stutzer, 2000).

## **How Entrepreneurship Affects Happiness**

In recent years a whole research agenda has been developed that addresses the emerging evidence that entrepreneurship affects the individual well-being of entrepreneurs (Shir, 2015; Williams & Shepherd, 2016; Ryan & Deci, 2017; Sánchez-García et al., 2018; Shir et al., 2019).

According to several studies, individuals who voluntarily start a business report significantly higher levels of life satisfaction despite lower incomes and longer working hours (Benz & Frey, 2008, 2008a; GEM, 2014).

Carree and Verheul (2012), present a proposal to conceptualize happiness in entrepreneurial activity by defining the happiness of entrepreneurs as the general satisfaction with their life after founding the new venture.

According to Binder and Coad (2013), higher levels of happiness are positively associated to opportunity entrepreneurship, whereas self-employment or necessity entrepreneurs score lower in terms of well-being and life satisfaction rates.

Naudé et al. (2014), identify the need for research on the potential contribution of entrepreneurship to happiness. The same authors point out the reasonability of associating happy societies with entrepreneurial societies, but point out that this association is not studied.

Referring also to the existence of the relationship between happiness and entrepreneurship, it was analyzed in the work of Audretsch and Belitski (2015), from the point of view that the level of happiness in a city can be associated with the quality of the entrepreneurial ecosystem.

Uy et al. (2017), contribute to the theory and investigation of affection in entrepreneurship. They demonstrate the impact of affection even after controlling the average levels of positive and negative affection and self-efficacy of entrepreneurs, background of subjective well-being and performance.

Chen et al. (2018), present determinants for happiness in entrepreneurial activity and relate the issue with creativity in creative industries.

Gonçalves (2018) identifies in her study that literature has concluded that when comparing entrepreneurs and non-entrepreneurs, the firsts present positive and higher scores related to happiness/well-being and life satisfaction. In the conclusions of its work the main results showed that entrepreneurs are happier than nonentrepreneurs; the relation between entrepreneurship and happiness is mediated by culture; the opportunity entrepreneurs tend to be happier than necessity entrepreneurs; finally, culture mediates the relationship between the types of entrepreneurship and happiness.

The study by Shir et al. (2019) proves that entrepreneurship contributes to the well-being of individuals through the development of a model in which autonomy mediates the relationship between entrepreneurship and well-being, partially through its effect on competence and relationship.

Wiklund et al. (2019) refer the need to conduct more studies in this area by identifying a clear gap in the literature, identifying welfare as one of the outcomes of entrepreneurship. The same authors mention that welfare is an important variable largely dependent on psychological theory. The increase in the use of well-being as an entrepreneur-dependent variable would be consistent with the intended disciplinary development in this field.

Also according to Wiklund et al. (2019), although there are international comparisons of entrepreneurship between countries (e.g., GEM, 2014) and welfare (e.g., Diener, 2000), there is currently no comprehensive data set linking the two concepts. Such data and associated research would enable further development of the institutional influence of entrepreneurship on welfare (Wiklund et al., 2019).

## **Comparisons Between Entrepreneurship and Happiness Indexes**

Naudé et al. (2014) were apparently pioneers in developing the first attempt to identify the independent effect of entrepreneurship on national happiness levels and, on the other hand, to assess the effects of a happy environment on entrepreneurship.

This research came in the wake of previous work, such as the research of Acs and Szerb (2011), according to which the comparison of country positions in the Global Entrepreneurship & Development Index (GEDI) with their happiness indexes measured by the Gallup 2005 world survey suggests a relationship between entrepreneurship and happiness.

Naudé et al. (2014) also compared countries' positions in the GEDI with their happiness indexes measured by Gallup's 2005 Global Survey, which suggests a relationship between entrepreneurship and happiness by establishing that higher levels of happiness increase entrepreneurial activity based on identifying opportunities. The sample size was 74 observations. The findings of these authors suggest that opportunity-driven entrepreneurship can contribute to happiness; however, an excessive level of entrepreneurship can have a counterproductive effect on happiness levels. However, it is not clear what kind of relationship exists due to three orders of ideas (Naudé et al., 2014):

- Since indicators of happiness tend to be stable over time, the direction of causality can range from happiness to entrepreneurship;
- On the other hand, the authors claim that GEDI does not measure entrepreneurship, but rather the "entrepreneurial economy" (based on entrepreneurial attitudes, actions and aspirations), and these factors may be associated with happiness more broadly and not only with entrepreneurship;
- Moreover, both entrepreneurship and happiness could be determined by a third omitted factor: the reality of national institutions.

The institutions mentioned in the previous paragraph correspond to the identification that, for example, lower levels of unemployment and inflation, better levels of health, less inequality, greater freedom of participation, living in democracy and being able to intervene in political matters, are factors that affect the perception of happiness.

In this last paper (Naudé et al., 2014), the existence of a gap in the literature and the need to continue exploring this relationship between entrepreneurship and happiness were clearly identified.

## **METHODOLOGY AND DATA ANALYSIS**

In accordance with the gap identified in the literature and to try to deepen the possibility of the existence of the relationship between happiness and entrepreneurship, a more comprehensive analysis was attempted in relation to those previously conducted in other works, with a sample size of 118 countries. This number of observations was achieved by comparing the countries integrated in two types of indexes: one related to happiness and the other to entrepreneurship.

Data from two open access databases were used, namely the WHR (World Happiness Report) data and the GEI (Global Entrepreneurship Index) issued annually by the Global Entrepreneurship and Development Institute (GEDI).

In both cases the data are collected and disseminated on an annual basis, however, a different time interval has been chosen to conduct the analysis we have here conducted. We have based the statistical analysis on the global data of the three-year period considered (2016-2018), working with 354 observations.

One of the data sets considered, corresponds to the WHR index of happiness, of annual and global character, having been used the values of the triennium 2016-2018, because they correspond to the most current data disclosed and available.

The second data set was considered because it is also global and open access data, such as the set regarding the index related to happiness, for the same period as the one considered for the data on happiness (triennium 2016-2018). This index is based on data from the Global Entrepreneurship Monitor – GEM, the latter being a partner of the Institute for Entrepreneurship and Global Development (GEDI, s/d.).

These two sets of data were harmonized with each other, the figures for countries that were not present in both sets at the same time were taken, and within each set the countries that were not present in all years of the triennium were taken. Also for the year 2018, for the GEI index an adjustment had to be made to work on the basis of the same unit of measurement.

As a result of this procedure, a set of 118 countries were analyzed in each of the years.

Thus, correlation analysis was made initially and after regression, between the values of the two indexes considered, in order to try to evaluate if there is correlation between the data of each index and if there is still a net relationship between both. Also the question of which of the indexes better explains the evolution of the other was considered.

Regarding the correlation analysis between the two indexes, in the analyzed years there are strong correlations between the indicators of both indexes, as shown in table.

*Table 2. Correlation between the WHR and GEI indicators in the triennium 2016-2018*

	WHR	GEI
WHR	1	
GEI	0,759744703	1

Source: the authors

The correlation is approximately 76%, which translates into a strong correlation between the indicators of each index. The vectors are collinear. Thus, moving on to regression analysis, the following results are obtained, which confirm the existence of rejection of the null hypothesis, i.e. the level of happiness can be explained according to the level of entrepreneurship, or vice versa, trying to understand which of the explanations has greater statistical relevance.

In the next two Figures (1 and 2), are presented the linear regression adjusted lines in each case.

According to the graphs presented in the previous figures, a linear type relationship is obtained between the two types of index.

Also according to table 3, which presents the regression statistics for the triennium under analysis, in the regression analysis between the two indexes the one that demonstrates to have greater explanatory power in relation to the other is the entrepreneurship index. Apparently entrepreneurship will assume greater explanatory effect on the happiness index variable, due to the fact that the associated standard error is smaller.

**Entrepreneurship and Happiness**

Figure 1. Design of the regression adjusted line, being the entrepreneurship index (GEI), the dependent variable and the happiness index (WHR), the independent variable - triennium 2016-2018

Source: the authors

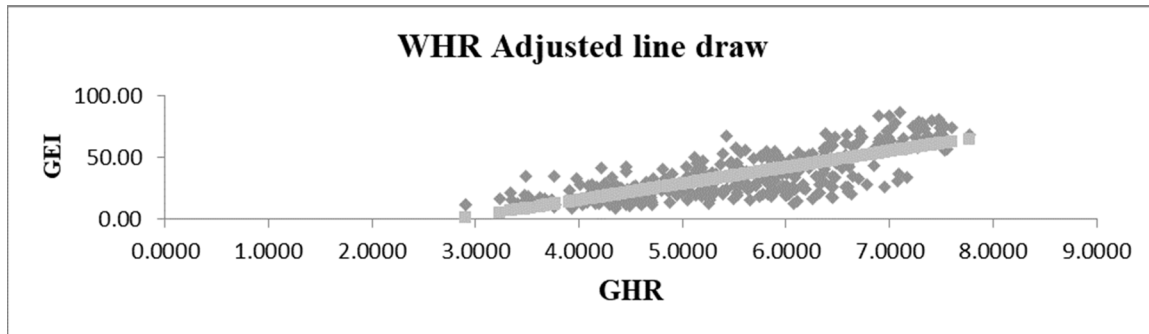


Figure 2. Design of the regression adjusted line, being the happiness index (WHR), the dependent variable and the entrepreneurship index (GEI), the independent variable - triennium 2016-2018

Source: the authors

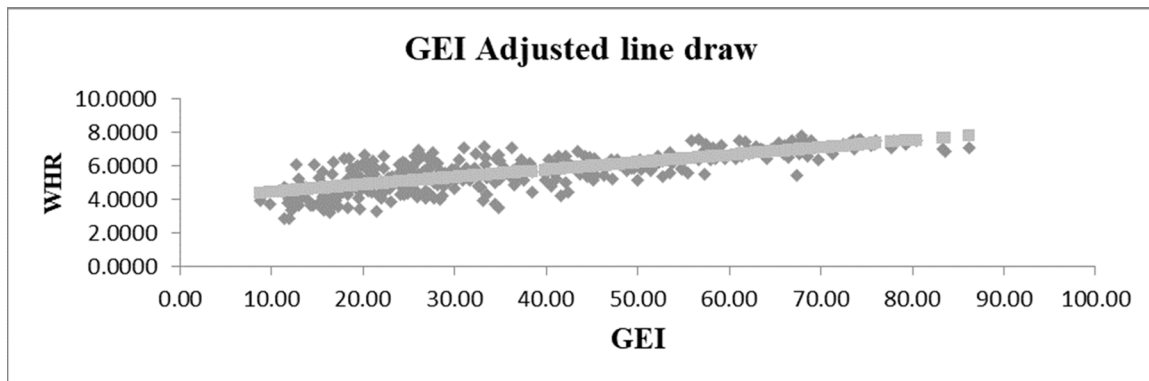


Table 3. Regression Statistics for the triennium 2016-2018, for the hypotheses analyzed

Regression statistics - explanatory variable WHR		Regression statistics - explanatory variable GEI	
R multiple	0,75974470	R multiple	0,759744703
R Square	0,57721201	R Square	0,577212014
Adjusted R Square	0,57601091	Adjusted R Square	0,576010912
Standard-error	12,3418634	Standard-error	0,71237201
Observations	354	Observations	354

Source: the authors

As for the analysis of the variance, presented in tables 4 and 5, for each of the explanatory variables considered, it can be seen that the explanatory effect of the entrepreneur index variable (GEI), continues to be higher, due to t-statistic and p-value, which assume statistical significance.



Table 4. ANOVA for Explanatory Variable WHR index - triennium 2016-2018

	<i>df</i>	<i>SQ</i>	<i>MQ</i>	<i>F</i>	<i>F significance</i>	
Regression	1	73200,97404	73200,97	480,5685966	8,79798E-68	
Residual	352	53617,20064	152,3216			
Total	353	126818,1747				
	<i>Coefficients</i>	<i>Standard-error</i>	<i>Stat t</i>	<i>P value</i>	<i>95% lower</i>	<i>95% upper</i>
Intercept	-37,42841137	3,411613423	-10,9709	2,76144E-24	-44,13812097	-30,71870176
WHR	13,16259656	0,600432064	21,92187	8,79798E-68	11,98171107	14,34348205

Source: the authors

Table 5. ANOVA for Explanatory Variable GEI index - triennium 2016-2018

	<i>df</i>	<i>SQ</i>	<i>MQ</i>	<i>F</i>	<i>F significance</i>	
Regression	1	243,8760103	243,8760103	480,5685966	8,79798E-68	
Residual	352	178,6308057	0,50747388			
Total	353	422,506816				
	<i>Coefficients</i>	<i>Standard-error</i>	<i>Stat t</i>	<i>P value</i>	<i>95% lower</i>	<i>95% upper</i>
Intercept	3,998756657	0,081299112	49,18573575	8,6823E-160	3,83886356	4,158649754
GEI	0,043852443	0,002000397	21,92187484	8,79798E-68	0,039918211	0,047786675

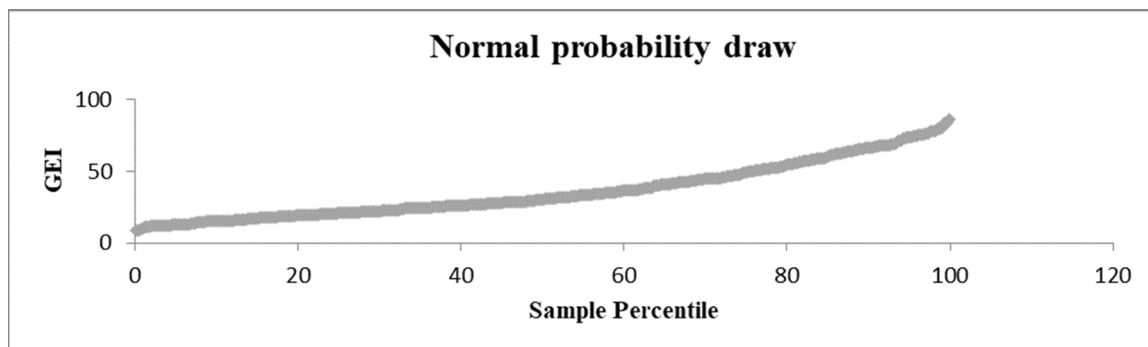
Source: the authors

In order to complete the analysis, the next Figures (3 to 6), representing Normal Probability Plot (Figures 3 and 4), and Residuals Plot (Figures 5 and 6), confirming that on both indexes power of explanation relating to the other one, the GEI index seems to have a better result on WHR, than WHR on GEI.

In this case only it can be seen that when entrepreneurship index is the independent variable, the curve assumes a slightly more linear shape, so the distribution is more close to normal.

Figure 3. Drawing of the Normal Probability Plot, being the entrepreneurship index (GEI), the dependent variable and the happiness index (WHR), the independent variable - triennium 2016-2018

Source: the authors



## Entrepreneurship and Happiness

Figure 4. Drawing of the Normal Probability Plot, being the happiness index (WHR), the dependent variable and the entrepreneurship index (GEI), the independent variable - triennium 2016-2018  
Source: the authors

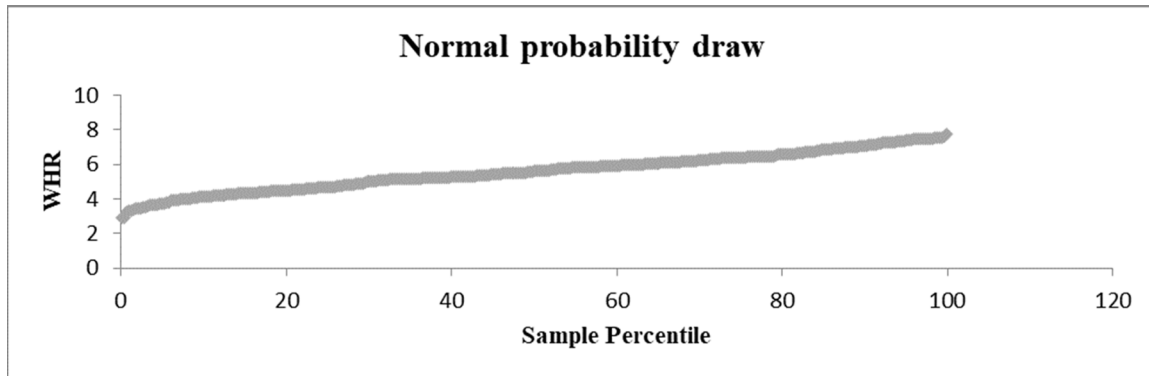


Figure 5. Design of the Residuals Plot, being the entrepreneurship index (GEI), the dependent variable and the happiness index (WHR), the independent variable - triennium 2016-2018  
Source: Own

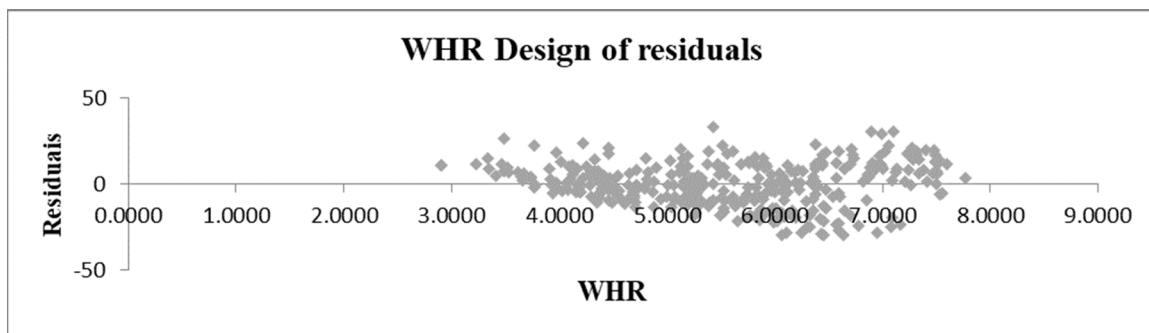
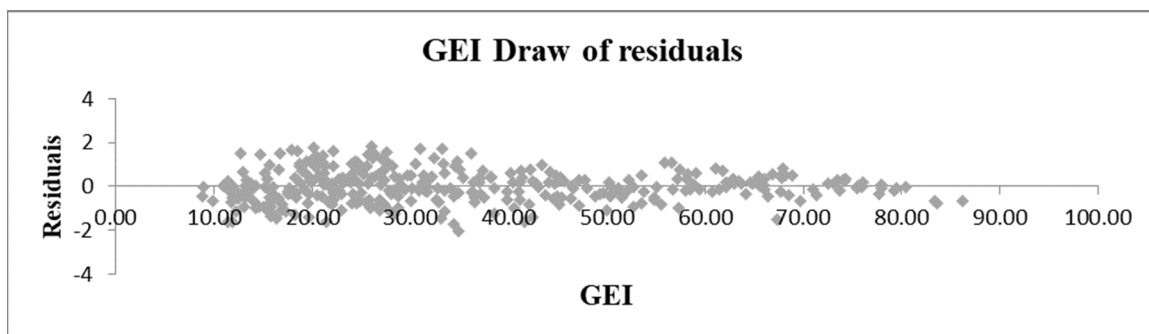


Figure 6. Design of the Residuals Plot, being the happiness index (WHR), the dependent variable and the entrepreneurship index (GEI), the independent variable - triennium 2016-2018  
Source: Own



In the case of graphs 5 and 6, representing the Design of Residual Plots, both confirm the adjustment of a linear regression, presenting the second, however a slightly better design than the first, which confirms the previous analysis, being considered the index of entrepreneurship statistically more reliable than the explanatory variable index of happiness.

In conclusion, based on the results of the statistical analysis carried out we can conclude that for the considered years (2016 to 2018), the results obtained indicates that it is possible that the value of the GEI index may contribute to explain the value obtained from the WHR happiness index in a more effective way than the opposite.

## **CONCLUSION AND FUTURE RESEARCH DIRECTIONS**

This chapter contributes to the international comparison between entrepreneurship and happiness, linking the two concepts. This theme was identified as one of those that would need research in order to provide further developments on the institutional influence of entrepreneurship on welfare (Naudé et al., 2014; Shir, 2015; Williams & Shepherd, 2016; Ryan & Deci, 2017; Chen et al., 2018; Shir et al., 2019; Wiklund et al., 2019).

According to the results that could be obtained from the analysis carried out, it can be concluded that the values assumed by the indexes of happiness and entrepreneurship considered present a strong correlation between them during the entire period considered, which should be further developed in future works. These results confirm the results of other studies (Acs & Szerb, 2011; Naudé et al., 2014).

Apparently, according to the results obtained, the values of the GEI Index may assume an explanatory function in the values obtained in the GHR index, which has been maintained in the triennium considered, this being one of the contributions of the present work. Thus, generalizing, it can be said that there is a possibility that a country's level of entrepreneurship can contribute to its level of happiness in a direct way. This result is in line with the need to prove the potential contribution of entrepreneurship to happiness (Naudé et al., 2014; Wiklund et al., 2019).

This result seems to contradict the considerations of Naudé et al. (2014), which state that causality may have the opposite meaning, i.e., from happiness to entrepreneurship.

We also highlight that the work presents an analysis to a large number of countries in the comparison between the values assumed by the two indexes and their relationship. Other papers (Acs & Szerb, 2011; Naudé et al., 2014) presented similar comparisons, but with much lower numbers of countries (observations), which may lead to a higher generalization effect in the study now carried out. This will be another of the contributions to be considered.

In the area of practical implications for this study we can highlight, as aforementioned, the fact that the World is beginning to face an enormous change and probably a huge financial and economic crisis with the scenario provided by COVID19 pandemic. In an era where nobody seems to be prepared or even acquainted to what the near and not so near future will bring, when everything is already changing: from health conditions, to social life, to working conditions, to the functioning of markets, it seems very likely that entrepreneurship will be called upon to help solve problems. This likeliness will be further increased by the fact that can be understood that entrepreneurship can contribute to increase the general levels of happiness, or at least that the relationship between the two phenomena is positively related. In the next coming years the search for an increase in happiness, or at least its non-decrease, will be on the agenda of all governments, worldwide.

## **Entrepreneurship and Happiness**

As for the limitations and future prospects of research, we highlight the character of the statistical analyses carried out, which in future research should be overcome and deepened in order to make the result even more robust.

The existence of a gap in the literature is not surpassed by this only work, and the need to continue exploring the relationship between entrepreneurship and happiness are clear and, at this time, more urgent than ever. Essentially due to the situation of extreme uncertainty held at the present time, that surely assumes a negative impact on happiness scores all over the world.

## **REFERENCES**

- Acemoglu, D., & Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Profile Books.
- Acs, Z. J., Arenius, P., Hay, M., & Minniti, M. (2005). Global Entrepreneurship Monitor. GEM 2004 Executive Report, Babson College & London Business School.
- Acs, Z. J., Autio, E., & Szerb, L. (2014). National Systems of Entrepreneurship: Measurement Issues and Policy Implications. *Research Policy*, 43(3), 476–449. doi:10.1016/j.respol.2013.08.016
- Acs, Z. J., & Szerb, L. (2011). *Global Entrepreneurship and Development Index*. Edward Elgar Publishers.
- Audretsch, D. B., & Belitski, M. (2015). *Is Happiness Conducive to Entrepreneurship? Exploring Subjective Well-Being – Entrepreneurship Relationship across Major European Cities*. Discussion Paper Number: CFE-2015-01, Henley Center for Entrepreneurship, Henley Business School, University of Reading. Retrieved from: <https://pdfs.semanticscholar.org/e07c/5fc162c8cc965e1958a6deab39a5684f1405.pdf>
- Baron, R. A. (2015). Affect and Entrepreneurship. *Wiley Encyclopedia of Management*, volume 3. Entrepreneurship. doi:10.1002/9781118785317.weom030002
- Baumol, W. (1993). Formal Entrepreneurship Theory in Economics: Existence and Bounds. *Journal of Business Venturing*, 8(3), 197–210. doi:10.1016/0883-9026(93)90027-3
- Benz, M., & Frey, B. S. (2008). Being independent is a great thing: Subjective evaluations of self-employment and hierarchy. *Economica*, 75(298), 362–383. doi:10.1111/j.1468-0335.2007.00594.x
- Benz, M., & Frey, B. S. (2008a). The value of doing what you like: Evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization*, 68(3-4), 445–455. doi:10.1016/j.jebo.2006.10.014
- Binder, M., & Coad, A. (2013). Life satisfaction and self-employment: A matching approach. *Small Business Economics*, 40(4), 1009–1033. doi:10.1007/11187-011-9413-9
- Blanchflower, D. G., & Oswald, A. J. (2000). *Well-Being Over Time in Britain and the USA*. NBER Working Paper, No. 7487. Cambridge, MA: National Bureau of Economic Research.
- Bygrave, W. D. (1993). Theory Building in the Entrepreneurship Paradigm. *Journal of Business Venturing*, 8(3), 255–280. doi:10.1016/0883-9026(93)90031-Y

- Cantillon, R. (1755). *Essay on the nature of Commerce* (H. Higgs, Trans.). London: Macmillan. Retrieved from: <http://la.utexas.edu/users/hcleaver/368/368cantillonessaytable.pdf>
- Cantril, H. (1961). *Public Opinion, 1935-1946*. Princeton University Press.
- Cantril, H. (1965). *The Pattern of Human Concerns*. Rutgers University Press.
- Chen, M., Chang, Y., & Lin, Y. (2018). Exploring creative entrepreneurs' happiness: Cognitive style, guanxi and creativity. *The International Entrepreneurship and Management Journal*, 14(4), 1089–1110. doi:10.1007/11365-017-0490-3
- Conkle, A. (2008). Serious Research on Happiness. *APS Observer*, 21(7). Retrieved from: <https://www.psychologicalscience.org/observer/serious-research-on-happiness>
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness. *The American Economic Review*, 91(1), 335–341. doi:10.1257/aer.91.1.335
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *The American Psychologist*, 55(1), 34–43. doi:10.1037/0003-066X.55.1.34 PMID:11392863
- Diener, E., Eunkook, M. S., Richard, E. L., & Heidi, L. S. (1999). Subjective Well-Being: Three Decades of Progress. *Psychological Bulletin*, 125(2), 276–303. doi:10.1037/0033-2909.125.2.276
- Dijkhuizen, J., Veldhoven, M. V., & Schalk, R. (2016). Four Types of Well-being among Entrepreneurs and Their Relationships with Business Performance. *The Journal of Entrepreneurship*, 25(2), 184–210. doi:10.1177/0971355716650369
- Douglas, E. J., & Shepherd, D. A. (2014). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. In D. A. Shepherd (Ed.), *A Psychological Approach to Entrepreneurship: Selected Essays of Dean A. Shepherd* (pp. 307–316). Edward Elgar Publishing Ltd. doi:10.4337/9781783479801.00025
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and Households in Economic Growth: Essays in Honor of Moses Abramowitz*. Academic Press. doi:10.1016/B978-0-12-205050-3.50008-7
- Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *Economic Journal (London)*, 111(473), 465–484. doi:10.1111/1468-0297.00646
- EC – European Commission. (2012). *Entrepreneurship Determinants: Culture and Capabilities*. Eurostat, European Commission, Luxembourg: Publications Office of the European Union.
- Florida, R., Mellander, C., & Rentfrow, P. J. (2013). The happiness of cities. *Regional Studies*, 47(4), 613–627. doi:10.1080/00343404.2011.589830
- Frey, B. S., & Stutzer, A. (2000). Happiness, Economy and Institutions. *Economic Journal (London)*, 110(446), 918–938. doi:10.1111/1468-0297.00570
- Frey, B. S., & Stutzer, A. (2002). *Happiness and economics*. Princeton University Press.

## **Entrepreneurship and Happiness**

- Frey, B. S., & Stutzer, A. (2002a). The Economics of Happiness. *World Economy*, 3(1), 1–17.
- GEDI – Global Entrepreneurship and Development Institute. (n.d.). *About us - Strategic Partners*. Retrieved from: <https://thegedi.org/strategic-partners/>
- GEM – Global Entrepreneurship Monitor. (2014). *GEM 2013 Global Report*. Retrieved from: <https://www.gemconsortium.org/report/48772>
- GEM – Global Entrepreneurship Monitor. (2017). *Global Entrepreneurship Monitor. GEM 2016/17 Global Report*. Retrieved from <https://www.gemconsortium.org/report>
- Glaeser, E. L., Rosenthal, S. S., & Strange, W. C. (2010). Urban economics and entrepreneurship. *Journal of Urban Economics*, 67(1), 1–14. doi:10.1016/j.jue.2009.10.005
- GNH – Gross National Happiness. (n.d.). *What is GNH?* Retrieved from: <http://www.gnhcentrebhutan.org/what-is-gnh/>
- Gonçalves, R. V. (2018). *Does Entrepreneurship Convey Higher Levels of Happiness? An Analysis by Type of Entrepreneurship and National Cultures. Dissertation on Master in Management*. Faculdade de Economia: Universidade do Porto.
- Helliwell, J. F. (2001). *How's Life? Combining Individual and National Variables to Explain Subjective Well-Being. Mimeo*. Department of Economics, University of British Columbia.
- Huang, C. (2016). The Impact of Governance on Happiness: Evidence from Quantile Regressions. *International Journal of Economics and Management Engineering*, 10(7), 2539-2542.
- Layard, R. (2011). *Happiness: Lessons from a new science*. Penguin Books.
- Lowrey, Y. L. (2003). *The Entrepreneur and Entrepreneurship: A Neoclassical Approach*. Office of Advocacy, U.S. Small Business Administration Economic Research Working Paper. Available at SSRN: <https://ssrn.com/abstract=744785>
- Menger, C. (1871). *Principles of Economics*. Institute for Humane Studies. Retrieved from: [https://cdn.mises.org/Principles%20of%20Economics\\_5.pdf](https://cdn.mises.org/Principles%20of%20Economics_5.pdf)
- Morris, M. H., Pryor, C. G., Schindehutte, M., & Kuratko, D. F. (2012). *Entrepreneurship as Experience: How Events Create Ventures and Ventures Create Entrepreneurs*. Edward Elgar Publishing Ltd. doi:10.4337/9781781005187
- Natarajan, R., & Angur, M. G. (2014). Innovative ability and entrepreneurial activity: Two factors to enhance “quality of life”. *Journal of Business and Industrial Marketing*, 29(6), 469–475. doi:10.1108/JBIM-09-2013-0205
- Naudé, W., Amorós, J. E., & Cristi, O. (2014). “Surfeiting, the appetite may sicken”: Entrepreneurship and happiness. *Small Business Economics*, 42(3), 523–540. doi:10.1007/11187-013-9492-x
- Naudé, W. A. (2010). Entrepreneurship, developing countries and development economics: New approaches and insights. *Small Business Economics Journal*, 34(1), 1–12. doi:10.1007/11187-009-9198-2
- Ng, Y. (2001). Is Public Spending Good for You? *World Economy*, 2(2), 1–19.

- OECD - Organisation for Economic Co-operation and Development. (2019). *OECD SME and Entrepreneurship Outlook 2019*. OECD Publishing. doi:10.1787/34907e9c
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Publications.
- Sacks, D. W., Stevenson, B., & Wolfers, J. (2010). *Subjective Well-being, Income, Economic Development and Growth*. Working paper 16441, National Bureau of Economic Research.
- Sánchez-García, J. C., Vargas-Morúa, G., & Hernández-Sánchez, B. R. (2018). Entrepreneurs' Well-Being: A Bibliometric Review. *Frontiers in Psychology*, 9, 1696. doi:10.3389/fpsyg.2018.01696
- Sánchez-García, J. C., Sánchez, B. H., Flórez, J., Saraiva, H. I. B., & Gabriel, V. M. S. (2017). Entrepreneurial potential, realism and optimism as predictor variables of entrepreneurial intention: Differences between Spain and Portugal. *Journal of Business. Universidad del Pacífico (Lima, Perú)*, 9(1), 67–82.
- Saraiva, H., & Carqueja, H. (2018). Ensaio sobre o papel da Organização das Nações Unidas no processo de harmonização contabilística - Iniciativas durante o período 1953-2009. *De Computis - Revista Española de Historia de la Contabilidad*, 15(2), 108-132. doi:10.26784/issn.1886-1881.v15i2.336
- Saraiva, H., & Paiva, T. (2020). Entrepreneurship Education: Background and Future. In J. G. Dantas & L. C. Carvalho (Eds.), *Handbook of Research on Approaches to Alternative Entrepreneurship Opportunities* (pp. 1–12). IGI Global. doi:10.4018/978-1-7998-1981-3.ch001
- Say, J. B. (1816). *England and the English People* (2nd ed.; J. Richter, Trans.). Sherwood, Neely et Jones.
- Schumpeter, J. (1934). *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*. Harvard University Press.
- Schumpeter, J. A. (1911). *The Theory of Economic Development*. Harvard University Press.
- SDSN - Sustainable Development Network Solutions – A Global Initiative for the United Nations. (n.d.). *Sobre nós – Visão e Organização*. Retrieved from: <http://unsdsn.org/about-us/vision-and-organization/>
- Seligman, M. E. P. (2002). *Authentic happiness*. Free Press.
- Shir, N. (2015). *Entrepreneurial Well-Being: The Payoff Structure of Business Creation* (Dissertation for the Degree of Doctor of Philosophy). Stockholm School of Economics. Retrieved from: <https://ex.hhs.se/dissertations/849175-FULLTEXT02.pdf>
- Shir, N., Nikolaev, B. N., & Wincent, J. (2019). Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, 34(5), 105875. doi:10.1016/j.jbusvent.2018.05.002
- Smith, A. (1776). *An Inquiry Into the Nature and Causes of the Wealth of Nations*. New York: Modern Library. Retrieved from: [https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf)
- Smith, L. M., Case, J. L., Smith, H. M., Harwell, L. C., & Summers, J. K. (2013). Relating ecosystem services to domains of human well-being: Foundation for a US index. *Ecological Indicators*, 28, 79–90. doi:10.1016/j.ecolind.2012.02.032

## **Entrepreneurship and Happiness**

Stevenson, L., & Lundström, A. (2002). *Beyond the Rhetoric: Defining Entrepreneurship Policy and its Best Practice Components*. Stockholm: Swedish Foundation for Small Business Research.

Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). *Report by the Commission on the measurement of economic performance and social progress*. Retrieved from: <https://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report>

Stuart-Mill, J. (1848). *The principles of Political Economy: with some of their applications to social philosophy*. Parker.

Stutzer, A., & Frey, A. (2010). *Recent advances in the economics of individual subjective well-being*. IZA discussion paper no 4850.

UNCTAD – United Nations Conference on Trade and Development. (2012). *Entrepreneurship Policy Framework and Implementation Guidance*. United Nations.

UNSDSN – United Nations Sustainable Development Network Solutions. (n.d.). *The World's Knowledge Network for the Sustainable Development Goals*. Retrieved from: <http://unsdsn.org/wp-content/uploads/2018/05/180627-SDSN-Overview-Formatted-MASTER.pdf>

Uy, M. A., Sun, S., & Foo, M. D. (2017). Affect spin, entrepreneurs' well-being, and venture goal progress: The moderating role of goal orientation. *Journal of Business Venturing*, 32(4), 443–460. doi:10.1016/j.jbusvent.2016.12.001

Wiklund, J., Nikolaev, B., Shir, N., Food, M., & Bradley, S. (2019). Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing*, 34(4), 579–588. doi:10.1016/j.jbusvent.2019.01.002

Williams, T. A., & Shepherd, D. A. (2016). Victim entrepreneurs doing well by doing good: Venture creation and well-being in the aftermath of a resource shock. *Journal of Business Venturing*, 31(4), 365–387. doi:10.1016/j.jbusvent.2016.04.002

## **KEY TERMS AND DEFINITIONS**

**Entrepreneurship:** The entrepreneurial activity has been defined with the aim of increasing wealth putting the focus on the creation of new businesses or initiatives, on self-employment, on new businesses organization or the expansion of existing ones, by an individual, team of individuals or business established. Is almost always due to the reference to attitudes towards the environment and the capacity to respond to it, in order to construct solutions that add value to society, as a tool of public policies to achieve certain social, environmental, economic and even cultural objectives.

**Happiness:** The theme of happiness is presented as a predominantly subjective phenomenon, being subordinated more to psychological and sociocultural traits than to external factors. Some authors point that entrepreneurship might be related to higher levels of happiness, satisfaction with life or increased well-being, and that people who score higher on the well-being scales have better social and work relationships; make more money; live longer, healthier lives; and are more contributory societal citizens. In sum, they seem to be more adjusted to assume an entrepreneurial attitude than those who do not score high.



## Compilation of References

- Abada, T., Hou, F., & Lu, Y. (2014). Choice or necessity: Do immigrants and their children choose self-employment for the same reasons? *Work, Employment and Society*, 28(1), 78–94. doi:10.1177/0950017013511870
- Abeysekera, R., Patton, D., & Mullineux, A. (2017). Co-production in business training in microfinance institutions: A conceptual approach. *World Review of Entrepreneurship, Management and Sustainable Development*, 13(1), 52–68. doi:10.1504/WREMSD.2017.080741
- Acemoglu, D., & Robinson, J. A. (2012). *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. Profile Books.
- Acs, Z. J., Arenius, P., Hay, M., & Minniti, M. (2005). Global Entrepreneurship Monitor. GEM 2004 Executive Report, Babson College & London Business School.
- Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations*, 1(1), 97–107. doi:10.1162/itgg.2006.1.1.97
- Acs, Z. J. (1999). The new American evolution. In S. Ackermann (Ed.), *Are small firms important? Their role and impact* (pp. 1–20). Springer. doi:10.1007/978-1-4615-5173-7\_1
- Acs, Z. J., & Armington, C. (2006). *Entrepreneurship, geography and American economic growth*. Cambridge University. doi:10.1017/CBO9780511510816
- Acs, Z. J., & Audretsch, D. B. (2003). Innovation and technological change. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 55–79). Kluwer Academic Publishers. doi:10.1007/b105789
- Acs, Z. J., & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small Business Economics*, 28(2-3), 109–122. doi:10.1007/11187-006-9012-3
- Acs, Z. J., & Szerb, L. (2011). *Global Entrepreneurship and Development Index*. Edward Elgar Publishers.
- Acs, Z., & Audretsch, D. (1990). *Innovation and Small Firms*. The MIT Press. doi:10.1007/978-94-015-7854-7
- Acs, Z., Audretsch, D., Braunerhjelm, P., & Carlsson, B. (2012). Growth and entrepreneurship. *Small Business Economics*, 39(2), 289–300. doi:10.1007/11187-010-9307-2
- Acs, Z., Audretsch, D., & Lehmann, E. (2013). The knowledge spillover theory of entrepreneurship. *Small Business Economics*, 32(1), 15–30. doi:10.1007/11187-008-9157-3
- Acs, Z., Autio, E., & Szerb, L. (2014). National systems of entrepreneurship: Measurement issues and policy implications. *Research Policy*, 43(3), 476–494. doi:10.1016/j.respol.2013.08.016
- Acs, Z., & Sanders, M. (2013). Knowledge spillover entrepreneurship in an endogenous growth model. *Small Business Economics*, 41(4), 775–795. doi:10.1007/11187-013-9506-8

## Compilation of References

- Adamowicz, M. (2017). Bioeconomy – Concept, application and perspectives. *Problems of Agricultural Economics*, 1(350), 29–49. doi:10.5604/00441600.1232987
- Adeyonu, A. G., Balogun, O. L., & Obaniyi, K. S. (2019). Factors influencing entrepreneurial intentions of undergraduate agricultural students in Nigeria. *Yuzuncu Yil University Journal of Agricultural Sciences*, 29(4), 669–676. doi:10.29133/yyutbd.623910
- Adhana, D. K., & Saxena, M. (2017). *Micro insurance in India: a powerful tool to empower poor*. Academic Press.
- Afandi, E., & Kermani, M. (2015). Bridging the gender gap in entrepreneurship: An empirical analysis. *Journal of Developmental Entrepreneurship*, 20(2), 1550008. Advance online publication. doi:10.1142/S1084946715500089
- Agarwal, R., Audretsch, D., & Sarkar, M. B. (2007). The process of creative construction: Knowledge spillovers, entrepreneurship, and economic growth. *Strategic Entrepreneurship Journal*, 1(3-4), 263–286. doi:10.1002ej.36
- Agarwal, R., Audretsch, D., & Sarkar, M. B. (2010). Knowledge spillover and strategic entrepreneurship. *Strategic Entrepreneurship Journal*, 4(4), 271–283. doi:10.1002ej.96
- Agarwal, R., Echambadi, R., Franco, A., & Sarkar, M. (2004). Knowledge transfer through inheritance: Spin-out generation, development and survival. *Academy of Management Journal*, 47(4), 501–522. doi:10.2307/20159599
- Aghion, P., & Jaravel, X. (2015). Knowledge spillovers, innovation and growth. *Economic Journal (London)*, 125(583), 533–573. doi:10.1111/eoj.12199
- Agho, A. (2009). Perspectives of senior-level executives on effective followership and leadership. *Journal of Leadership & Organizational Studies*, 16(2), 159–166. doi:10.1177/1548051809335360
- Agrawal, A., Catalini, C., & Goldfarb, A. (2010). *The geography of crowdfunding*. NET Institute Working Paper, No. 10-08. <https://ssrn.com/abstract=1692661>
- Agrawal, A., Catalini, C., & Goldfarb, A. (2015). Crowdfunding: Geography, social networks, and the timing of investment decisions. *Journal of Economics & Management Strategy*, 24(2), 253–274. doi:10.1111/jems.12093
- Aguilar, A., Twardowski, T., & Wohlgemuth, R. (2019). Bioeconomy for sustainable development. *Journal of Biotechnology*, 20(8), e1800638. doi:10.1002/biot.201800638 PMID:31106982
- Ahlawat, S. (2016). Financial Performance of Group Based Microfinance Model in Haryana. *Integrated Journal of Social Sciences*, 3(1), 9–12.
- Ahlers, G. K. C., Cumming, D., Gunther, C., & Schweizer, D. (2015). Signaling in equity crowdfunding. *Entrepreneurship Theory and Practice*, 39(4), 955–980. doi:10.1111/etap.12157
- Ahl, H. (2006). Why research on women entrepreneurs needs new directions. *Entrepreneurship Theory and Practice*, 30(5), 595–621. doi:10.1111/j.1540-6520.2006.00138.x
- Ahmad, N. H. (2007). *A cross cultural study of entrepreneurial competencies and entrepreneurial success in SMEs in Australia and Malaysia*. University of Adelaide.
- Ahmed, E. M., & Ammar, A. (2017). *Bioeconomy and its connection to knowledge-based economy*. Paper presented at the World Association for Sustainable Developed Conference, Manama, Bahrain.
- Ahmed, E. M. (2018). Are bio-economy dimensions new stream of the knowledge economy? *World Journal of Science. Technology and Sustainable Development*, 15(2), 142–155. doi:10.1108/WJSTSD-06-2017-0014

- Ahmed, I., Islam, T., & Usman, A. (2020). Predicting entrepreneurial intentions through self-efficacy, family support, and regret: A moderated mediation explanation. *Journal of Entrepreneurship in Emerging Economies*. Advance online publication. doi:10.1108/JEEE-07-2019-0093
- Ajayi, O. F., & Akinbobola, T. O. (2020). Links among bioeconomy, food security, and Sustainable Development Goals in Nigeria. In W. Leal Filho, A. Azul, L. Brandli, P. Özuyar, & T. Wall (Eds.), *Zero hunger*. Encyclopedia of the UN Sustainable Development Goals. Cham: Springer. doi:10.1007/978-3-319-69626-3\_106-1
- Ajzen, I. (1987). Attitudes, traits, and actions: Dispositional prediction of behavior in personality and social psychology. *Advances in Experimental Social Psychology*, 20, 1–63. doi:10.1016/S0065-2601(08)60411-6
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. doi:10.1016/0749-5978(91)90020-T
- Akpor-Robaro, M. (2012). The impact of socio-cultural environment on entrepreneurial emergence: An empirical analysis of Nigeria society. *Management Science and Engineering*, 6(4), 82–92.
- Al Mamun, A., & Fazal, S. A. (2018). Effect of entrepreneurial orientation on competency and micro-enterprise performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(3), 379–398. doi:10.1108/APJIE-05-2018-0033
- Alam, M., Kousar, S., & Rehman, C. A. (2019). Role of entrepreneurial motivation on entrepreneurial intentions and behaviour: Theory of planned behaviour extension on engineering students in Pakistan. *Journal of Global Entrepreneurship Research*, 9(50), 50. Advance online publication. doi:10.118640497-019-0175-1
- Alamsyah, D. P., & Muhammed, H. A. A. (2018). Antecedents of Green Awareness for Increased Consumption of Eco-Friendly Products. *ASEAN Marketing Journal*, 10(2), 109–126. Retrieved from <http://journal.ui.ac.id/index.php/amj/article/viewFile/8425/67546336>
- Alba, R. D. (2005). Bright vs. blurred boundaries: Second-generation assimilation and exclusion in France, Germany, and the United States. *Ethnic and Racial Studies*, 28(1), 20–49. doi:10.1080/0141987042000280003
- Albashrawi, M., & Alashoor, T. (2020). Individual Intention to Become an Entrepreneur: Technological Perspective. *Lecture Notes in Information Systems and Organisation*, 35, 469–481. doi:10.1007/978-3-030-34269-2\_32
- Albertos, J. M. (2002). Cultura, innovación y desarrollo local. *Boletín de la AGE*, 34, 229–244.
- Alcácer, J., & Chung, W. (2007). Location Strategies and Knowledge Spillovers. *Management Science*, 53(5), 760–776. doi:10.1287/mnsc.1060.0637
- Aldrich, H. (1999). *Organizations evolving*. Sage.
- Aldrich, H. E., & Fiol, C. M. (1994). Fools Rush in? The Institutional Context of Industry Creation. *Academy of Management Review*, 19(4), 645–670. doi:10.5465/amr.1994.9412190214
- Aldrich, H. E., & Waldinger, R. D. (1990). Ethnicity and Entrepreneurship. *Annual Review of Sociology*, 16(1), 111–135. doi:10.1146/annurev.so.16.080190.000551
- Ali, A., Alam, K., & Lodhi, N. A. (2014). Students intentions towards entrepreneurship: Pakistani perspective. *NICE Research Journal*, 7(2), 154–176.
- Al-Lamky, A. (2007). Feminising Leadership in Arab Societies: The Perspectives of Omani Female Leaders. *Women in Management Review*, 22(1), 49–67. doi:10.1108/09649420710726229
- Alon, I., Lerner, M., & Shoham, A. (2016). Cross-national cultural values and nascent entrepreneurship: Factual versus normative values. *International Journal of Cross Cultural Management*, 16(3), 321–340. doi:10.1177/1470595816674744

## Compilation of References

- Alsaad, A. (2018). The individualistic view of culture and the nascent entrepreneurship: An examination of Schwartz's cultural values. *Journal of Developmental Entrepreneurship*, 23(4), 1850026. Advance online publication. doi:10.1142/S1084946718500267
- Al-shami, S. S. A., Razali, R., & Rashid, N. (2018). The effect of microcredit on women empowerment in welfare and decisions making in Malaysia. *Social Indicators Research*, 137(3), 1073–1090. doi:10.1007/11205-017-1632-2
- Alvarez, S., & Barney, J. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1-2), 11–26. doi:10.1002ej.4
- Alvarez, S., Barney, J., & Young, S. (2010). Debates in entrepreneurship: opportunity formation and implications for the field of entrepreneurship. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 23–46). Springer-Verlag., doi:10.1007/978-1-4419-1191-9\_2
- Alvarez, S., & Welter, C. (2015). The state of opportunities: Clarifying the transitions between opportunity types. *Management Decision*, 53(7), 1398–1411. doi:10.1108/MD-07-2014-0466
- Alves, A. C., Fischer, B., Vonortas, N. S., & de Queiroz, S. R. R. (2019). Configurations of knowledge-intensive entrepreneurial ecosystems. *Revista de Administração de Empresas*, 59(4), 242–257. doi:10.15900034-759020190403
- Alvord, S. H., Brown, L. D., & Letts, C. W. (2004). Social entrepreneurship and societal transformation: An exploratory study. *The Journal of Applied Behavioral Science*, 40(3), 260–282. doi:10.1177/0021886304266847
- Amabile, T. (1996). *Creativity in context: Update to the social psychology of creativity*. Westview Press.
- Amason, A., Shrader, R., & Tompson, G. (2006). Newness and novelty: Relating top management team composition to new venture performance. *Journal of Business Venturing*, 21(1), 125–148. doi:10.1016/j.jbusvent.2005.04.008
- Amorós, J., & Bosma, N. (2014). *Global entrepreneurship monitor. 2013 Global report*. Santiago de Chile: GERA. Retrieved September 11, 2015, from <http://www.gemconsortium.org/docs/download/3106>
- Amorós, J. E., & Bosma, N. (2014). *Global Entrepreneurship Monitor 2013 Global Report*. Global Entrepreneurship Research Association.
- Amoros, J. E., Ciravegna, L., Mandakovic, V., & Stenholm, P. (2019). Necessity or opportunity? The effects of state fragility and economic development on entrepreneurial efforts. *Entrepreneurship Theory and Practice*, 43(4), 725–750. doi:10.1177/1042258717736857
- Amudha, R., Selvabaskar, S., & Motha, L. C. S. (2014). *Micro-insurance: A mechanism for women empowerment through self help group linked LIC*. Paper presented at the Science Engineering and Management Research (ICSEMR), 2014 International Conference on. 10.1109/ICSEMR.2014.7043613
- Anbarasan, P., & Sushil. (2018). Stakeholder engagement in sustainable enterprise: Evolving a conceptual framework and a case study of ITC. *Business Strategy and the Environment*, 27(3), 282–299. doi:10.1002/bse.1999
- Anderson, B. S., Covin, J. G., & Slevin, D. P. (2009). Understanding the relationship between entrepreneurial orientation and strategic learning: An empirical investigation. *Strategic Entrepreneurship Journal*, 3(3), 219–241. doi:10.1002ej.72
- Anderson, T., & Huggins, L. (2008). *Greener than Thou: Are You Really an Environmentalist?* Hoover Institution Press.
- Andersson, M., Baltzopoulos, A., & Löf, H. (2012). R&D Strategies and Entrepreneurial Spawning. *Research Policy*, 41(1), 54–68. doi:10.1016/j.respol.2011.08.005
- Andersson, S. (2011). International entrepreneurship, born globals and the theory of effectuation. *Journal of Small Business and Enterprise Development*, 18(3), 627–643. doi:10.1108/14626001111155745

- André, K., Bureau, S., Gautier, A., & Rubel, O. (2017). Beyond the Opposition Between Altruism and Self-interest: Reciprocal Giving in Reward-Based Crowdfunding. *Journal of Business Ethics*, 146(2), 313–332. doi:10.1007/10551-017-3652-x
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm glow giving. *Economic Journal (London)*, 401(100), 464–477. doi:10.2307/2234133
- Aneke, E. O., Derera, E., & Bomani, M. (2017). An exploratory study of challenges faced by women entrepreneurs in the construction industry in South Africa. *International Journal of Business and Management Studies*, 9(2), 35–51.
- Anholon, R., Quelhas, O. L. G., Leal Filho, W., de Souza Pinto, J., & Feher, A. (2016). Assessing corporate social responsibility concepts used by a Brazilian manufacturer of airplanes: A case study at Embraer. *Journal of Cleaner Production*, 135, 740–749. doi:10.1016/j.jclepro.2016.06.169
- Anwar, I., & Saleem, I. (2019). Exploring entrepreneurial characteristics among university students: An evidence from India. *Asia Pacific Journal of Innovation and Entrepreneurship*, 13(3), 282–295. doi:10.1108/APJIE-07-2018-0044
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105–123. doi:10.1016/S0883-9026(01)00068-4
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24(3), 233–247. doi:10.1007/11187-005-1984-x
- Argote, L., McEvily, B., & Reagans, R. (2003). Managing knowledge in organizations: An integrative framework and review of emerging themes. *Management Science*, 49(4), 571–582. doi:10.1287/mnsc.49.4.571.14424
- Armendáriz, B., & Morduch, J. (2010). *The economics of microfinance*. Academic Press.
- Armitage, C., & Conner, M. (2001). Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499. doi:10.1348/014466601164939 PMID:11795063
- Arrow, K. J. (1962). The economic implications of learning by doing. *The Review of Economic Studies*, 29(3), 155–173. doi:10.2307/2295952
- Arshad, A., & Yazdanifard, R. (2017). Investigative Synopsis of Sony Inc.'s Strategic Management Issues / Failures and How to Overcome Them. *International Journal of Management, Accounting & Economics*, 4(9), 917–936. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=126496031&site=ehost-live>
- Arthur, S., & Hisrich, R. (2011). Entrepreneurship through the ages: Lessons learned. *Journal of Enterprising Culture*, 19(1), 1–40. doi:10.1142/S0218495811000696
- Ashraf, N., Karlan, D., & Yin, W. (2006). Tying Odysseus to the mast: Evidence from a commitment savings product in the Philippines. *The Quarterly Journal of Economics*, 121(2), 635–672. doi:10.1162/qjec.2006.121.2.635
- Asia Pacific Economic Cooperation. (2000). *Towards knowledge-based economies in APEC*. APEC.
- Asiama, J. P., & Osei, V. (2007). *Microfinance in Ghana: an overview*. Research Department, Bank of Ghana.
- Association for the Promotion of the Economy for the Common Good. (2016). Retrieved February 22, 2016, from <https://www.ecogood.org/>
- Audretsch, D. B., & Belitski, M. (2015). *Is Happiness Conducive to Entrepreneurship? Exploring Subjective Well-Being – Entrepreneurship Relationship across Major European Cities*. Discussion Paper Number: CFE-2015-01, Henley Center for Entrepreneurship, Henley Business School, University of Reading. Retrieved from: <https://pdfs.semanticscholar.org/e07c/5fc162c8cc965e1958a6deab39a5684f1405.pdf>

## Compilation of References

- Audretsch, D. B., Falck, O., & Heblich, S. (2011). Handbook of Research on Innovation and Entrepreneurship. Cheltenham: Edward Elgar Publishing. doi:10.4337/9781849807760
- Audretsch, D. (2007). Entrepreneurship capital and economic growth. *Oxford Review of Economic Policy*, 23(1), 63–78. doi:10.1093/oxrep/grm001
- Audretsch, D. (2012). Entrepreneurship research. *Management Decision*, 50(5), 755–764. doi:10.1108/00251741211227384
- Audretsch, D. B. (1995). *Innovation and Industry Evolution*. MIT Press.
- Audretsch, D. B. (2003). Innovation and spatial externalities. *International Regional Science Review*, 26(2), 167–174. doi:10.1177/0160017602250973
- Audretsch, D. B., Aldridge, T. T., & Sanders, M. (2011). Social capital building and new business formation: A case study in silicon valley. *International Small Business Journal*, 29(2), 152–169. doi:10.1177/0266242610391939
- Audretsch, D. B., & Belitski, M. (2013). The missing pillar: The creativity theory of knowledge spillover entrepreneurship. *Small Business Economics*, 41(4), 819–836. doi:10.1007/11187-013-9508-6
- Audretsch, D. B., & Keilbach, M. (2007). The theory of knowledge spillover entrepreneurship. *Journal of Management Studies*, 44(7), 1242–1254. doi:10.1111/j.1467-6486.2007.00722.x
- Audretsch, D. B., & Link, A. N. (2019). Entrepreneurship and knowledge spillovers from the public sector. *The International Entrepreneurship and Management Journal*, 15(1), 195–208. doi:10.1007/11365-018-0538-z
- Audretsch, D., & Feldman, M. (1996). R&D spillovers and the geography of innovation and production. *The American Economic Review*, 86(3), 630–640. doi:10.2307/2118216
- Austin, J.E. (2000). Strategic collaboration between non-profits and businesses. *Non-profit and Voluntary Sector Quarterly*, 29 (supplement to issue 1), 69-97.
- Austin, J., Stevenson, H., & Wei-Skillern, J. (2006). Social and commercial entrepreneurship: Same, different, or both? *Entrepreneurship Theory and Practice*, 30(1), 1–22. doi:10.1111/j.1540-6520.2006.00107.x
- Autio, E., & Acs, Z. (2010). Intellectual property protection and the formation of entrepreneurial growth aspirations. *Strategic Entrepreneurship Journal*, 4(3), 234–251. doi:10.1002/ej.93
- Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43(7), 1097–1108. doi:10.1016/j.respol.2014.01.015
- Ayuub, S. (2013). Impact of microfinance on poverty alleviation: A case study of NRSP in Bahawalpur of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 3(1), 119–135.
- Azmat, F., Ferdous, A. S., & Couchman, P. (2015). Understanding the dynamics between social entrepreneurship and inclusive growth in subsistence marketplaces. *Journal of Public Policy & Marketing*, 34(2), 252–271. doi:10.1509/jppm.14.150
- Azoulay, P., Jones, B. F., Kim, J. D., & Miranda, J. (2020). Age and high-growth entrepreneurship. *American Economic Review: Insights*, 2(1), 65–82.
- Bacq, S., Hartog, C., Hoogendoorn, B., & Lepoutre, J. (2011). Social and commercial entrepreneurship: Exploring individual and organizational characteristics. *Scales Research Reports, EIM Business and Policy Research*. Retrieved December 12, 2019, from [http://www.ondernemerschap.nl/sys/cftags/assetnow/design/widgets/site/ctm\\_getFile.cfm?file=H201110.pdf&perId=615](http://www.ondernemerschap.nl/sys/cftags/assetnow/design/widgets/site/ctm_getFile.cfm?file=H201110.pdf&perId=615)

- Bacq, S., & Alt, E. (2018). Feeling capable and valued: A prosocial perspective on the link between empathy and social entrepreneurial intentions. *Journal of Business Venturing*, 33(3), 333–350. doi:10.1016/j.jbusvent.2018.01.004
- Baden, S. (1999). *Meeting on Women and Political Participation: 21<sup>st</sup> Century Challenge United Nations Development Programme 24-26 March 1999, New Delhi, India. Background Paper, No. 1. 2, Gender, Governance and the 'Feminisation of Poverty*. <http://mirror.undp.org/magnet/events/gender/india/Badefeb2.htm>
- Bagwell, S. (2006). UK Vietnamese Businesses: Cultural Influences and Intracultural Differences. *Environment and Planning, C, Government & Policy*, 24(1), 51–69. doi:10.1068/c058
- Bagwell, S. (2018). From mixed embeddedness to transnational mixed embeddedness: An exploration of Vietnamese businesses in London. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 104–120. doi:10.1108/IJEER-01-2017-0035
- Baker, E. (2020). Tasmania's tough coronavirus controls have tourism and hospitality owners scrambling for solutions. *ABC News*. Retrieved March, 22, 2020, from <https://www.abc.net.au/news/2020-03-20/coronavirus-hits-tasmanias-tourism-industry/12074692>
- Baker, S. (2007). Followership: The theoretical foundation of a contemporary construct. *Journal of Leadership & Organizational Studies*, 14(1), 50–60. doi:10.1177/0002831207304343
- Baliga, B. R., Dachler, H. P., & Schriesheim, C. A. (1988). In J. G. Hunt (Ed.), *Emerging leadership vistas* (pp. 85–88). Lexington Books.
- Baluku, M. M., & Otto, K. (2019). Impact of personal cultural orientations and moral potency on self-employment intentions: The moderating role cognitive styles. *International Journal of Entrepreneurship and Small Business*, 37(4), 545–572. doi:10.1504/IJESB.2019.101701
- Banco de Portugal. (2015). *Análise Setorial das Sociedades Não Financeiras em Portugal 2010-2015*. Banco de Portugal.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. Academic Press.
- Banerjee, V., & Duflo, E. (2007). The economic lives of the poor. *The Journal of Economic Perspectives*, 21(1), 141–167. doi:10.1257/jep.21.1.141 PMID:19212450
- Bang, J. K., Follér, A., & Buttazzoni, M. (2009). *Industrial biotechnology: More than green fuel in a dirty economy? Exploring the transformational potential of industrial biotechnology on the way to a green economy*. World Wildlife Fund.
- Bansal, P. (2002). The corporate challenges of sustainable development. *The Academy of Management Perspectives*, 16(2), 122–131. doi:10.5465/ame.2002.7173572
- Barasinska, N., & Schafer, D. (2014). Is Crowdfunding Different? Evidence on the Relation between Gender and Funding Success from a German Peer-to-Peer Lending Platform. *German Economic Review*, 15(4), 436–452. doi:10.1111/geer.12052
- Barea, J. (1990). Concepto y agentes de la economía social. *CIRIEC-ESPAÑA, Revista de Economía Pública. Social y Cooperativa*, 8, 109–117.
- Barin-Cruz, L., Boehe, D. M., & Ogasavara, M. H. (2013). CSR-based differentiation strategy of export firms from developing countries: An exploratory study of the strategy tripod. *Business & Society*, 54(6), 723–762. doi:10.1177/0007650312473728
- Baron, R. A. (2015). Affect and Entrepreneurship. *Wiley Encyclopedia of Management*, volume 3. Entrepreneurship. doi:10.1002/9781118785317.weom030002

## Compilation of References

- Baron, R. A., & Henry, R. A. (2011). Entrepreneurship: The genesis of organizations. In Handbook of industrial and organizational psychology, Vol. 1: building and developing the organization. American Psychological Association.
- Baron, R., & Shane, S. (2008). Entrepreneurship: A Process Perspective (2nd ed.). Mason: Thomson South-Western.
- Baron, A., & Shane, S. A. (2008). *Entrepreneurship, a process perspective*. Thomson.
- Baron, D. (2010). *Business and its environment*. Prentice Hall.
- Baron, R. (2004). The cognitive perspective: A valuable tool for answering entrepreneurship's basic "why" questions. *Journal of Business Venturing, 19*(2), 221–239. doi:10.1016/S0883-9026(03)00008-9
- Baron, R. (2006). Opportunity recognition as pattern recognition. *Academy of Management Review, 20*, 104–120. doi:10.5465/AMP.2006.19873412
- Baron, T., & Harima, A. (2019). The role of diaspora entrepreneurs in start-up ecosystem development - a Berlin case study. *International Journal of Entrepreneurship and Small Business, 36*(1/2), 74. doi:10.1504/IJESB.2019.096968
- Barrick, M., & Mount, M. (2005). Yes, personality matters: Moving on to more important matters. *Human Performance, 18*(4), 359–372. doi:10.120715327043hup1804\_3
- Barron, F., & Harrington, D. (1981). Creativity, intelligence, and personality. *Annual Review of Psychology, 32*(1), 439–476. doi:10.1146/annurev.ps.32.020181.002255
- Bartha, Z., Gubik, A. S., & Bereczk, A. (2019). The social dimension of the entrepreneurial motivation in the central and Eastern European countries. *Entrepreneurial Business and Economics Review, 7*(1), 9–27. doi:10.15678/EBER.2019.070101
- Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behaviour: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103–118. doi:10.1002/job.4030140202
- Bauer, F., Hansen, T., & Hellsmark, H. (2018). Innovation in the bioeconomy – Dynamics of biorefinery innovation networks. *Technology Analysis and Strategic Management, 30*(8), 935–947. doi:10.1080/09537325.2018.1425386
- Baumgardner, T., Neufeld, C., Huang, P., Sondhi, T., Mursalin, F., & Talha, A. (2017). Crowdfunding as a Fast Expanding Market for the Creation of Capital and Shared Value. *Thunderbird International Business Review, 59*(1), 115–126. doi:10.1002/tie.21766
- Baumol, W. (1993). Formal Entrepreneurship Theory in Economics: Existence and Bounds. *Journal of Business Venturing, 8*(3), 197–210. doi:10.1016/0883-9026(93)90027-3
- Baumol, W. J. (1968). Entrepreneurship in economic theory. *The American Economic Review, 58*(2), 64–71.
- Baziana, S., & Tzimitra-Kalogianni, E. (2016). Investigation of Consumer Behavior. *International Journal of Social Ecology and Sustainable Development, 7*(1), 50–61. doi:10.4018/IJSESD.2016010103
- Bazzy, J. D., Smith, A. R., & Harrison, T. (2019). The impact of abstract thinking on entrepreneurial intentions. *International Journal of Entrepreneurial Behaviour & Research, 25*(2), 323–337. doi:10.1108/IJEBR-03-2018-0128
- Bearden, W. O., Money, R. B., & Nevins, J. L. (2006). Multidimensional versus unidimensional measures in assessing national culture values: The Hofstede VSM 94 example. *Journal of Business Research, 59*(2), 195–203. doi:10.1016/j.jbusres.2005.04.008
- Bechard, J. P., & Toulouse, J. M. (1998). Validation of a didactic model for the analysis of training objectives in entrepreneurship. *Journal of Business Venturing, 13*(4), 317–332. doi:10.1016/S0883-9026(98)80006-2



- Beckers, P., & Blumberg, B. F. (2013). Immigrant entrepreneurship on the move: A longitudinal analysis of first- and second-generation immigrant entrepreneurship in the Netherlands. *Entrepreneurship and Regional Development*, 25(7–8), 654–691. doi:10.1080/08985626.2013.808270
- Begley, T., & Boyd, D. (1987). A comparison of entrepreneurs and managers of small business firms. *Journal of Management*, 13(1), 99–108. doi:10.1177/014920638701300108
- Belleflamme, P., Lambert, T., & Schwienbacher, A. (2014). Crowdfunding: Tapping the right crowd. *Journal of Business Venturing*, 29(5), 585–609. doi:10.1016/j.jbusvent.2013.07.003
- Belleflamme, P., Omrani, N., & Peitz, M. (2015). The Economics of Crowdfunding Platforms. *Information Economics and Policy*, 33, 11–28. doi:10.1016/j.infoecopol.2015.08.003
- Bell, R. (2019). Predicting entrepreneurial intention across the university. *Education + Training*, 61(7-8), 815–831. doi:10.1108/ET-05-2018-0117
- Ben-Ner, A. (1986). Non-profit organizations: Why do they exist in market economies. The economics of non-profit institutions. *Studies in Structure and Policy*, 1, 94–113.
- Bensemam, J., Warren, L., & Anderson, A. (2018). Entrepreneurial engagement in a depleted small town: Legitimacy and embeddedness. *Journal of Management & Organization*, 1–17. doi:10.1017/jmo.2018.63
- Benz, M. (2009). Entrepreneurship as a non-profit-seeking activity. *The International Entrepreneurship and Management Journal*, 5(1), 23–44. doi:10.1007/11365-006-0031-y
- Benz, M., & Frey, B. S. (2008). Being independent is a great thing: Subjective evaluations of self-employment and hierarchy. *Economica*, 75(298), 362–383. doi:10.1111/j.1468-0335.2007.00594.x
- Benz, M., & Frey, B. S. (2008a). The value of doing what you like: Evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization*, 68(3-4), 445–455. doi:10.1016/j.jebo.2006.10.014
- Berger, I. E., Cunningham, P. H., & Drumwright, M. E. (2004). Social alliances: Company/non-profit collaboration. *California Management Review*, 47(1), 58–90. doi:10.2307/41166287
- Berglann, H., Moen, E., Roed, K., & Skogstrøm, J. F. (2011). Entrepreneurship: Origins and returns. *Labour Economics*, 18(2), 180–193. doi:10.1016/j.labeco.2010.10.002
- Berglund, H. (2007). Researching entrepreneurship as lived experience. In H. Neergaard & J. P. Ullhøi (Eds.), *Handbook of Qualitative Research Methods in Entrepreneurship* (pp. 75–93). Edward Elgar. doi:10.4337/9781847204387.00011
- Bergmann, H., & Stephan, U. (2013). Moving on from nascent entrepreneurship: Measuring cross-national differences in the transition to new business ownership. *Small Business Economics*, 41(4), 945–959. doi:10.1007/11187-012-9458-4
- Bernard, D. K., Kevin, L. L. T., & Khin, A. A. (2016). Entrepreneurial success through microfinance services among women entrepreneurs in Sri Lanka: A pilot study and overview of the findings. *International Journal of Economics and Financial Issues*, 6(3), 1144–1150.
- Berns, J. P., Figueroa-Armijos, M., da Motta Veiga, S. P., & Dunne, T. C. (2020). Dynamics of lending-based prosocial crowdfunding: Using a social responsibility lens. *Journal of Business Ethics*, 161(1), 169–185. doi:10.1007/10551-018-3932-0
- Beynon, M. J., Jones, P., & Pickernell, D. (2016). Country-based comparison analysis using FSQCA investigating entrepreneurial attitudes and activity. *Journal of Business Research*, 69(4), 1271–1276. doi:10.1016/j.jbusres.2015.10.091

## Compilation of References

- Bezanilla, M., García-Olalla, A., Paños-Castro, J., & Arruti, A. (2020). Developing the Entrepreneurial University: Factors of Influence. *Sustainability*, *12*(3), 842. doi:10.3390/u12030842
- Bhebhe, T. B., Bhebhe, R. K., & Bhebhe, B. S. (2016). An investigation into the causes of unemployment among youths in the City of Harare. *Global Journal of Arts, Humanities and Social Sciences*, *4*(2), 90–102.
- Bhebhe, T. B., Sulochana, N., Muranda, Z., Sifile, O., & Chavunduka, M. D. (2020). Effects of the educated youth unemployment nexus in Zimbabwe. *Journal of the Humanities and Social Sciences*, *20*(10), 1–11.
- Bikhchandani, S., Hirshleifer, D., & Welch, I. (1992). A Theory of Fads, Fashion, Custom, and Cultural-Change as Informational Cascades. *Journal of Political Economy*, *100*(5), 457–486. doi:10.1086/261849
- Binder, M., & Coad, A. (2013). Life satisfaction and self-employment: A matching approach. *Small Business Economics*, *40*(4), 1009–1033. doi:10.1007/11187-011-9413-9
- Biofuture Platform. (2018). *Creating the Biofuture: A Report on the State of the Low Carbon Bioeconomy*. Biofuture Platform.
- Birch, D. (1987). *Job creation in America*. Macmillan.
- Birch, D. L. (1979). *Program on neighborhood Massachusetts Institute of Technology (Cambridge, Change, R., & Mass.). The Job Generation Process* (Vol. 302). MIT Program on Neighborhood and Regional Change.
- Bird, B. (1995). Towards a theory of entrepreneurial competency. *Advances in Entrepreneurship, Firm Emergence and Growth*, *2*, 51-72. Retrieved from [https://www.academia.edu/1282975/Toward\\_a\\_theory\\_of\\_entrepreneurialcompetency](https://www.academia.edu/1282975/Toward_a_theory_of_entrepreneurialcompetency)
- Bird, B. (1988). Implementing entrepreneurial ideas: The case for intention. *Academy of Management Review*, *13*(3), 442–453. doi:10.5465/amr.1988.4306970
- Birner, R. (2018). Bioeconomy concepts. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 17–38). Springer. doi:10.1007/978-3-319-68152-8\_3
- Bi, S., Liu, Z., & Usman, K. (2017). The influence of online information on investing decisions of reward-based crowd-funding. *Journal of Business Research*, *71*, 10–18. doi:10.1016/j.jbusres.2016.10.001
- Bjørnskov, C., & Foss, N. J. (2008). Economic freedom and entrepreneurial activity: Some cross-country evidence. *Public Choice*, *134*(3-4), 307–328. doi:10.1007/11127-007-9229-y
- Blackwood, T., Round, A., Pugalis, L., & Hatt, L. (2015). Making sense of learning: Insights from an experientially-based undergraduate entrepreneurship programme. *Industry and Higher Education*, *29*(6), 445–457. doi:10.5367/ihe.2015.0278
- Blanchflower, D. G., & Oswald, A. J. (2000). *Well-Being Over Time in Britain and the USA*. NBER Working Paper, No. 7487. Cambridge, MA: National Bureau of Economic Research.
- Blanchflower, D. G. (2000). Self-employment in OECD countries. *Labour Economics*, *7*(5), 471–505. doi:10.1016/S0927-5371(00)00011-7
- Blankesteyn, M., Bossink, B., & van der Sijde, P. (2020). Science-based entrepreneurship education as a means for university-industry technology transfer. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-019-00623-3
- Block, J. H., Colombo, M. G., Cumming, D. J., & Vismara, S. (2018). New players in entrepreneurial finance and why they are there. *Small Business Economics*, *50*(2), 239–250. doi:10.1007/11187-016-9826-6

- Block, J. H., Thurik, R., & Zhou, H. (2013). What turns knowledge into innovative products? The role of entrepreneurship and knowledge spillovers. *Journal of Evolutionary Economics*, 23(4), 693–718. doi:10.1007/00191-012-0265-5
- Block, J., Hornuf, L., & Moritz, A. (2018). Which updates during an equity crowdfunding campaign increase crowd participation? *Small Business Economics*, 50(1), 3–27. doi:10.1007/11187-017-9876-4
- Block, J., & Sandner, P. (2009). Necessity and opportunity entrepreneurs and their duration in self-employment: Evidence from German micro data. *Journal of Industry, Competition and Trade*, 9(2), 117–137. doi:10.1007/10842-007-0029-3
- Block, J., & Wagner, M. (2010). Necessity and opportunity entrepreneurs in Germany: Characteristics and earnings differentials. *Schmalenbach Business Review*, 62(2), 154–174. doi:10.1007/BF03396803
- Böcher, M., Töller, A. E., Perbandt, D., Beer, K., & Volgelpohl, T. (2020). Research trends: Bioeconomy politics and governance. *Forest Policy and Economics*, 118, 102219. doi:10.1016/j.forpol.2020.102219
- Bocken, N. (2015). Sustainable venture capital—catalyst for sustainable start-up success? *Journal of Cleaner Production*, 108, 647–658. doi:10.1016/j.jclepro.2015.05.079
- Bocken, N., Farracho, M., Bosworth, R., & Kemp, R. (2014). The front-end of eco-innovation for eco-innovative small and medium sized companies. *Journal of Engineering and Technology Management*, 31, 43–57. doi:10.1016/j.jengtecman.2013.10.004
- Bocken, N., Morgan, D., & Evans, S. (2013). Understanding environmental performance variation in manufacturing companies. *International Journal of Productivity and Performance Management*, 62(8), 856–870. doi:10.1108/IJPPM-03-2013-0042
- Boehm, J. (2008). *Entrepreneurial Orientation in Academia*. Springer Science & Media.
- Boeuf, B., Darveau, J., & Legoux, R. (2014). Financing creativity: Crowdfunding as a new approach for theatre projects. *International Journal of Arts Management*, 16(3), 33–48.
- Bogatyрева, K., Edelman, L. F., Manolova, T. S., Osiyevskyy, O., & Shirokova, G. (2019). When do entrepreneurial intentions lead to actions? The role of national culture. *Journal of Business Research*, 96, 309–321. doi:10.1016/j.jbusres.2018.11.034
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions. *Sustainability*, 12(3), 1267. doi:10.3390/u12031267
- Bolton, D. L., & Lane, M. D. (2012). Individual entrepreneurial orientation: Development of a measurement instrument. *Education + Training*, 54(2/3), 219–233. doi:10.1108/00400911211210314
- Bolzani, D., Rasmussen, E., & Fini, R. (2020). Spin-offs’ linkages to their parent universities over time: The performance implications of equity, geographical proximity, and technological ties. *Strategic Entrepreneurship Journal*, sej.1359. doi:10.1002/ej.1359
- Bomtempo, J. V., Chaves Alves, F., & de Almeida Oroski, F. (2017). Developing new platform chemicals: What is required for a new bio-based molecule to become a platform chemical in the bioeconomy? *Faraday Discussions*, 202, 213–225. doi:10.1039/C7FD00052A PMID:28671699
- Bonaiuti, M. (2014). Bio-economics. In G. D’Alisa, F. Dematia, & G. Kallis (Eds.), *Degrowth: A Vocabulary for a New Era* (pp. 52–55). Routledge/Taylor & Francis Group.

## Compilation of References

- Boohene, R., Sheridan, A., & Kotey, B. (2008). Gender, personal values, strategies and small business performance. *Equal Opportunities International*, 27(3), 237–257. doi:10.1108/02610150810860075
- Bos-Brouwers, H. E. J. (2010). *Sustainable innovation processes within small and medium-sized enterprises*. University of Amsterdam.
- Boschma, R., Eriksson, R., & Lindgren, U. (2009). How Does Labour Mobility Affect the Performance of Plants? The Importance of Relatedness and Geographical Proximity. *Journal of Economic Geography*, 9(2), 169–190. doi:10.1093/jeg/lbn041
- Bosma, N., Hill, S., Ionescu-Somers, A., Kelley, D., Levie, J., & Tarnawa, A. (2020). *Global Entrepreneurship Monitor 2019/2020 Global Report*. Global Entrepreneurship Research Association.
- Bosma, N., Jones, K., Autio, E., & Levie, J. (2007). *Global Entrepreneurship Monitor: 2007 Executive Report*. London Business School.
- Bosma, N., & Levie, J. (2010). *Global Entrepreneurship Monitor 2009, Executive Report*. Global Entrepreneurship Research Association.
- Bousmpou, D., Kakouris, A., & Samathrakis, V. (2019). Connecting ASKO beliefs and entrepreneurial self-efficacy with entrepreneurial intention. *Proceedings of the 14th European Conference on Innovation and Entrepreneurship (ECIE)*, 2, 1245-1249.
- Bowen, H. R. (1953). *Social Responsibilities of the Businessman*. Harper & Row.
- Bowen, H. R. (1953). *Social responsibility of the businessman*. Harper & Row.
- Bowles, S., & Gintis, H. (1976). *Schooling in capitalist America* (Vol. 75). Basic Books.
- Bowman, C., & Faulkner, D. O. (1997). *Competitive and corporate strategy*. Irwin.
- Brana, S. (2013). Microcredit: An answer to the gender problem in funding? *Small Business Economics*, 40(1), 87–100. doi:10.1007/1187-011-9346-3
- Brändle, L., Berger, E., Golla, S., & Kuckertz, A. (2018). I am what I am - How nascent entrepreneurs' social identity affects their entrepreneurial self-efficacy. *Journal of Business Venturing Insights*, 9, 17–23. doi:10.1016/j.jbvi.2017.12.001
- Brandstätter, H. (1997). Becoming an entrepreneur - A question of personality structure? *Journal of Economic Psychology*, 18(2-3), 157–177. doi:10.1016/S0167-4870(97)00003-2
- Brandstätter, H. (2011). Personality aspects of entrepreneurship: A look at five meta-analyses. *Personality and Individual Differences*, 51(3), 222–230. doi:10.1016/j.paid.2010.07.007
- Bretschneider, U., Knaub, K., & Wieck, E. (2014). Motivations For Crowdfunding: What Drives The Crowd To Invest In Start-Ups? *Proceedings of Twenty Second European Conference on Information Systems*, 1–11.
- Breznitz, S., & Clayton, P. (2017). *The Impact Of The 2008-2013 Financial Crisis On University Research Output*. Innovation Policy White Paper Series 2017-02, University of Toronto.
- Bridges, D., & Schendan, H. E. (2019). Sensitive individuals are more creative. *Personality and Individual Differences*, 142, 186–195. doi:10.1016/j.paid.2018.09.015
- Broadstock, D. C., Matousek, R., Meyer, M., & Tzeremes, N. G. (2019). Does corporate social responsibility impact firms' innovation capacity? The indirect link between environmental & social governance implementation and innovation performance. *Journal of Business Research*. Advance online publication. doi:10.1016/j.jbusres.2019.07.014

- Brockhaus, R. (1982). The psychology of an entrepreneur. In C. Kent, D. Sexton, & K. Vesper (Eds.), *Encyclopedia of entrepreneurship* (pp. 39–56). Prentice Hall.
- Brockhaus, S. H. (1980). Risk taking propensity of entrepreneurs. *Academy of Management Journal*, 23(3), 509–520. doi:10.2307/255515
- Bröring, S., Laibach, N., & Wustmans, M. (2020). Innovation types in the bioeconomy. *Journal of Cleaner Production*, 266, 121939. doi:10.1016/j.jclepro.2020.121939
- Brune, L., Giné, X., Goldberg, J., & Yang, D. (2016). Facilitating savings for agriculture: Field experimental evidence from Malawi. *Economic Development and Cultural Change*, 64(2), 187–220. doi:10.1086/684014
- Brunello, G., & Schlotter, M. (2011). *Non cognitive skills and personality traits: Labour market relevance and their development in education & training systems*. IZA Discussion Paper N°. 5743. Retrieved July 15, 2015 from <http://ftp.iza.org/dp5743.pdf>
- Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice*, 34(3), 421–440. doi:10.1111/j.1540-6520.2010.00390.x
- Bruton, G., Khavul, S., Siegel, D., & Wright, M. (2015). New Financial Alternatives in Seeding Entrepreneurship: Microfinance, Crowdfunding, and Peer-to-Peer Innovations. *Entrepreneurship Theory and Practice*, 39(1), 9–26. doi:10.1111/etap.12143
- Bryant, P. (2007). Self-regulation and decision heuristics in entrepreneurial opportunity evaluation and exploitation. *Management Decision*, 45(4), 732–748. doi:10.1108/00251740710746006
- Bryce, H. J. (2006). Non-profits as social capital and agents in the public policy process: Toward a new paradigm. *Non-profit and Voluntary Sector Quarterly*, 35(2), 311–318. doi:10.1177/0899764005283023
- Buccieri, D., Javalgi, R. G., & Cavusgil, E. (2020). International new venture performance: Role of international entrepreneurial culture, ambidextrous innovation, and dynamic marketing capabilities. *International Business Review*, 29(2), 101639. doi:10.1016/j.ibusrev.2019.101639
- Buenstorf, G. (2007). Evolution on the shoulders of giants: Entrepreneurship and firm survival in the german laser industry. *Review of Industrial Organization*, 30(3), 179–202. doi:10.1007/11151-007-9132-1
- Buenstorf, G., & Costa, C. (2018). Drivers of spin-off performance in industry clusters: Embodied knowledge or embedded firms? *Research Policy*, 47(3), 663–673. doi:10.1016/j.respol.2018.01.015
- Buheji, M. (2018). Understanding necessity entrepreneurship. *Issues in Social Science*, 6(1), 1–7. doi:10.5296/iss.v6i1.13298
- Bull, I., & Willard, G. (1993). Towards a theory of entrepreneurship. *Journal of Business Venturing*, 8(3), 183–195. doi:10.1016/0883-9026(93)90026-2
- Burgess, G. (2018). Bruny Island tourist influx a double-edged sword for those calling it home. *ABC News*. Retrieved March 12, 2020, from <https://www.abc.net.au/news/2018-12-20/bruny-island-off-tasmania-feels-growing-pains-of-tourism-boom/10582124>
- Burton, M. D., Sorensen, J. B., & Beckman, C. M. (2002). Coming from good stock: Career histories and new venture formation. *Research in the Sociology of Organizations*, 19, 229–262. doi:10.1016/S0733-558X(02)19007-0
- Busenitz, L., West, G. III, Sheperd, D., Nelson, T., Chandler, G., & Zacharakis, A. (2003). Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*, 26(3), 285–308. doi:10.1016/S0149-2063(03)00013-8

## Compilation of References

- Business Partners. (2015). *Business Organisations and Associations for Women*. <https://www.businesspartners.co.za/entrepreneurs-growth-centre/useful-articles/women-in-business/business-organisations-and-associations-for-women>
- Buttner, E. H., & Moore, D. P. (1997). Women's organizational exodus to entrepreneurship: Self-reported motivations and correlates with success. *Journal of Small Business Management*, 35, 34–46.
- Bygrave, W. D. (1993). Theory Building in the Entrepreneurship Paradigm. *Journal of Business Venturing*, 8(3), 255–280. doi:10.1016/0883-9026(93)90031-Y
- Caiazza, R., Belitski, M., & Audretsch, D. B. (2020). From latent to emergent entrepreneurship: The knowledge spillover construction circle. *The Journal of Technology Transfer*, 45(3), 694–704. doi:10.1007/10961-019-09719-y
- Caiazza, R., Richardson, A., & Audretsch, D. (2015). Knowledge effects on competitiveness: From firms to regional advantage. *The Journal of Technology Transfer*, 40(6), 899–909. doi:10.1007/10961-015-9425-8
- Caird, S. (1991). The enterprising tendency of occupational groups. *International Small Business Journal*, 9(4), 75–81. doi:10.1177/026624269100900405
- Cai, Y. (2014). Why are suboptimal contracts usually chosen in venture capital backed nascent entrepreneurship? *Journal of Developmental Entrepreneurship*, 19(4), 1450021. Advance online publication. doi:10.1142/S1084946714500216
- Calderon, G., Iacovone, L., & Juarez, L. (2017). Opportunity versus necessity: Understanding the heterogeneity of female micro-entrepreneurs. *The World Bank Economic Review*, 30(1), S86–S96.
- Calic, G., & Mosakowski, E. (2016). Kicking Off Social Entrepreneurship: How A Sustainability Orientation Influences Crowdfunding Success. *Journal of Management Studies*, 53(5), 738–767. doi:10.1111/joms.12201
- Caliendo, M., & Kritikos, A. (2007). *Is entrepreneurial success predictable? An ex-ante analysis of the character-based approach*. IZA Discussion Paper No. 2687. Retrieved May 8, 2016, from <http://ftp.iza.org/dp2687.pdf>
- Caliendo, M., Fossen, F., & Kritikos, A. (2011). *Personality characteristics and the decision to become and stay self-employed*. IZA Discussion Paper N°. 5566. Retrieved June 18, 2016, from <http://ftp.iza.org/dp5566.pdf>
- Caliendo, M., Fossen, F., & Kritikos, A. (2010). The impact of risk attitudes on entrepreneurial survival. *Journal of Economic Behavior & Organization*, 76(1), 45–63. doi:10.1016/j.jebo.2010.02.012
- Callan. (2001). Generating spin-offs: evidences from across the OECD. *STI Review*.
- Camagni, R. (2001). The economic role and spatial contradictions of global city-regions: the functional, cognitive and evolutionary context. In A. J. Scott (Ed.), *Global City-regions: Trends, Theory, Policy* (pp. 96–118). Oxford University Press.
- Campbell, B., Ganco, M., Franco, A., & Agarwal, R. (2012). Who leaves, where to, and why worry? Employee mobility, entrepreneurship and effects on source firm performance. *Strategic Management Journal*, 33(11), 65–87. doi: 10.1002/mj.943
- Cannella, G. S. (1997). *Deconstructing early childhood education : social justice and revolution*. P. Lang.
- Cantillon, R. (1755). *Essay on the nature of Commerce* (H. Higgs, Trans.). London: Macmillan. Retrieved from: <http://la.utexas.edu/users/hcleaver/368/368cantillonessaytable.pdf>
- Cantillon, R. (1931). *Essai sur la nature du commerce en general* (H. Higgs, Ed. & Trans.). Macmillan.
- Cantril, H. (1961). *Public Opinion, 1935-1946*. Princeton University Press.
- Cantril, H. (1965). *The Pattern of Human Concerns*. Rutgers University Press.

- Canyelles, J. M. (2011). Responsabilidad Social de las administraciones públicas. *Revista de Contabilidad y Dirección*, 13, 77–104.
- Cappellini, B., & Parsons, E. (2014). Constructing the culinary consumer: Transformative and reflective processes in Italian cookbooks. *Consumption Markets & Culture*, 17(1), 71–99. doi:10.1080/10253866.2012.701893
- Caprana, G., & Cervone, C. (2000). *Personality: Determinants, dynamics, and potentials*. Cambridge University Press. doi:10.1017/CBO9780511812767
- Carmona, V. C., Dai Pra Martens, C., Dal Belo Carneiro Leão, A. L., Nassif, J., Jorge Nassif, V. M., de Freitas, R., & Mello Rodrigues Mello, H. (2018). Empreendedorismo social: Uma perspectiva bibliométrica na área de administração e negócios. *Estudios Gerenciales*, 34(149), 399–410. doi:10.18046/j.estger.2018.149.2912
- Carneiro, P., & Heckman, J. (2003). *Human capital policy*. National Bureau of Economic Research, Working Paper No. 9495. Retrieved October 14, 2015, from <https://www.nber.org/papers/w9495>
- Carneiro, P., Crawford, C., & Goodman, A. (2007). The impact of early cognitive and non-cognitive skills on later outcomes. *Centre for the Economics of Education, London School of Economics*. Retrieved July 16, 2016, from <https://discovery.ucl.ac.uk/16164/1/16164.pdf>
- Carree, M. A., & Thurik, A. R. (2003). The impact of entrepreneurship on economic growth. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship* (pp. 557–594). Kluwer Academic Publishers.
- Carree, M. A., & Thurik, A. R. (2010). The impact of entrepreneurship on economic growth. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research: An interdisciplinary survey and introduction* (pp. 557–594). Springer-Verlag. doi:10.1007/978-1-4419-1191-9\_20
- Carr, J. C., & Sequeira, J. M. (2007). Prior family business exposure as intergenerational influence and entrepreneurial intent: A theory of planned behavior approach. *Journal of Business Research*, 60(10), 1090–1098. doi:10.1016/j.jbusres.2006.12.016
- Carroll, A. (2008). Corporate social responsibility (CSR) and corporate social performance (CSP). In A. Carroll (Ed.), *Encyclopaedia of business ethics and society*. Sage. doi:10.4135/9781412956260.n206
- Carsten, M., & Uhl-Bien, M. (2013). Ethical followership: An examination of followership beliefs and crimes of obedience. *Journal of Leadership & Organizational Studies*, 20(1), 49–61. doi:10.1177/1548051812465890
- Carter, S., & Shaw, E. (2006). Women's business ownership: Recent research and policy developments. *Report to Small Business Service*. <http://www.berr.gov.uk/files/file38330.pdf>
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review*, 38(1), 33–53. doi:10.1111/1540-6288.00034
- Carter, N. M., Gartner, W. B., Shaver, K. G., & Gatewood, E. J. (2003). The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18(1), 13–39. doi:10.1016/S0883-9026(02)00078-2
- Carus, M. (2017). Biobased economy and climate change – Important links, pitfalls, and opportunities. *Industrial Biotechnology (New Rochelle, N.Y.)*, 13(2), 41–51. doi:10.1089/ind.2017.29073.mca
- Casson, M. (2005). Entrepreneurship and the theory of the firm. *Journal of Economic Behavior & Organization*, 58(2), 327–348. doi:10.1016/j.jebo.2004.05.007

## Compilation of References

- Cederberg, M., & Villares-Varela, M. (2019). Ethnic entrepreneurship and the question of agency: The role of different forms of capital, and the relevance of social class. *Journal of Ethnic and Migration Studies*, 45(1), 115–132. doi:10.1080/1369183X.2018.1459521
- Chaganti, R., & Greene, P. G. (2002). Who Are Ethnic Entrepreneurs? A Study of Entrepreneurs' Ethnic Involvement and Business Characteristics. *Journal of Small Business Management*, 40(2), 126–143. doi:10.1111/1540-627X.00045
- Chan, C. S. R., Park, H. D., Patel, P., & Gomulya, D. (2018). Reward-based crowdfunding success: Decomposition of the project, product category, entrepreneur, and location effects. *Venture Capital*, 20(3), 285–307. doi:10.1080/13691066.2018.1480267
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative research*. SAGE Publications.
- Chatterji, A. K. (2009). Spawned with a silver spoon? Entrepreneurial performance and innovation in the medical device industry. *Strategic Management Journal*, 30(2), 185–206. doi:10.1002/mj.729
- Chaves, R., & Monzón, J. L. (2018). La economía social ante los paradigmas económicos emergentes: Innovación social, economía colaborativa, economía circular, responsabilidad social empresarial, economía del bien común, empresa social y economía solidaria. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 93(93), 5–50. doi:10.7203/CIRIEC-E.93.12901
- Chawla, A., & Sujatha, R. (2016). *Women entrepreneurship: Culture and norms: An Indian perspective*. Retrieved May 27, 2020, from <https://www.semanticscholar.org/paper/Women-Entrepreneurship%3A-Culture-and-Norms-%E2%80%93-An-Chawla-Sujatha/b8eba4e83f5fe3a19f582e8d154410e50ae01df2>
- Chell, E., Haworth, J., & Brearley, S. (1991). *The entrepreneurial personality: Concepts, cases, and categories*. Thomson Learning.
- Chen, C., Greene, P., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers? *Journal of Business Venturing*, 13(4), 295–316. doi:10.1016/S0883-9026(97)00029-3
- Chen, M., Chang, Y., & Lin, Y. (2018). Exploring creative entrepreneurs' happiness: Cognitive style, guanxi and creativity. *The International Entrepreneurship and Management Journal*, 14(4), 1089–1110. doi:10.1007/11365-017-0490-3
- Chen, M., Chang, Y., & Lo, Y. (2015). Creativity cognitive style, conflict, and career success for creative entrepreneurs. *Journal of Business Research*, 68(4), 906–910. doi:10.1016/j.jbusres.2014.11.050
- Cheston, S., & Kuhn, L. (2002). Empowering women through microfinance. *Draft, Opportunity International*, 64.
- Chigwenya, A., & Mudzengerere, F. H. (2013). The small and medium enterprises policy in Zimbabwe: A narrative of strides taken to mainstream the informal sector activities in urban local authorities in Zimbabwe. *International Journal of Politics and Good Governance*, 4(4), 1–18.
- Chinomona, E., & Maziriri, E. T. (2015). Women in action: Challenges facing women entrepreneurs in the Gauteng Province of South Africa. *International Business & Economics Research Journal*, 14(6), 835–850. doi:10.19030/iber.v14i6.9487
- Choi, Y., Lévesque, M., & Shepherd, D. (2008). When should entrepreneurs expedite or delay opportunity exploitation? *Journal of Business Venturing*, 23(3), 333–355. doi:10.1016/j.jbusvent.2006.11.001
- Choi, Y., & Shepherd, D. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3), 377–395. doi:10.1016/j.jm.2003.04.002



- Cho, M., & Kim, G. (2017). A cross-cultural comparative analysis of crowdfunding projects in the United States and South Korea. *Computers in Human Behavior*, 72, 312–320. doi:10.1016/j.chb.2017.03.013
- Chowdhury, S., & Endres, M. (2005). *Gender difference and the formation of entrepreneurial self- efficacy*. Presented at the United States Association of Small Business (USASBE) Annual Conference, Indian Wells, CA.
- Christensen, C. (1993). The rigid disk drive industry: A history of commercial and technological turbulence. *Business History Review*, 67(4), 531–588. doi:10.2307/3116804
- Chuang, L. M., Yeh, C. C., & Lin, C. W. (2019). *Applying the self-organizing maps to analyze and interpret the clustering and characteristics of nascent entrepreneurs: A cross-country study*. Academic Press.
- Churchill, L. J. (2006). Is There a Woman in This Textbook? Feminist Pedagogy and Elementary Latin. *When Dead Tongues Speak: Teaching Beginning Greek and Latin*, 86-109.
- Churchill, N., & Lewis, V. (1986). Entrepreneurial research: Directions and methods. In D. Sexton & R. Smilor (Eds.), *The Art and Science of Entrepreneurship* (pp. 333–365). Balingen.
- Civera, A., Meoli, M., & Vismara, S. (2020). Engagement of academics in university technology transfer: Opportunity and necessity academic entrepreneurship. *European Economic Review*, 123, 103376. Advance online publication. doi:10.1016/j.euroecorev.2020.103376
- Clark, K., & Drinkwater, S. (2000). Pushed out or pulled in? Self-employment among ethnic minorities in England and Wales. *Labour Economics*, 7(5), 603–628. doi:10.1016/S0927-5371(00)00015-4
- Clarysse, B., & Moray, N. (2004). A process study of entrepreneurial team formation: The case of a research-based spin-off. *Journal of Business Venturing*, 19(1), 55–79. doi:10.1016/S0883-9026(02)00113-1
- Coduras Martínez, A., Levie, J., Kelley, D. J., Sæmundsson, R. J., & Schøtt, T. (2010). *Global Entrepreneurship Monitor special report: A global perspective on entrepreneurship education and training*. Academic Press.
- Coff, R. (1997). Human assets and management dilemmas: Coping with hazards on the road to resource- based theory. *Academy of Management Review*, 22(2), 374–402. doi:10.5465/amr.1997.9707154063
- Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of Business Venturing*, 22(1), 29–49. doi:10.1016/j.jbusvent.2004.12.001
- Cohen, M., McCord, M. J., & Sebstad, J. (2005). Reducing vulnerability: Demand for and supply of microinsurance in East Africa. *Journal of International Development: The Journal of the Development Studies Association*, 17(3), 319–325. doi:10.1002/jid.1192
- Cohen, W. M., & Levinthal, D. A. (1989). Innovation and learning: The two faces of R&D. *Economic Journal (London)*, 99(397), 569–596. doi:10.2307/2233763
- Cohen, W., & Levinthal, D. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly*, 35(1), 128–152. doi:10.2307/2393553
- Cojoianu, T., Clark, G., Hoepner, A., Veneri, P., & Wojcik, D. (2018). Going from zero to one: How environmental knowledge and policy shapes start-up creation across green, brown and gray industries. *SSRN Electronic Journal*. doi:10.2139/ssrn.3254284
- Coleman, S., & Robb, A. (2009). A comparison of new firm financing by gender: Evidence from the Kauffman Firm survey data. *Journal of Small Business Economics*, 1-15. <http://www.springerlink.com/content/t5r386117j311837/fulltext.pdf>

## Compilation of References

- Collins, J. W. Jr, Wambach, J., David, R. J., & Rankin, K. M. (2009). Women's lifelong exposure to neighborhood poverty and low birth weight: A population-based study. *Maternal and Child Health Journal*, 13(3), 326. doi:10.1007/10995-008-0354-0 PMID:18459039
- Colombo, M. G., Franzoni, C., & Rossi-Lamastra, C. (2015). Internal social capital and the attraction of early contributions in crowdfunding. *Entrepreneurship Theory and Practice*, 39(1), 75–100. doi:10.1111/etap.12118
- Colombo, M., & Grilli, L. (2010). On growth drivers of high-tech start-ups: Exploring the role of founders' human capital and venture capital. *Journal of Business Venturing*, 25(6), 610–626. doi:10.1016/j.jbusvent.2009.01.005
- Commission of the European Communities. (2002). Corporate Social Responsibility: A business contribution to Sustainable Development. In *Communication From the Commission*. Retrieved from [http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc\\_127374.pdf](http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc_127374.pdf)
- Committee Nobel Prize. (2001). *George A. Akerlof, A. Michael Spence, Joseph E. Stiglitz: Markets with asymmetric information*. Nobel Prize Committee. Retrieved February 25, 2020, [https://www.nobelprize.org/nobel\\_prizes/economics/laureates/2001/popular.html](https://www.nobelprize.org/nobel_prizes/economics/laureates/2001/popular.html)
- Conceição, O., & Faria, A. (2014). *Determinants of research-based spin-offs survival*. Working Paper, 2014/21. Braga: NIPE – Universidade do Minho.
- Conceição, O., Faria, A., & Fontes, M. (2017). Regional variation of academic spinoffs formation. *The Journal of Technology Transfer*, 42(3), 654–675. doi:10.1007/10961-016-9508-1
- Conkle, A. (2008). Serious Research on Happiness. *APS Observer*, 21(7). Retrieved from: <https://www.psychologicalscience.org/observer/serious-research-on-happiness>
- Contini, M., Annunziata, E., Rizzi, F., & Frey, M. (2020). Exploring the influence of Corporate Social Responsibility (CSR) domains on consumers' loyalty: An Experiment in BRICS countries. *Journal of Cleaner Production*, 247, 1–10. doi:10.1016/j.jclepro.2019.119158
- Corbett, A. C. (2007). Learning asymmetries and the discovery of entrepreneurial opportunities. *Journal of Business Venturing*, 22(1), 97–118. doi:10.1016/j.jbusvent.2005.10.001
- Corporate Social Responsibility Wire. (2008). Chile most ethical country for business. *CSR News*. Retrieved March 22, 2020, from [https://www.csrwire.com/press\\_releases/18950-Chile-Most-Ethical-Country-for-Business](https://www.csrwire.com/press_releases/18950-Chile-Most-Ethical-Country-for-Business)
- Cortini, R., Barbi, M., Caré, B., Lavelle, C., Lesne, A., Mozziconacci, J., & Victor, J.-M. (2016). The physics of epigenetics. *Reviews of Modern Physics*, 88(025002).
- Costa, P. Jr, & McCrae, R. (1992). *NEO PI-R professional manual*. Psychological Assessment Resources.
- Cotter, T. (2018). *Necessity vs. innovation-based entrepreneurs*. Retrieved June 1, 2020, from <https://entrepreneurship.mit.edu/necessity-vs-innovation-based-entrepreneurs/>
- Courtney, C., Dutta, S., & Li, Y. (2017). Resolving information asymmetry: Signaling, endorsement, and crowdfunding success. *Entrepreneurship Theory and Practice*, 41(2), 265–290. doi:10.1111/etap.12267
- Covin, J. G., & Slevin, D. P. (1986). The development and testing of an organizational-level entrepreneurship scale. In R. Ronstadt (Ed.), *Frontiers of entrepreneurship research* (pp. 628–639). Babson College Center for Entrepreneurship.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75–87. doi:10.1002/mj.4250100107

- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7–25. doi:10.1177/104225879101600102
- Cozarenco, A., Hudon, M., & Szafarz, A. (2016). What type of microfinance institutions supply savings products? *Economics Letters*, 140, 57–59. doi:10.1016/j.econlet.2016.01.013
- Crampton, N. (2019). *Funding And Financial Assistance For SA Women Entrepreneurs*. <https://www.entrepreneur.com/article/327558>
- Crawford, J. A., Dawkins, S., Martin, A., & Lewis, G. (2020a). Putting the leader back into authentic leadership: Reconceptualising and rethinking leaders. *Australian Journal of Management*, 45(1), 114–133. doi:10.1177/0312896219836460
- Crawford, J., & Butler-Henderson, K. (2020). Digitally Empowered Workers and Authentic Leaders: The Capabilities Required for Digital Services. In K. Sandhu (Ed.), *Leadership, Management, and Adoption Techniques for Digital Service Innovation* (pp. 103–124). IGI Global. doi:10.4018/978-1-7998-2799-3.ch006
- Crawford, J., Dawkins, S., Martin, A., & Lewis, G. (2018). Conceptualising authentic followers and developing a future research agenda. In D. Cotter-Lockard (Ed.), *Authentic Leadership and Followership: International Perspectives* (pp. 271–293). Palgrave Macmillan. doi:10.1007/978-3-319-65307-5\_11
- Crawford, J., Kelder, J. A., & Knox, M. W. (2020b). What does it take to be a social entrepreneur?: Authentic leaders and their effect on innovation. In C. Dogru (Ed.), *Leadership Styles, Innovation, and Social Entrepreneurship in the Era of Digitalization* (pp. 282–310). IGI Global. doi:10.4018/978-1-7998-1108-4.ch011
- Crawford, J., Young, S., & Knox, M. (2020c). Following Through the Good and the Bad? Building a Positive Change Culture with Authentic Followers. In S. Nawaz Khan (Ed.), *Leadership and Followership in an Organizational Change Context*. IGI Global.
- Cristo-Andrade, S., & Ferreira, J. J. (2020). Knowledge Spillovers and Strategic Entrepreneurship: What Researches and Approaches? *The International Entrepreneurship and Management Journal*, 16(1), 263–286. doi:10.1007/11365-018-0541-4
- Cromie, S. (2000). Assessing entrepreneurial inclinations: Some approaches and empirical evidence. *European Journal of Work and Organizational Psychology*, 9(1), 7–30. doi:10.1080/135943200398030
- Cromie, S., & Johns, S. (1983). Irish entrepreneurs: Some personal characteristics. *Journal of Organizational Behavior*, 4, 317–324.
- Cruz, J. (2018). Beyond financing: Crowdfunding as an informational mechanism. *Journal of Business Venturing*, 33(3), 371–393. doi:10.1016/j.jbusvent.2018.02.001
- Cumming, D. J., Leboeuf, G., & Schwienbacher, A. (2020). Crowdfunding models: Keep-it-all vs. all-or-nothing. *Financial Management*, 49(2), 331–360. doi:10.1111/fima.12262
- Cunha, F., & Heckman, J. (2007). *The technology of skill formation*. National Bureau of Economic Research, Working Paper n° 12840, Retrieved June 02, 2016, from <http://www.nber.org/papers/w12840.pdf>
- Cunha, F., Heckman, J., Lochner, L., & Masterov, D. (2006). Interpreting the evidence on life cycle skill formation. In *Handbook of the economics of Education* (pp. 697-812). Retrieved August 02, 2016, from [http://jenni.uchicago.edu/papers/Cunha\\_Heckman\\_etal\\_2006\\_HEE\\_v1\\_ch12.pdf](http://jenni.uchicago.edu/papers/Cunha_Heckman_etal_2006_HEE_v1_ch12.pdf)
- Cunha, F., Heckman, J., & Schennach, S. (2010). Estimating the technology of cognitive and noncognitive skill formation. *Econometrica*, 78(3), 883–931. doi:10.3982/ECTA6551 PMID:20563300

## Compilation of References

- Cunningham, J. B., & Lischeron, J. (1991). Defining entrepreneurship. *Journal of Small Business Management*, 29(1), 45–61.
- Cyert, R. M., Kumar, P., & Williams, J. R. (1993). Information, market imperfections and strategy. *Strategic Management Journal*, 14(S2), 47–58. doi:10.1002/mj.4250141006
- D'Amato, A., Henderson, S., & Florence, S. (2009). *Corporate social responsibility and sustainable business: A guide to leadership tasks and functions*. Centre for Creative Leadership.
- Dacin, M. T., Dacin, P. A., & Tracey, P. (2011). Social entrepreneurship: A critique and future directions. *Organization Science*, 22(5), 1203–1213. doi:10.1287/orsc.1100.0620
- Dadzie, K., Evans, J., & Mack, R. (2010). An examination of the impact of product and service quality perceptions on customer loyalty in rural banks in Ghana: The importance of social networks for nascent entrepreneurs. *Global Business and Economics Review*, 12(1-2), 100–114. doi:10.1504/GBER.2010.032320
- Dahl, M. S., & Sorenson, O. (2013). The who, why, and how of spinoffs. *Industrial and Corporate Change*, 23(3), 661–688. doi:10.1093/icc/dtt032
- Dahlstedt, M., & Fejes, A. (2019). Shaping entrepreneurial citizens: A genealogy of entrepreneurship education in Sweden. *Critical Studies in Education*, 60(4), 462–476. doi:10.1080/17508487.2017.1303525
- Dalborg, C., & Wincent, J. (2015). The idea is not enough: The role of self-efficacy in mediating the relationship between pull entrepreneurship and founder passion – a research note. *International Small Business Journal: Researching Entrepreneurship*, 33(8), 974–984. doi:10.1177/0266242614543336
- Danes, S. M., Lee, J., Stafford, K., & Heck, Z. (2008). The Effects of Ethnicity, Families and Culture on Entrepreneurial Experience : An Extension of Sustainable Family Business Theory. *Journal of Developmental Entrepreneurship*, 13(3), 229–268. doi:10.1142/S1084946708001010
- Dang, C.-M., & Harima, A. (2020). Dual Embeddedness and Entrepreneurial Activities of Second-Generation Ethnic Entrepreneurs: Multiple Case Studies with Vietnamese Entrepreneurs in Germany. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 239395751988755(1), 84–113. Advance online publication. doi:10.1177/2393957519887554
- Danish, S., & Nellen, V. C. (1997). New roles for sport psychologists: Teaching life skills through sport to at-risk youth. *Quest*, 49(1), 100–113. doi:10.1080/00336297.1997.10484226
- Danish, S., Taylor, T., Hodge, K., & Heke, I. (2004). Enhancing youth development through sport. *World Leisure Journal*, 46(3), 38–49. doi:10.1080/04419057.2004.9674365
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2017a). Entrepreneurship and national culture: How cultural differences among countries explain entrepreneurial activity. In Information Resources Management Association (Ed.), *Entrepreneurship: Concepts, Methodologies, Tools, and Applications* (Volume 3, Chapter 62, pp. 1456-1485). IGI Global.
- Dantas, J., & Silva, L. (2014). Empreendedorismo e empreendedores. O papel da educação. *Sensos* 8, 4(2), 175-191.
- Dantas, J., & Valente, F. (2014). Empreendedorismo, cultura nacional e o papel da administração local. Estudo de caso. In *Proceedings of XXIV Jornadas Luso-Espanholas de Gestão Científica*. Instituto Politécnico de Leiria.
- Dantas, J., & Valente, F. (2015). Empreendedorismo, sim. Mas quando e onde se desenvolvem as competências? In *Ensino do Empreendedorismo em Portugal - Teoria & Prática. Reflexão das I Jornadas do Ensino do Empreendedorismo em Portugal* (pp. 55-82). Coimbra: Edição Instituto Pedro Nunes.
- Dantas, J. (1999). *Gestão da Inovação*. Vida Económica.

- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2015). Entrepreneurship and national culture: How cultural differences among countries explain entrepreneurial activity. In L. C. Carvalho (Ed.), *Handbook of research on internationalization of entrepreneurial innovation in the global economy* (pp. 1–28). IGI Global. doi:10.4018/978-1-4666-8216-0.ch001
- Dantas, J. G., Moreira, A. C., & Valente, F. M. (2017b). National culture, societal values and type of economy. Are they relevant to explain entrepreneurial activity? In L. C. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Ecosystems and Social Dynamics in a Globalized World* (pp. 75–103). IGI Global.
- Dantas, J., Moreira, A., & Valente, F. (2015). Entrepreneurship and national culture. How cultural differences among countries explain entrepreneurial activity. In L. Carvalho (Ed.), *Internationalization of entrepreneurial innovation in the global economy* (pp. 1–30). IGI Global.
- Dantas, J., Moreira, A., & Valente, F. (2018). National Culture, Societal Values, and Type of Economy: Are They Relevant to Explain Entrepreneurial Activity? In L. Carvalho (Ed.), *Handbook of Research on Entrepreneurial Ecosystems and Social Dynamics in a Globalized World* (pp. 75–103). IGI Global. doi:10.4018/978-1-5225-3525-6.ch004
- Darling-Hammond, L. (1996). The Right to Learn and the Advancement of Teaching: Research, Policy, and Practice for Democratic Education. *Educational Researcher*, 25(6), 5–17. doi:10.3102/0013189X025006005
- Dart, R. (2004). The legitimacy of social enterprise. *Nonprofit Management & Leadership*, 14(4), 411–424. doi:10.1002/nml.43
- Datta, P. B., & Gailey, R. (2012). Empowering Women through Social Entrepreneurship: Case Study of a Women's Cooperative in India. *Entrepreneurship Theory and Practice*, 36(3), 569–587. doi:10.1111/j.1540-6520.2012.00505.x
- Davidsson, P. (1995). *Determinants of Entrepreneurial Intentions*. Paper presented at the RENT IX Conference, Piacenza, Italy.
- Davidsson, P. (2016). *Researching Entrepreneurship - Conceptualization and Design* (2nd ed.). International Studies in Entrepreneurship. Springer International Publishing.
- Davidsson, P. (2006). Nascent entrepreneurship: Empirical studies and developments. *Foundations and Trends in Entrepreneurship*, 2(1), 1–76. doi:10.1561/03000000005
- Davidsson, P. (2015). Data replication and extension: A commentary. *Journal of Business Venturing Insights*, 3, 12–15. doi:10.1016/j.jbvi.2015.02.001
- Davidsson, P. (2015). Nascent Entrepreneurship. In D. B. Audretsch, C. S. Hayter, & A. N. Link (Eds.), *Concise Guide to Entrepreneurship, Technology and Innovation* (pp. 131–136). Edward Elgar.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331. doi:10.1016/S0883-9026(02)00097-6
- Davidsson, P., Steffens, P., & Gordon, S. (2011). Comprehensive Australian Study of Entrepreneurial Emergence (CAU-SEE): design, data collection and descriptive results. In K. Hindle & K. Klyver (Eds.), *Handbook of Research on New Venture Creation* (pp. 216–250). Edward Elgar Publishing. doi:10.4337/9780857933065.00020
- Davis, C., Zai, C. C., Adams, N., Bonder, R., & Kennedy, J. L. (2019). Oxytocin and its association with reward-based personality traits: A multilocus genetic profile (MLGP) approach. *Personality and Individual Differences*, 138, 231–236. doi:10.1016/j.paid.2018.09.002
- De Buysere, K., Gajda, O., Kleverlaan, R., & Marom, D. (2012). *A Framework for European Crowdfunding*. European Crowdfunding Network (ECN). <https://www.fundraisingschool.it/wp-content/uploads/2013/02/European-Crowdfunding-Framework-Oct-2012.pdf>

## Compilation of References

- De Clercq, D., & Arenius, P. (2006). The role of knowledge in business start-up activity. *International Small Business Journal*, 24(4), 339–358. doi:10.1177/0266242606065507
- De Clercq, D., & Voronov, M. (2009). The Role of Domination in Newcomers' Legitimation as Entrepreneurs. *Organization*, 16(6), 799–827. doi:10.1177/1350508409337580
- De la Cuesta González, M. (2004). El porqué de la responsabilidad social corporativa. *Boletín Económico del ICE*, 2813, 45–58.
- de Vries, H. P., Hamilton, R. T., & Voges, K. (2015). Antecedents of Ethnic Minority Entrepreneurship in New Zealand: An Intergroup Comparison. *Journal of Small Business Management*, 53, 95–114. doi:10.1111/jsbm.12195
- Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of Business Venturing*, 22(1), 50–76. doi:10.1016/j.jbusvent.2005.09.003
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology*, 49(1), 14–23. doi:10.1037/0708-5591.49.1.14
- Dees, J. G. (2001). *The meanings of 'social entrepreneurship'*. University of Stanford.
- Deffains-Crapsky, C., & Sudolska, A. (2014). Radical innovation and early stage financing gaps: Equity-based crowdfunding challenges. *Journal of Positive Management*, 5(2), 3–19. doi:10.12775/JPM.2014.009
- Defourny, J., Hulgård, L., & Pestoff, V. (2014). *Social enterprise and the third sector: Changing European landscapes in a comparative perspective*. Routledge. doi:10.4324/9780203487747
- Defourny, J., & Nyssens, M. (2008). Social enterprise in Europe: Recent trends and developments. *Social Enterprise Journal*, 4(3), 202–228. doi:10.1108/17508610810922703
- Defourny, J., & Nyssens, M. (2010). Conceptions of social enterprise and social entrepreneurship in Europe and the United States: Convergences and divergences. *Journal of Social Entrepreneurship*, 1(1), 32–53. doi:10.1080/19420670903442053
- Defourny, J., & Nyssens, M. (2012). El enfoque EMES de la empresa social desde una perspectiva comparada. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 75, 7–34.
- Defourny, J., & Nyssens, M. (2017). Fundamentals for an international typology of social enterprise models. *Voluntas*, 28(6), 2469–2497. doi:10.1007/s11266-017-9884-7
- Delmar, F. (2015). A response to Honig and Samuelsson (2014). *Journal of Business Venturing Insights*, 3, 1–4. doi:10.1016/j.jbvi.2014.11.002
- Delmar, F. (2015). When the dust has settled: A final note on replication. *Journal of Business Venturing Insights*, 4, 20–21. doi:10.1016/j.jbvi.2015.07.001
- Delmar, F., & Davidsson, P. (2000). Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship and Regional Development*, 12(1), 1–23. doi:10.1080/089856200283063
- Delmar, F., Davidsson, P., & Gartner, W. (2003). Arriving at the High-Growth Firm. *Journal of Business Venturing*, 18(2), 189–216. doi:10.1016/S0883-9026(02)00080-0
- DeMartino, R., & Barbato, R. (2003). Differences between women and men MBA entrepreneurs: Exploring family flexibility and wealth creation as career motivators. *Journal of Business Venturing*, 18(6), 815–832. doi:10.1016/S0883-9026(03)00003-X

- DeMartino, R., Barbato, R., & Jacques, P. H. (2006). Exploring the career/achievement and personal life orientation differences between entrepreneurs and non-entrepreneurs: The impact of sex and dependents. *Journal of Small Business Management*, 44(3), 350–368. doi:10.1111/j.1540-627X.2006.00176.x
- Dencker, J. C., Gruber, M., & Shah, S. K. (2009). Pre-entry knowledge, learning and the survival of new firms. *Organization Science*, 20(3), 516–537. doi:10.1287/orsc.1080.0387
- Denyer, D., & Tranfield, T. (2009). Producing a systematic review. In D. A. Buchanan & A. Bryman (Eds.), *The Sage Handbook of Organizational Research Methods*. Sage Publications Ltd.
- Department of Industry. (2018). *Bioeconomy and Industrial Biotechnology*. Retrieved from Industry.gov.au: <https://industry.gov.au/industry/IndustrySectors/nanotechnology/IndustrialBiotechnology/Pages/BioeconomyandIndustrial-Biotechnology.aspx>
- Department of Small Business Development (DSBD). (2020). Republic of South Africa. <http://www.dsbd.gov.za/>
- Department of Trade and Industry (DTI). (2012). Republic of South Africa. <http://www.thedti.gov.za/>
- Derera, E. (2011). *A review of government initiatives to stimulate women entrepreneurship in South Africa: 1955-2009* [Unpublished Masters dissertation]. University of KwaZulu-Natal, South Africa.
- Derera, E. (2015). *Women's economic empowerment and entrepreneurship in agriculture: A case of Mashonaland West Province in Zimbabwe* [Unpublished doctoral dissertation]. University of KwaZulu-Natal, South Africa.
- Derera, E., Chitakunye, P., & O'Neill, C. (2014). The impact of gender on startup capital: A case of women entrepreneurs in South Africa. *The Journal of Entrepreneurship*, 23(1), 95–114. doi:10.1177/0971355713513355
- Derera, E., Chitakunye, P., O'Neill, C., & Tarkhar-Lail, A. (2014). Gendered lending practices: Enabling South African women entrepreneurs to access startup capital. *Journal of Enterprising Culture*, 22(3), 313–330. doi:10.1142/S0218495814500137
- Devaney, L. A., & Henchion, M. (2017). If opportunity doesn't knock, build a door: Reflecting on a bioeconomy policy agenda for Ireland. *The Economic and Social Review*, 48(2), 207–229.
- DeVault, M. L. (1991). *Feeding the Family: The Social Organization of Caring as Gendered Work*. University of Chicago Press.
- Devereaux, C. (2020). The Dirt in Autumn. *Sprout*. Retrieved March, 19, 2020, from [https://www.sprout.org.au/autumn\\_2020](https://www.sprout.org.au/autumn_2020)
- DGIDC. (2007). *Guião promoção do empreendedorismo na escola*. Editorial do Ministério da Educação. Retrieved Sep 18, 2015, from [https://juventude.gov.pt/Emprego/InovaJovensCriativos/Documents/Guiaio\\_Promocao\\_Empreendedorismo\\_escola\\_DGE.pdf](https://juventude.gov.pt/Emprego/InovaJovensCriativos/Documents/Guiaio_Promocao_Empreendedorismo_escola_DGE.pdf)
- Di Gregorio, D., & Shane, S. (2003). Why do some universities generate more start-ups than others? *Research Policy*, 32(2), 209–227. doi:10.1016/S0048-7333(02)00097-5
- Di Pietro, F., & Buttice, V. (2020). Institutional characteristics and the development of crowdfunding across countries. *International Review of Financial Analysis*, 71, 101543. Advance online publication. doi:10.1016/j.irfa.2020.101543
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness. *The American Economic Review*, 91(1), 335–341. doi:10.1257/aer.91.1.335
- Diamantopoulos, A., Schlegelmilch, B. B., Sinkovics, R. R., & Bohlen, G. M. (2003). Can socio-demographics still play a role in profiling green consumers? A review of the evidence and an empirical investigation. *Journal of Business Research*, 56(6), 465–480. doi:10.1016/S0148-2963(01)00241-7

## Compilation of References

- Diáñez-González, J., Camelo-Ordaz, C., & Fernández-Alles, M. (2020). Drivers and implications of entrepreneurial orientation for academic spin-offs. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-020-00652-3
- Díaz Foncea, M., & Marcuello, C. (2012). Social enterprises and social markets: Models and new trends. *Service Business*, 6(1), 61–83. doi:10.1007/11628-011-0132-8
- Dichter, T. (2007). Can microcredit make an already slippery slope more slippery? Some lessons from the social meaning of debt. In *What's wrong with microfinance?* (Vol. 7, pp. 7-18). Practical Action Publishing in association with GSE Research.
- DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. *Medical Education*, 40(4), 314–321. doi:10.1111/j.1365-2929.2006.02418.x PMID:16573666
- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *The American Psychologist*, 55(1), 34–43. doi:10.1037/0003-066X.55.1.34 PMID:11392863
- Diener, E., Eunkook, M. S., Richard, E. L., & Heidi, L. S. (1999). Subjective Well-Being: Three Decades of Progress. *Psychological Bulletin*, 125(2), 276–303. doi:10.1037/0033-2909.125.2.276
- Digan, S. P., Sahi, G. K., Mantok, S., & Patel, P. C. (2019). Women's Perceived Empowerment in Entrepreneurial Efforts: The Role of Bricolage and Psychological Capital. *Journal of Small Business Management*, 57(1), 206–229. doi:10.1111/jsbm.12402
- Dijkhuizen, J., Veldhoven, M. V., & Schalk, R. (2016). Four Types of Well-being among Entrepreneurs and Their Relationships with Business Performance. *The Journal of Entrepreneurship*, 25(2), 184–210. doi:10.1177/0971355716650369
- Dileo, I., & Pereiro, T. G. (2019). Assessing the impact of individual and context factors on the entrepreneurial process. A cross-country multilevel approach. *The International Entrepreneurship and Management Journal*, 15(4), 1393–1441. doi:10.1007/11365-018-0528-1
- DiMaggio, P. J., & Powell, W. W. (1991). Introduction. In W. W. Powell & P. J. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 1–38). University of Chicago Press.
- Dimov, D. (2007). From opportunity insight to opportunity intention: The importance of person-situation learning match. *Entrepreneurship Theory and Practice*, 31(4), 561–583. doi:10.1111/j.1540-6520.2007.00188.x
- Dimov, D. (2010). Nascent entrepreneurs and venture emergence: Opportunity confidence, human capital, and early planning. *Journal of Management Studies*, 47(6), 1123–1153. doi:10.1111/j.1467-6486.2009.00874.x
- Ding, X. H., & Huang, R. H. (2010). Effects of knowledge spillover on inter-organizational resource sharing decision in collaborative knowledge creation. *European Journal of Operational Research*, 201(3), 949–959. doi:10.1016/j.ejor.2009.04.008
- Dion, D., Sitz, L., & Rémy, É. (2012). Legitimacy and Authenticity of Ethnic Affiliations: The Case of Regionalism. [English Edition]. *Recherche et Applications en Marketing*, 27(1), 59–76. doi:10.1177/076737011202700103
- Donatelli, D. (2004). *Quem me educa: a família e a escola perante a (in)disciplina*. Editora ARX.
- Doran, J., McCarthy, N., O'Connor, M., & Nsiah, C. (2018). The role of entrepreneurship in stimulating economic growth in developed and developing countries. *Cogent Economics & Finance*, 6(1), 1–14. doi:10.1080/23322039.2018.1442093
- Dorfman, R. (1993). Some concepts from welfare economics. In R. Dorfman & N. S. Dorfman (Eds.), *Economics of the Environment: Selected Readings* (pp. 79–96). W. W. Norton.



- Dornelas, J. (2014). *Empreendedorismo*. Livros Técnicos e Científicos Editora.
- Dos Santos, L. L., Pereira, R. M., Borini, F. M., Raziq, M. M., & De Miranda Oliveira, M. (2020). The influence of national culture and support to innovate on openness to innovation. *International Journal of Entrepreneurship and Innovation Management*, 24(2-3), 189–209. doi:10.1504/IJEIM.2020.105782
- Douglas, E. J., & Shepherd, D. A. (2014). Self-employment as a career choice: Attitudes, entrepreneurial intentions, and utility maximization. In D. A. Shepherd (Ed.), *A Psychological Approach to Entrepreneurship: Selected Essays of Dean A. Shepherd* (pp. 307–316). Edward Elgar Publishing Ltd. doi:10.4337/9781783479801.00025
- Douglas, E., & Prentice, C. (2019). Innovations and profit motivations for social entrepreneurship: A fuzzy-set analysis. *Journal of Business Research*, 99, 69–79. doi:10.1016/j.jbusres.2019.02.031
- Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *Pacific Sociological Review*, 18(1), 122–136. doi:10.2307/1388226
- Downing, S. (2005). The social construction of entrepreneurship: Narrative and dramatic processes in the coproduction of organizations and identities. *Entrepreneurship Theory and Practice*, 29(2), 185–204. doi:10.1111/j.1540-6520.2005.00076.x
- Driessen, M. P., & Zwart, P. S. (2007). *The entrepreneur scan measuring characteristics and traits of entrepreneurs*. <http://www.necarbo.eu/files/E-scan%20MAB%20Article.pdf/>
- Drucker, P. (1985). *Innovation and entrepreneurship*. Harper & Row.
- Drucker, P. (2001). *The Coming of entrepreneurial society. Reprinted in the essential Drucker*. Harper Collins.
- Dunn, T., & Holtz-Eakin, D. (2000). Financial capital, human capital, and the transition to self-employment: Evidence from intergenerational links. *Journal of Labor Economics*, 18(2), 282–305. doi:10.1086/209959
- Dupas, P., & Robinson, J. (2013). Savings constraints and microenterprise development: Evidence from a field experiment in Kenya. *American Economic Journal. Applied Economics*, 5(1), 163–192. doi:10.1257/app.5.1.163
- Dupire, M., & M’Zali, B. (2018). CSR Strategies in Response to Competitive Pressures. *Journal of Business Ethics*, 148(3), 603–623. doi:10.1007/10551-015-2981-x
- Duvendack, M. (2011). *What is the evidence of the impact of microfinance on the well-being of poor people?* Academic Press.
- Dyck, B., & Neubert, M. (2008). *Management: Current practices and new directions*. Cengage Learning.
- Dzidrov, M., Simeonov, S., Cvetkov, S., Dimitrov, S., & Ceravolo, L. S. (2015). Study on the importance of knowledge, innovation and entrepreneurship on the country’s progress. *International Journal of Scientific and Engineering Research*, 6(11), 913–917.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and Households in Economic Growth: Essays in Honor of Moses Abromowitz*. Academic Press. doi:10.1016/B978-0-12-205050-3.50008-7
- Easterlin, R. A. (2001). Income and happiness: Towards a unified theory. *Economic Journal (London)*, 111(473), 465–484. doi:10.1111/1468-0297.00646
- EC – European Commission. (2012). *Entrepreneurship Determinants: Culture and Capabilities*. Eurostat, European Commission, Luxembourg: Publications Office of the European Union.

## Compilation of References

- Eccles, J. S. (1994). Understanding women's educational and occupational choices. *Psychology of Women Quarterly*, 18(4), 585–609. doi:10.1111/j.1471-6402.1994.tb01049.x
- Edelman, L. F., Brush, C. G., Manolova, T. S., & Greene, P. G. (2010). Start-up motivations and growth intentions of minority nascent entrepreneurs. *Journal of Small Business Management*, 48(2), 174–196. doi:10.1111/j.1540-627X.2010.00291.x
- Edelman, L. F., Manolova, T. S., & Brush, C. G. (2008). Entrepreneurship education: Correspondence between practices of nascent entrepreneurs and textbook prescriptions for success. *Academy of Management Learning & Education*, 7(1), 56–70.
- Edwards-Schachter, M., García-Granero, A., Sánchez-Barrioluengo, M., Quesada-Pineda, H., & Amara, N. (2015). Disentangling competences: Interrelationships on creativity, innovation and entrepreneurship. *Thinking Skills and Creativity*, 16, 27–39. doi:10.1016/j.tsc.2014.11.006
- EESC. (2014). *EESC Recommendations on Social Enterprise* (EESC-2014-66-EN).
- EESC. (2016). *Opinion of the European Economic and Social Committee on the 'Sharing economy and self-regulation' (exploratory opinion)*. (2016/C 303/05).
- Efendic, N., & Wennberg, K. (2016). Growth in first- and second-generation immigrant firms in Sweden. *International Small Business Journal*, 34(8), 1028–1052. doi:10.1177/0266242615612533
- Egger, F. N. (2001). Affective Design of E-Commerce User Interfaces: How to Maximise Perceived Trustworthiness. *Proceedings of the Conference on Affective Human Factors Design (CAHD)*.
- Ekins, P., Gupta, J., & Boileau, P. (2019). *GEO-6 - Healthy Planet Healthy People*. Retrieved from <https://wedocs.unep.org/bitstream/handle/20.500.11822/275>
- El-Chichakli, B., von Braun, J., Lang, C., Barben, D., & Philp, J. (2016). Five cornerstones of a global bioeconomy. *Nature*, 535(7611), 221–223.
- Elkington, J. (2013). Enter the triple bottom line. *The Triple Bottom Line: Does It All Add Up*, 1(1986), 1–16. doi:10.4324/9781849773348
- Elkington, J. (1997). *Cannibals with Forks. The Triple Bottom Line of 21st Century Business*. Capston Publishing Ltd.
- Ellen MacArthur Foundation & McKinsey. (2015). *Growth within a circular economy vision for a competitive Europe*. Retrieved from [https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation\\_Growth-Within\\_July15.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/publications/EllenMacArthurFoundation_Growth-Within_July15.pdf)
- Ellen MacArthur Foundation. (2015). *Towards a circular economy: business rationale for an accelerated transition*. Retrieved from: [https://www.ellenmacarthurfoundation.org/assets/downloads/TCE\\_Ellen-MacArthur-Foundation\\_9-Dec-2015.pdf](https://www.ellenmacarthurfoundation.org/assets/downloads/TCE_Ellen-MacArthur-Foundation_9-Dec-2015.pdf)
- Enriquez, J. (1998). Genomics and the world's economy. *Science*, 281(5379), 925–926. doi:10.1126/science.281.5379.925 PMID:9722465
- Escamilla Solano, S., Plaza Casado, P., & Flores Ureba, S. (2016). Análisis de la divulgación de la información sobre la responsabilidad social corporativa en las empresas de transporte público urbano en España. *Revista de Contabilidad*, 19(2), 195–203. doi:10.1016/j.rcsar.2015.05.002
- Esposti, R. (2012). Knowledge, technology and innovations for a bio-based economy: Lessons from the past, challenges for the future. *Bio-Based and Applied Economics*, 1(3), 235–268.

- Estrin, S., Korosteleva, J., & Mickiewicz, T. (2014). *Entrepreneurial growth aspirations, Innovation Propensity and National Knowledge Intensity: Unveiling the Complexity of the Relationship, using GEM data*. GRINCOH Working Paper Series, Paper No. 3.08.2.
- Etzioni, A. (1987). Entrepreneurship, adaptation and legitimation. A macro-behavioral perspective. *Journal of Economic Behavior & Organization*, 8(2), 175–189. doi:10.1016/0167-2681(87)90002-3
- Euapermkiati, A. (2017). *Thailand bioeconomy: Current status, future direction and implication for industrial sectors*. In Biomass to Energy, Chemicals and Functional Materials. Paper presented at the 4th Japan-ASEAN Science, Technology and Innovation Platform (JASTIP), Pathum Thani, Thailand.
- Eurofound. (2015). *Youth entrepreneurship in Europe: Values, attitudes, policies*. Luxembourg: Publications Office of the European Union.
- European Commission Directorate General Environment. (2009). *The Potential of Market Pull Instruments for Promoting Innovation in Environmental Characteristics*. Final Report.
- European Commission Directorate-General for Employment. (2001). *Promoting a European Framework for Corporate Social Responsibility: Green Paper*. Office for Official Publications of the European Communities.
- European Commission. (2005). *New perspectives on the knowledge-based bio-economy -conference report*. European Commission.
- European Commission. (2010). *Entrepreneurship in the EU and beyond*. The Galloup Organization, Flash Eurobarometer 283. Retrieved November 03, 2015, from [http://ec.europa.eu/public\\_opinion/flash/fl\\_283\\_en.pdf](http://ec.europa.eu/public_opinion/flash/fl_283_en.pdf)
- European Commission. (2011). Opinion of the European Economic and Social Committee on the ‘Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: Social Business Initiative - Creating a favorable climate for social enterprises, key stakeholders in the social economy and innovation’. COM (2011) 682 final (2012/C 229/08). Brussels.
- European Commission. (2012). *Effects and impact of entrepreneurship programmes in higher education*. Directorate-General for Enterprise and Industry.
- European Commission. (2012). *Entrepreneurship education at school in Europe - National strategies, curricula and learning outcomes*. Retrieved September 12, 2016, from [http://eacea.ec.europa.eu/education/eurydice/documents/thematic\\_reports/135EN.pdf](http://eacea.ec.europa.eu/education/eurydice/documents/thematic_reports/135EN.pdf)
- European Commission. (2013). *Bio-economy and sustainability: a potential contribution to the Bio-economy Observatory*. European Commission, Joint Research Centre, Institute for Environment and Sustainability.
- European Commission. (2013). *Entrepreneurship 2020 action plan: Reigniting the entrepreneurial spirit in Europe*. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.
- European Commission. (2015). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Closing the loop - An EU action plan for the Circular Economy. COM (2015) 0614 final. Brussels.
- European Commission. (2015). *Crowdfunding from an investor perspective*. Oxera.
- European Commission. (2016). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - A European Agenda for the Collaborative Economy. COM (2016) 356 final. Brussels.

## Compilation of References

- European Commission. (2016). *Entrepreneurship Education at School in Europe*. European Commission.
- European Commission. (2019). Report from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions on the implementation of the Circular Economy Action Plan. COM (2019) 190 final. Brussels.
- European Commission. (2020). *Internal Market, Industry, Entrepreneurship and SMEs. Social economy in the EU*. Retrieved from: [https://ec.europa.eu/growth/sectors/social-economy/enterprises\\_en](https://ec.europa.eu/growth/sectors/social-economy/enterprises_en)
- Eurydice Network. (2012). *Entrepreneurship education at school in Europe*. Education, audiovisual and culture executive agency. Retrieved Mars, 16, 2016, from <http://eacea.ec.europa.eu/education/Eurydice>
- Evans, D. E., & Rothbart, M. K. (2007). Developing a model for adult temperament. *Journal of Research in Personality*, 41(4), 868–888. doi:10.1016/j.jrp.2006.11.002
- Evelyn, U., & Osifo, S. J. (2018). Microfinance and female entrepreneurship in Nigeria. *DBA Africa Management Review*, 8(1).
- Evers, H. - D., & Schweißhelm, R. (2005). Knowledge as a factor of production: Southeast Asia's transition towards a knowledge society. *Soziale Welt: Zeitschrift für sozialwissenschaftliche Forschung und Praxis*, 56(1), 37–48.
- Fagenson, E. A., & Marcus, E. C. (1991). Perceptions of the sex-role stereotypic characteristics of entrepreneurs: Women's evaluations. *Entrepreneurship Theory and Practice*, 15(4), 33–47. doi:10.1177/104225879101500406
- Fairlie, R. W., & Fossen, F. M. (2018). *Opportunity versus necessity entrepreneurship: two components of business creation*. Discussion Paper Series-IZA DP No. 11258.
- Fairlie, R. W., & Fossen, F. M. (2018). *Opportunity versus necessity entrepreneurship: Two components of business creation*. IZA Discussion Paper 11258. IZA Institute of Labor Economics.
- Fairlie, R. (2005). Entrepreneurship and earnings among young adults from disadvantaged families. *Small Business Economics*, 25(3), 223–236. doi:10.1007/11187-003-6457-5
- Fairlie, R., & Holleran, W. (2012). Entrepreneurship training, risk aversion and other personality traits: Evidence from a random experiment. *Journal of Economic Psychology*, 33(2), 366–378. doi:10.1016/j.joep.2011.02.001
- Farrukh, M., Lee, J. W. C., Sajid, M., & Waheed, A. (2019). Entrepreneurial intentions: The role of individualism and collectivism in perspective of theory of planned behaviour. *Education + Training*, 61(7-8), 984–1000. doi:10.1108/ET-09-2018-0194
- Fauchart, E., & Gruber, M. (2011). Darwinians, communitarians, and missionaries: The role of founder identity in entrepreneurship. *Academy of Management Journal*, 54(5), 935–957. doi:10.5465/amj.2009.0211
- Febea -Fédération Européenne des banques Ethiques et Alternatives. (2016). Retrieved April 18, 2016, from <http://www.febea.org/en>
- Felber, C. (2012). *La Economía del Bien Común*. Deusto.
- Feldman, M., Ozcan, S., & Reichstein, T. (2019). Falling not far from the tree: Entrepreneurs and organizational heritage. *Organization Science*, 30(2), 337–360. doi:10.1287/orsc.2018.1222
- Felfe, C., Rainer, H., & Saurer, J. (2016). Why Birthright Citizenship Matters for Immigrant Children: Impacts on Parental Educational Choices (SSRN Scholarly Paper No. ID 2845276). Rochester, NY: Social Science Research Network.

- Feller, I., Ailes, C., & Roessner, D. (2002). Impacts of research universities on technological innovation in industry: Evidence from engineering research centers. *Research Policy*, 31(3), 457–474. doi:10.1016/S0048-7333(01)00119-6
- Ferreira, J. J., Dana, L.-P., & Ratten, V. (2017). *Knowledge Spillover-based Strategic Entrepreneurship*. Routledge.
- Ferreira, J. J., Ratten, V., & Dana, L. P. (2017). Knowledge spillover-based strategic entrepreneurship. *The International Entrepreneurship and Management Journal*, 13(1), 161–167. doi:10.1007/11365-016-0415-6
- Ferretti, M., Ferri, S., Fiorentino, R., Parmentola, A., & Sapio, A. (2020). What drives the growth of academic spin-offs? Matching academics, universities, and non-research organizations. *The International Entrepreneurship and Management Journal*, 16(1), 137–163. doi:10.1007/11365-018-0497-4
- Feser, D., & Proeger, T. (2016). Asymmetric information as a barrier to knowledge spillovers in expert markets. *The International Entrepreneurship and Management Journal*, 1–22. doi:10.1007/11365-016-0404-9
- Figueiredo, R., Meyer-Doyle, P., & Rawley, E. (2013). Inherited agglomeration effects in hedge fund spawns. *Strategic Management Journal*, 34(7), 843–862. doi:10.1002/mj.2048
- Filion, L. (1994). Ten steps to entrepreneurial teaching. *Journal of Small Business and Entrepreneurship*, 11(3), 68–78. doi:10.1080/08276331.1994.10600466
- Filion, L. (1999). Empreendedorismo: Empreendedores e proprietários-gerentes de pequenos negócios. *Revista ADM*, 34(2), 5–28.
- Fini, R., Grimaldi, R., Marzocchi, G. L., & Sobrero, M. (2012). The determinants of corporate entrepreneurial intention within small and newly established firms. *Entrepreneurship Theory and Practice*, 36(2), 387–414. doi:10.1111/j.1540-6520.2010.00411.x
- Fiol, C. M. (1991). Managing culture as a competitive resource: An identity-based view of sustainable competitive advantage. *Journal of Management*, 17(1), 191–211. doi:10.1177/014920639101700112
- Fisac-García, R., Alves de Carvalho, N., Moreno-Romero, A., Moreno-Mateos, J., & Rojas, A. (2012). Iniciativas emprendedoras de lucha contra problemas sociales: distintas aproximaciones geográficas. In *Proceedings of XVI Congreso de Ingeniería de Organización* (pp. 1065-1072). Vigo, Spain: Asociación para el Desarrollo de la Ingeniería de Organización (ADINGOR).
- Fisher, G., Kuratko, D. F., Bloodgood, J. M., & Hornsby, J. S. (2017). Legitimate to whom? The challenge of audience diversity and new venture legitimacy. *Journal of Business Venturing*, 32(1), 52–71. doi:10.1016/j.jbusvent.2016.10.005
- Flap, H., Kumcu, A., & Bulder, B. (2000). The Social Capital of Ethnic Entrepreneurs and their Business Success. In J. Rath (Ed.), *Immigrant Business: The Economic, Political and Social Environment* (pp. 142–161). Macmillan Press. doi:10.1057/9781403905338\_9
- Fletschner, D. (2009). Rural women's access to credit: Market imperfections and intrahousehold dynamics. *World Development*, 37(3), 618–631. doi:10.1016/j.worlddev.2008.08.005
- Florida, R. (2002). *The rise of the creative class: and how it's transforming work, leisure, community and everyday life*. Basic Books.
- Florida, R., & Kenney, M. (1988). Venture capital and high technology entrepreneurship. *Journal of Business Venturing*, 3(4), 301–319.
- Florida, R., Mellander, C., & Rentfrow, P. J. (2013). The happiness of cities. *Regional Studies*, 47(4), 613–627. doi:10.1080/00343404.2011.589830

## Compilation of References

- Florin, J., Karri, R., & Rossiter, N. (2007). Fostering entrepreneurial drive in business education: An attitudinal approach. *Journal of Management Education, 31*(1), 17–42. doi:10.1177/1052562905282023
- Fogg, B. J., Marshall, J., Laraki, O., Osipovich, A., Varma, C., Fang, N., Paul, J., Rangnekar, A., Shon, J., Swani, P., & Treinen, M. (2001). What Makes Web Sites Credible? A Report on a Large Quantitative Study. *Proceedings of the CHI Conference on Human Factors in Computing Systems*.
- Fornieris, T., Halsall, T., Bean, C., & Danish, S. (2014). Human development programming: fostering well-being through adulthood. In A. R. Gomes, R. Resende & A. Albuquerque (Eds.), *Positive Human Functioning from a multidimensional perspective – volume 2. Promoting Healthy Lifestyles* (pp. 79- 94). New York: Nova Science Publishers, Inc.
- Forson, C. (2006). The strategic framework for women's enterprise: BME women at the margins. *Equal Opportunities International, 25*(6), 418–432. doi:10.1108/02610150610713737
- Fourth Sector Foundation FSN (2009). *The emerging fourth sector. A new sector of organizations at the intersection of public, private and social sectors*. Aspen Institute.
- Fragoso, R., Rocha-Junior, W., & Xavier, A. (2019). Determinant factors of entrepreneurial intention among university students in Brazil and Portugal. *Journal of Small Business and Entrepreneurship, 1*–25. doi:10.1080/08276331.2018.1551459
- França, A., Frankenbach, S., Vilares, A., Vereb, V., & Moreira, A. C. (2017). The challenging dynamics of nascent entrepreneurship. In *Nascent entrepreneurship and successful new and successful new* (pp 1–28), Hershey, PA: IGI Global.
- França, A., Vilares, A., Frankenbach, S., Vereb, V., & Moreira, A. C. (2017). The challenging dynamics of nascent entrepreneurship. In A. C. Moreira, J. G. Dantas, & F. Vanlente (Eds.), *Nascent Entrepreneurship and Successful New Venture Creation* (pp. 1–28). IGI Global.
- França, A., Vilares, A., Frankenbach, S., Vereb, V., & Moreira, A. C. (2018). The Challenging Dynamics of Nascent Entrepreneurship. In A. C. Moreira, J. G. Dantas, & F. M. Valente (Eds.), *Nascent Entrepreneurship and Successful New Venture Creation* (pp. 1–28). IGI Global., doi:10.4018/978-1-5225-2936-1.ch001
- Francis, D., & Webster, E. (2019). Poverty and inequality in South Africa: Critical reflections. *Development Southern Africa, 36*(6), 788–802. doi:10.1080/0376835X.2019.1666703
- Franck, A. K. (2012). Factors motivating women's informal micro-entrepreneurship: Experiences from Penang, Malaysia. *International Journal of Gender and Entrepreneurship, 4*(1), 65–78. doi:10.1108/17566261211202981
- Frank, H., Lueger, M., & Korunka, C. (2007). The significance of personality in business start-up intentions, start-up realization and business success. *Entrepreneurship and Regional Development, 19*(3), 227–251. doi:10.1080/08985620701218387
- Freeman, R. E. (1984). *Strategic Management: A Stakeholder Approach*. Pitman Publishing.
- Frey, B. S., & Stutzer, A. (2000). Happiness, Economy and Institutions. *Economic Journal (London), 110*(446), 918–938. doi:10.1111/1468-0297.00570
- Frey, B. S., & Stutzer, A. (2002). *Happiness and economics*. Princeton University Press.
- Frey, B. S., & Stutzer, A. (2002a). The Economics of Happiness. *World Economy, 3*(1), 1–17.
- Frid, C. J., Wyman, D. M., Gartner, W. B., & Hechavarria, D. H. (2016). Low-wealth entrepreneurs and access to external financing. *International Journal of Entrepreneurial Behaviour & Research, 22*(4), 531–555. doi:10.1108/IJEBR-08-2015-0173
- Friedman, M. (1970). The social responsibility of business is to increase its profits. *The New York Times Magazine*, 122-126.

- Fritsche, U. R., & Iriarte, L. (2014). Sustainability criteria and indicators for the bio-based economy in Europe: State of discussion and way forward. *Energies*, 7(11), 6825-6836.
- Frydrych, D., Bock, A. J., Kinder, T., & Koeck, B. (2014). Exploring Entrepreneurial Legitimacy in Reward-Based Crowdfunding. *Venture Capital*, 16(3), 247-269. doi:10.1080/13691066.2014.916512
- Gabriel, Y., Muhr, S. L., & Linstead, S. (2014). Luck of the draw? Serendipity, accident, chance and misfortune in organization and design. *Culture and Organization*, 20(5), 334-341. doi:10.1080/14759551.2014.967452
- Gafni, H., Marom, D., & Sade, O. (2018). Are the life and death of an early-stage venture indeed in the power of the tongue? Lessons from online crowdfunding pitches. *Strategic Entrepreneurship Journal*, 13(1), 3-23. doi:10.1002ej.1293
- Gajda, O., & Mason, N. (2013). *Crowdfunding for Impact in Europe and the USA*. European Crowdfunding White Paper. Retrieved December 20, 2019, from [http://eurocrowd.org/wp-content/blogs.dir/sites/85/2013/12/20131220\\_ECN\\_Tonnic\\_CrowdfundingForImpact.pdf](http://eurocrowd.org/wp-content/blogs.dir/sites/85/2013/12/20131220_ECN_Tonnic_CrowdfundingForImpact.pdf)
- Galati, F., Bigliardi, B., Passaro, R., & Quinto, I. (2020). *Why do academics become entrepreneurs? How do their motivations evolve? Results from an empirical study*. International Journal of Entrepreneurial Behavior & Research. doi:10.1108/IJEER-11-2019-0619
- Galera, G., & Borzaga, C. (2009). Social enterprise: An international overview of its conceptual evolution and legal implementation. *Social Enterprise Journal*, 5(3), 210-228. doi:10.1108/17508610911004313
- Gallardo-Vázquez, D., & Sanchez-Hernandez, M. I. (2014). Measuring Corporate Social Responsibility for competitive success at a regional level. *Journal of Cleaner Production*, 72, 14-22. doi:10.1016/j.jclepro.2014.02.051
- Galloway, L., Anderson, M., Brown, W., & Wilson, L. (2005). Enterprise skills for the economy. *Education + Training*, 47(1), 7-17. doi:10.1108/00400910510580593
- Gambardella, A., & Giarratana, M. S. (2010). Localized knowledge spillovers and skill-biased performance. *Strategic Entrepreneurship Journal*, 4(4), 323-339. doi:10.1002ej.99
- Ganco, M. (2013). Cutting the Gordian knot: The effect of knowledge complexity on employee mobility and entrepreneurship. *Strategic Management Journal*, 34(6), 666-686. doi:10.1002mj.2044
- Gangi, F., & Daniele, L. M. (2017). Success drivers of reward-based crowdfunding: conceptual framework and empirical evidence. *Proceedings EURAM Conference 2017: Making Knowledge Work*, 21-24.
- Ganotakis, P. (2012). Founders' human capital and the performance of UK new technology-based firms. *Small Business Economics*, 39(2), 495-515. doi:10.1007/11187-010-9309-0
- Garba, A. S. (2011). Stumbling block for women entrepreneurship in Nigeria: How risk attitude and lack of capital mitigates their need for business expansion. *European Journal of Economics. Finance and Administrative Sciences*, 36, 38-49.
- Garba, A. S., Djafar, F., & Mansor, S. A. (2013). Evidence of opportunity and necessity driven entrepreneurship in Nigeria. *Journal of Entrepreneurship. Management and Innovation*, 9(3), 57-78.
- García Rodríguez, F. J., García Rodríguez, J. L., Castilla Gutiérrez, C., & Major, S. A. (2013). Corporate social responsibility of oil companies in developing countries: From altruism to business strategy. *Corporate Social Responsibility and Environmental Management*, 20(6), 371-384. doi:10.1002/csr.1320
- Gardner, W., Avolio, B., Luthans, F., May, D., & Walumbwa, F. (2005). "Can you see the real me?" A self-based model of authentic leader and follower development. *The Leadership Quarterly*, 16(3), 343-372. doi:10.1016/j.leaqua.2005.03.003

## Compilation of References

- Garikipati, S. (2008). The impact of lending to women on household vulnerability and women's empowerment: Evidence from India. *World Development*, 36(12), 2620–2642. doi:10.1016/j.worlddev.2007.11.008
- Garrett, R. Jr, Miao, C., Qian, S., & Bae, T. J. (2017). Entrepreneurial spawning and knowledge-based perspective: A meta-analysis. *Small Business Economics*, 49(2), 355–378. doi:10.1007/11187-017-9842-1
- Gartner, W. (1988). Who is an entrepreneur? Is the wrong question. *American Journal of Small Business*, 12(4), 11–32. doi:10.1177/104225878801200401
- Gartner, W. B. (1985). A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696–706. doi:10.5465/amr.1985.4279094
- Gartner, W. B. (1989). “Who is an entrepreneur?” is the wrong question. *Entrepreneurship Theory and Practice*, 13(4), 47–68. doi:10.1177/104225878901300406
- Gartner, W. B., Gartner, W. C., Shaver, K. G., Carter, N. M., & Reynolds, P. D. (Eds.). (2004). *Handbook of entrepreneurial dynamics: The process of business creation*. SAGE Publications.
- Gartner, W., & Shane, C. (1995). Measuring entrepreneurship over time. *Journal of Business Venturing*, 10(4), 283–301. doi:10.1016/0883-9026(94)00037-U
- Garvin, D. A. (1983). Quality on the line. *Harvard Business Review*, 61(5), 65–75.
- Gasse, Y., & Tremblay, M. (2011). Entrepreneurial beliefs and intentions: A cross-cultural study of university students in seven countries. *International Journal of Business*, 16(4), 303–314. <https://www.researchgate.net/publication/268435424>
- Gatewood, E., Shaver, K., Powers, J., & Gartner, W. (2002). Entrepreneurial expectancy, task, effort and performance. *Entrepreneurship Theory and Practice*, 27(Winter), 187–206. doi:10.1111/1540-8520.00006
- Gaurav, S., Acosta, A. P. G., & Ballesteros, L. F. (2012). *Innovating at the BoP: Delivering Microinsurance in Kalahandi, and Beyond*. Academic Press.
- Gawel, E., Pannicke, N., & Hagemann, N. (2019). A path transition towards a bioeconomy - The crucial role of sustainability. *Sustainability*, 11(11), 3005. doi:10.3390/11113005
- GEDI – Global Entrepreneurship and Development Institute. (n.d.). *About us - Strategic Partners*. Retrieved from: <https://thegedi.org/strategic-partners/>
- Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The Circular Economy—A new sustainability paradigm? *Journal of Cleaner Production*, 143, 757–768. doi:10.1016/j.jclepro.2016.12.048
- GEM – Global Entrepreneurship Monitor. (2014). *GEM 2013 Global Report*. Retrieved from: <https://www.gemconsortium.org/report/48772>
- GEM – Global Entrepreneurship Monitor. (2017). *Global Entrepreneurship Monitor. GEM 2016/17 Global Report*. Retrieved from <https://www.gemconsortium.org/report>
- GEM. (2014). *Global Entrepreneurship Monitor 2014 Global Report*. Retrieved December 10, 2019, from <https://www.gemconsortium.org/report>
- GEM. (2016). *2015/16 Global Report*. Retrieved December 10, 2019, from <https://www.gemconsortium.org/report>
- Gerber, E., Hui, J., & Kuo, P. (2012). Crowdfunding: Why people are motivated to post and fund projects on crowdfunding platforms. *CSCW Workshop*. Retrieved December 15, 2019, from [http://www.juliehui.org/wpcontent/uploads/2013/04/CSCW\\_Crowdfunding\\_Final.pdf](http://www.juliehui.org/wpcontent/uploads/2013/04/CSCW_Crowdfunding_Final.pdf)



- German Bioeconomy Council. (2010). *Bioeconomy Innovation*. Author.
- Geroski, P. (1995). What do we know about entry. *International Journal of Industrial Organization*, 13(4), 421–440. doi:10.1016/0167-7187(95)00498-X
- Geroski, P. A. (1989). Entry, innovation and productivity growth. *The Review of Economics and Statistics*, 71(4), 572–578. doi:10.2307/1928098
- Geroski, P., Mata, J., & Portugal, P. (2010). Founding Conditions and the Survival of New Firms. *Strategic Management Journal*, 31, 510–529.
- Ghalib, A. K., Malki, I., & Imai, K. S. (2015). Microfinance and household poverty reduction: Empirical evidence from rural Pakistan. *Oxford Development Studies*, 43(1), 84–104. doi:10.1080/13600818.2014.980228
- Ghio, N., Guerini, M., Lehman, E., & Rossi-Lamastra, C. (2015). The emergence of the knowledge spillover theory of entrepreneurship. *Small Business Economics*, 44(1), 1–18. doi:10.1007/11187-014-9588-y
- Gibb, A. (2007). Enterprise in education, educating tomorrows entrepreneurs. *Pentti Mankinen*, 1-19. Retrieved July, 25, 2016, from [http://www.enorssi.fi/opetus-ja-materiaalit/yrittajjysk\\_asvatus/pdf/Gibb.pdf](http://www.enorssi.fi/opetus-ja-materiaalit/yrittajjysk_asvatus/pdf/Gibb.pdf)
- Gielnik, M., Frese, M., Graf, J. M., & Kampschulte, A. (2012). Creativity in the opportunity identification process and the moderating effect of diversity of information. *Journal of Business Venturing*, 27(5), 559–576. doi:10.1016/j.jbusvent.2011.10.003
- Gierczak, M. M., Bretschneider, U., Haas, P., Blohm, I., & Leimeister, J. M. (2015): Crowdfunding – Outlining the New Era of Fundraising. In *Crowdfunding in Europe – State of The Art in Theory And Practice* (pp. 7-23). Cham: Springer Science + Business Media.
- Gieure, C., Benavides-Espinosa, M. D. M., & Roig-Dobón, S. (2020). The entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*, 112, 541–548. doi:10.1016/j.jbusres.2019.11.088
- Gifford, E., & McKelvey, M. (2019). Knowledge-intensive entrepreneurship and S3: Conceptualizing strategies for sustainability. *Sustainability*, 11(18), 4824. doi:10.3390/11184824
- Gimeno, J., Folta, T. B., Cooper, A. C., & Woo, C. Y. (1997). Survival of the fittest? Entrepreneurial human capital and the persistence of underperforming firms. *Administrative Science Quarterly. Cornell University*, 42(4), 750–783.
- Giudici, G., Massimiliano, G., & Rossi-Lamastra, C. (2017). Reward-based crowdfunding of entrepreneurial projects: The effect of local altruism and localized social capital on proponents’ success. *Small Business Economics*, 50(2), 307–324. doi:10.1007/11187-016-9830-x
- Glaeser, E. L., Rosenthal, S. S., & Strange, W. C. (2010). Urban economics and entrepreneurship. *Journal of Urban Economics*, 67(1), 1–14. doi:10.1016/j.jue.2009.10.005
- Glaub, M., & Frese, M. (2011). A critical review of the effects of entrepreneurship training in developing countries. *Enterprise Development & Microfinance*, 22(4), 335–353. doi:10.3362/1755-1986.2011.035
- Glavas, C., & Mathews, S. (2014). How international entrepreneurship characteristics influence Internet capabilities for the international business processes of the firm. *International Business Review*, 23(1), 228–245. doi:10.1016/j.ibusrev.2013.04.001
- Global Bioeconomy Summit. (2018). *Communiqué of the Global Bioeconomy Summit 2018. Innovation in the Global Bioeconomy for Sustainable and Inclusive Transformation and Wellbeing*. Authro.

## Compilation of References

- Global Entrepreneurship Monitor Consortium. (2013). *GEM Global Entrepreneurship Monitor: Global Reports*. Retrieved from <https://www.gemconsortium.org/report>
- Global Entrepreneurship Monitor. (2012). *GEM Portugal 2012 - Estudo sobre o Empreendedorismo*. GEM Portugal.
- Global Entrepreneurship Monitor. (2015). *GEM 2015/16 Global Report*. GEM Portugal.
- Global Entrepreneurship Monitor. (2019). *GEM Global Entrepreneurship Monitor: 2018-2019 Global Reports*. Available from: <https://www.gemconsortium.org/report/gem-2018-2019-global-report>
- Global Entrepreneurship Monitor. (2020). Global Entrepreneurship Monitor Mission. *Gemconsortium.org*. Retrieved March 19, 2020, from <https://www.gemconsortium.org/about/gem/5>
- GNH – Gross National Happiness. (n.d.). *What is GNH?* Retrieved from: <http://www.gnhcentrebhutan.org/what-is-gnh/>
- Godfray, H. C., Beddington, J. R., Crute, I. R., Haddad, L., Lawrence, D., Muir, J. F., Pretty, J., Robinson, S., Thomas, S. M., & Toulmin, C. (2010). Food security: The challenge of feeding 9 billion people. *Science*, 327(5967), 812–818. doi:10.1126/science.1185383 PMID:20110467
- Goel, R. K., & Göktepe-Hultén, D. (2013). Nascent entrepreneurship and inventive activity: A somewhat new perspective. *The Journal of Technology Transfer*, 38(4), 471–485. doi:10.1007/10961-012-9280-9
- Goldberg, L. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 2, pp. 141–165). Sage.
- Golden, J. S., Handfield, R., Pascual-Gonzalez, J., Agsten, B., Brennan, T., Khan, L., & True, E. E. (2018). Indicators of the U.S. biobased economy. Washington, DC: U.S. Department of Agriculture.
- Golden, J. S., & Handfield, R. B. (2014). *Opportunities in the emerging bioeconomy*. US Department of Agriculture, Office of Procurement and Property Management.
- Gómez-Garay, A., Torrejón, A., Gómez-Flechoso, M. A., Georgieva, F., Pintos, B., Avalos, A., & ... PérezUrría, E. (2015). Bioeconomy based on scientific research and entrepreneurship. *Journal of Small Business and Entrepreneurship Development*, 3(1), 8–18. doi:10.15640/jsbed.v3n1a
- Gonçalves, R. V. (2018). *Does Entrepreneurship Convey Higher Levels of Happiness? An Analysis by Type of Entrepreneurship and National Cultures. Dissertation on Master in Management*. Faculdade de Economia: Universidade do Porto.
- González-Pernía, J., Guerrero, M., Jung, A., & Pena-Legazkue. (2018). Economic recession shake-out and entrepreneurship: Evidence from Spain. *Business Research Quarterly*, 21(3), 153-167.
- González-Perníaa, J. L., Guerrero, M., Jung, A., & Legazkue, P. (2018). Economic recession shake-out and entrepreneurship: Evidence from Spain. *BRQ Business Research Quarterly*, 21(3), 153–167. doi:10.1016/j.brq.2018.06.001
- Gorbatai, A., & Nelson, L. (2015). Gender and the Language of Crowdfunding. *Academy of Management Annual Meeting Proceedings*, 1, 15785-15785. Available at SSRN: <http://ssrn.com/abstract=2549354>
- Gorbatai, A., & Nelson, L. (2015). The Narrative Advantage: Gender and the Language of Crowdfunding. *Academy of Management Annual Meeting Proceedings*, 15785-15785.
- Gorgievski, M. J., Stephan, U., Laguna, M., & Moriano, J. A. (2018). Predicting Entrepreneurial Career Intentions: Values and the Theory of Planned Behavior. *Journal of Career Assessment*, 26(3), 457–475. doi:10.1177/1069072717714541 PMID:30443149

- Goss, D., & Sadler-Smith, E. (2018). Opportunity creation: Entrepreneurial agency, interaction, and affect. *Strategic Entrepreneurship Journal*, 12(2), 219–236. doi:10.1002/ej.1273
- Goudas, M. (2010). Prologue: A review of life skills teaching in sport and physical education. *Hellenic Journal of Psychology*, 7, 241–258.
- Goyal, M., & Parkash, J. (2011). Women entrepreneurship in India-problems and prospects. *International Journal of Multidisciplinary Research*, 1(5), 195–207.
- Graevenitz, G., Harhoff, D., & Weber, R. (2010). The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), 90–112. doi:10.1016/j.jebo.2010.02.015
- Gramenz, E. (2016). Tasmania's popular lavender bear used to drive home road rules to tourists. *ABC News*. Retrieved March 22, 2020, from <https://www.abc.net.au/news/2016-05-10/bobbie-the-lavender-bear-driving-home-road-rules-to-tourists/7401100>
- Gray, P. H., & Meister, D. B. (2004). Knowledge sourcing effectiveness. *Management Science*, 50(6), 821–834. doi:10.1287/mnsc.1030.0192
- Greenberg, J., & Mollick, E. (2014). Leaning In or Leaning On? Gender, Homophily, and Activism in Crowdfunding. *Academy of Management Annual Meeting Proceedings*. DOI: 10.5465/AMBPP.2015.18365abstract
- Greene, F., Han, L., Martin, S., Zhang, S., & Wittert, G. (2013). Testosterone is associated with self-employment among australian men. *Economics and Human Biology*, 13, 76–84. doi:10.1016/j.ehb.2013.02.003 PMID:24565039
- Greve, A., & Salaff, J. W. (2003). Social networks and entrepreneurship. *Entrepreneurship Theory and Practice*, 28(1), 1–22. doi:10.1111/1540-8520.00029
- Gries, T., & Naudé, W. (2009). Entrepreneurship and regional economic growth: Towards a general theory of start-ups. *Innovation (Abingdon)*, 22(3), 309–328. doi:10.1080/13511610903354877
- Gries, T., & Naude, W. (2011). Entrepreneurship and human development: A capability approach. *Journal of Public Economics*, 95(3/4), 216–224. doi:10.1016/j.jpubeco.2010.11.008
- Griliches, Z. (1960). Hybrid Corn and the Economics of Innovation. *Science. New Series*, 132(3422), 275–280. PMID:17756993
- Grilo, I., & Irigoyen, J. M. (2006). Entrepreneurship in the EU: To Wish and Not to Be. *Small Business Economics*, 26(4), 305–318. doi:10.1007/11187-005-1561-3
- Grossauer, F., & Stoeglehner, G. (2020). Bioeconomy—Spatial requirements for sustainable development. *Sustainability*, 12(5), 1877. doi:10.3390/u12051877
- Gruber, H. E., & Wallace, D. B. (1999). The case study method and evolving systems approach for understanding unique creative people at work. In R. J. Sternberg (Ed.), *Handbook of creativity* (pp. 93–115). Cambridge University Press.
- Gruber, M., Kim, S. M., & Brinckmann, J. (2015). What Is An Attractive Business Opportunity? An Empirical Study of Opportunity Evaluation Decisions by Technologists, Managers, and Entrepreneurs. *Strategic Entrepreneurship Journal*, 9(3), 205–225. doi:10.1002/ej.1196
- Gundry, L., Ofstein, L., & Kickul, J. (2014). Seeing around corners: How creativity skills in entrepreneurship education influence innovation in business. *International Journal of Management Education*, 12(3), 529–538. doi:10.1016/j.ijme.2014.03.002

## Compilation of References

- Gunhidzirai, C., Pius, T., & Tanga, P. T. (2017). Informal entrepreneurship as a poverty alleviation mechanism in Zimbabwe: Challenges and prospects. *Journal of Economics and Behavioral Studies*, 9(4), 132–143. doi:10.22610/jebs.v9i4.1828
- Guo, Y., Zhou, B., Luo, C., Liu, C., & Xiong, H. (2016). Instance-based credit risk assessment for investment decisions in P2P lending. *European Journal of Operational Research*, 249(2), 417–426. doi:10.1016/j.ejor.2015.05.050
- Gupta, D., & Rao, D. K. (2005). Micro Finance in India. *Economic and Political Weekly*, 40(12), 1229–1237.
- Gupta, V. K., Turban, D., Wasti, S. A., & Sikdar, A. (2005). Entrepreneurship and stereotypes: Are entrepreneurs from Mars or from Venus? In K. M. Weaver (Ed.), *Academy of Management Best Paper Proceedings* [CD ROM]. Academy of Management. doi:10.5465/ambpp.2005.18778633
- Gu, S., Gao, M., Yan, Y., Wang, F., Tang, Y., & Huang, J. H. (2018). The neural mechanism underlying cognitive and emotional processes in creativity. *Frontiers in Psychology*, 9, 1–9. doi:10.3389/fpsyg.2018.01924 PMID:30429805
- Gustafsson, R., & Autio, E. (2011). A failure trichotomy in knowledge exploration and exploitation. *Research Policy*, 40(6), 819–831. doi:10.1016/j.respol.2011.03.007
- Gutiérrez-Nieto, B., Serrano-Cinca, C., & Camón-Cala, J. (2016). A credit score system for socially responsible lending. *Journal of Business Ethics*, 133(4), 691–701. doi:10.1007/10551-014-2448-5
- Gutman, L., & Schoon, I. (2013). *The impact of non-cognitive skills on outcomes for young people: Literature review*. Institute of Education, University of London.
- Gutterman, A. S. (2016). *Entrepreneurship. A Library of Resources for Growth-Oriented. Definitions and Types of Entrepreneurship*. *Entrepreneurs International Center for Growth-Oriented Entrepreneurship*. <https://alangutterman.typepad.com/files/en---definitions-types-1.pdf>
- Guyader, H., Ottosson, M., Frankelius, P., & Witell, L. (2019). Identifying the resource integration processes of green service. *Journal of Service Management*. Advance online publication. doi:10.1108/JOSM-12-2017-0350
- Haase, H., & Lautenschläger, A. (2011). The “Teachability Dilemma” of entrepreneurship. *The International Entrepreneurship and Management Journal*, 7(2), 145–162. doi:10.1007/11365-010-0150-3
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). *Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance*. <https://ssrn.com/abstract=2233795>
- Hair, J. F. Jr, Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis: with readings* (4th ed.). Prentice Hall.
- Hair Jr, Sarstedt, Hopkins, & Kuppelwieser. (2014). Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), 106–121. doi:10.1108/EBR-10-2013-0128
- Hakala, H. (2013). Entrepreneurial and learning orientation: Effects on growth and profitability in the software sector. *Baltic Journal of Management*, 8(1), 102–118. doi:10.1108/17465261311291687
- Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, 25(5), 439–448. doi:10.1016/j.jbusvent.2010.01.002
- Hamdana, A., Almubarak, M., & Sarea, A. M. (2020). Entrepreneurship and economic growth: Literature review. *International Journal of Psychosocial Rehabilitation*, 24(3), 937–943. doi:10.37200/IJPR/V24I3/PR200844
- Hamdani, K., & Koubaa, S. (2018, December). *Knowledge-based entrepreneurship: The role of networks*. Paper presented at the International Conference on Advances in Business Management – ICABM, Pune, India.

- Hameed, W. (2019). *Is Vulnerability Factors Discourages Women-Empowerment? The moderating role of Environmental, Health, Economic and Political Vulnerability between Microfinance Institutions and Women-Empowerment*. Academic Press.
- Hameed, U.-W., Mohammad, H., & Shahar, H. (2018). Microfinance institute's non-financial services and women-empowerment: The role of vulnerability. *Management Science Letters*, 8(10), 1103–1116. doi:10.5267/j.msl.2018.7.001
- Hameed, U.-W., Mohammad, H., Shahar, H., Aljumah, A., & Azizan, S. (2019). The effect of integration between audit and leadership on supply chain performance: Evidence from UK based supply chain companies. *Uncertain Supply Chain Management*, 7(2), 311–328. doi:10.5267/j.uscm.2018.8.001
- Hameed, W. U., Nisar, Q. A., Abbas, A., Waqas, A., & Meo, M. S. (2019). Microfinance Institutions as a Strategic Tool to Enhance Women's Career Development in Pakistan. *Asian Women*, 35(2), 93–128. doi:10.14431/aw.2019.06.35.2.93
- Hameed, W., Mohammad, H., & Shahar, H. (2018). Pursuing Goal of Self-Sustainability but Leads towards More Instability: Challenges and Way Forward of Self-Help Groups (SHGs). *International Journal of Business and Tehnoprneurship*, 8(1), 67–76.
- Hanage, R., Scott, J. M., & Davies, M. A. P. (2016). From “great expectations” to “hard times”: A longitudinal study of creative graduate new ventures. *International Journal of Entrepreneurial Behaviour & Research*, 22(1), 17–38. doi:10.1108/IJEER-07-2014-0135
- Hansen, D. J., Monllor, J., & Shrader, R. C. (2016). Identifying the elements of entrepreneurial opportunity constructs: Recognizing what scholars are really examining. *International Journal of Entrepreneurship and Innovation*, 17(4), 240–255. doi:10.1177/1465750316671471
- Harkness, S., Gregg, P., & MacMillan, L. (2012). *Poverty: The role of institutions, behaviours and culture*. Joseph Rowntree Foundation (JRF) Programme Paper on Poverty. <https://www.jrf.org.uk/sites/files/jrf/poverty-culture-behaviour-full.pdf>
- Harrison, R. T., & Mason, C. M. (2007). Does gender matter? Women business angels and the supply of entrepreneurial finance. *Entrepreneurship Theory and Practice*, 31(3), 445–472. doi:10.1111/j.1540-6520.2007.00182.x
- Hartmann, H., English, A., & Hayes, J. (2010). *Women and Men's Employment and Unemployment in the Great Recession*. Briefing Paper #C373. Institute for Women's Policy Research.
- Hatak, I., & Snellman, K. (2017). The influence of anticipated regret on business start-up behaviour. *International Small Business Journal: Researching Entrepreneurship*, 35(3), 349–360. doi:10.1177/0266242616673421
- Hatten, T. (2012). *Small Business: Entrepreneurship and Beyond* (5<sup>th</sup> ed.). Mason: South-Western Cengage Learning. Retrieved July, 29, 2016, from <https://wiki.zirve.edu.tr/sandbox/groups/economic sandadministrativesciences/wiki/a7111/attachments/eeb4c/the%20book.pdf?sessionID=cb5e8fbb6733b16789a0ffb6bbc66d7c647ec52c>
- Hayek, F. A. (1960). *The Constitution of Liberty*. The University of Chicago Press.
- Hayter, C. (2011). In search of the profit-maximizing actor: Motivations and definitions of success from nascent academic entrepreneurs. *The Journal of Technology Transfer*, 36(3), 340–352. doi:10.1007/10961-010-9196-1
- Hayter, C. S. (2013). Conceptualizing knowledge-based entrepreneurship networks: Perspectives from the literature. *Small Business Economics*, 41(4), 899–911. doi:10.1007/11187-013-9512-x
- Hayter, C., Lubynsky, R., & Maroulis, S. (2017). Who is the academic entrepreneur? The role of graduate students in the development of university spinoffs. *The Journal of Technology Transfer*, 42(6), 1237–1254. doi:10.1007/10961-016-9470-y

## Compilation of References

- Hébert, R., & Link, A. (1989). In search of the meaning of entrepreneurship. *Small Business Economics*, *1*, 39–49. doi:10.1007/BF00389915
- Heblich, S., & Slavtchev, V. (2014). Parent universities and the location of academic startups. *Small Business Economics*, *42*(1), 1–15. doi:10.1007/11187-013-9470-3
- Hechavarría, D. M., Matthews, C. H., & Reynolds, P. D. (2016). Does start-up financing influence start-up speed? evidence from the panel study of entrepreneurial dynamics. *Small Business Economics*, *46*(1), 137–167. doi:10.1007/11187-015-9680-y
- Hechavarría, D. M., Renko, M., & Matthews, C. H. (2012). The nascent entrepreneurship hub: Goals, entrepreneurial self-efficacy and start-up outcomes. *Small Business Economics*, *39*(3), 685–701. doi:10.1007/11187-011-9355-2
- Hechavarría, D. M., & Reynolds, P. D. (2009). Cultural norms & business start-ups: The impact of national values on opportunity and necessity entrepreneurs. *The International Entrepreneurship and Management Journal*, *5*(4), 417–437. doi:10.1007/11365-009-0115-6
- Heckman, J. (2012). Hard evidence on soft skills. *Focus*, *29*(2), 3–8. Retrieved February, 23, 2016, from <https://www.irp.wisc.edu/publications/focus/pdfs/foc292b.pdf>
- Heidegger, M., Macquarrie, J., & Robinson, E. (1962). Being and time.
- Heilbrunn, S. (2010). Advancing entrepreneurship in an elementary school: A case study. *International Education Studies*, *3*(2), 174–184. doi:10.5539/ies.v3n2p174
- Heilman, M. E. (1983). Sex bias in work settings: The lack of fit model. *Research in Organizational Behavior*, *5*, 269–298.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *The Journal of Social Issues*, *57*(4), 657–674. doi:10.1111/0022-4537.00234
- Heinonen, J., Hytti, U., & Stenholm, P. (2011). The role of creativity in opportunity search and business idea creation. *Education + Training*, *53*(8/9), 659–672. doi:10.1108/00400911111185008
- Helliwell, J. F. (2001). *How's Life? Combining Individual and National Variables to Explain Subjective Well-Being*. Mimeo. Department of Economics, University of British Columbia.
- Hemphill, T. A. (2005). National technology entrepreneurship policy: Foundation of a network economy. *Science & Public Policy*, *32*(6), 469–478. doi:10.3152/147154305781779254
- Henry, C., Hill, F., & Leitch, C. (2005). Entrepreneurship education and training: Can entrepreneurship be taught? Part II. *Education + Training*, *47*(3), 158–169. doi:10.1108/00400910510592211
- Henseler, J., Dijkstra, T. K., Sarstedt, M., Ringle, C. M., Diamantopoulos, A., Straub, D. W., Ketchen, D. J. Jr, Hair, J. F., Hult, G. T. M., & Calantone, R. J. (2014). Common beliefs and reality about PLS: Comments on Rönkkö and Evermann (2013). *Organizational Research Methods*, *17*(2), 182–209. doi:10.1177/1094428114526928
- Hermes, N., & Lensink, R. (2011). Microfinance: Its impact, outreach, and sustainability. *World Development*, *39*(6), 875–881. doi:10.1016/j.worlddev.2009.10.021
- Herzenstein, M., Dholakia, U. M., & Andrews, R. L. (2011). Strategic Herding Behavior in Peer-to-Peer Loan Auctions. *Journal of Interactive Marketing*, *25*(1), 27–36. doi:10.1016/j.intmar.2010.07.001
- Hietanen, L. (2015). Facilitating employees' and students' process towards nascent entrepreneurship. *Education + Training*, *57*(8-9), 964–976. doi:10.1108/ET-04-2015-0028

- Hietanen, L., & Ruismäki, H. (2019). Enhancing students' latent nascent entrepreneurship in basic education. In A. Fayolle, D. Kariv, & H. Matlay (Eds.), *The Role and Impact of Entrepreneurship Education. Methods, Teachers and Innovative Programmes* (pp. 146–163). Edward Elgar Publishing., doi:10.4337/9781786438232.00015
- Hill, I. (2018). How did you get up and running? taking a Bourdieuan perspective towards a framework for negotiating strategic fit. *Entrepreneurship and Regional Development*, 30(5-6), 662–696. doi:10.1080/08985626.2018.1449015
- Hillmann, F. (2007). Riders on the storm: Vietnamese in Germany's two migrant systems. In E. Spann, F. Hillmann, & T. van Naerssen (Eds.), *Asian Migrants and European Labour Markets: Patterns and Processes of Immigrant Labour Market Insertion in Europe* (pp. 80–100). Taylor & Francis.
- Hilson, G. (2012). Corporate Social Responsibility in the extractive industries: Experiences from developing countries. *Resources Policy*, 37(2), 131–137. doi:10.1016/j.resourpol.2012.01.002
- Hird, A. P. (2012). The impact of entrepreneurial cognition on the founding and survival of new small businesses. *Industry and Higher Education*, 26(6), 453–460. doi:10.5367/ihe.2012.0124
- Hmieleski, K. M., & Lerner, D. A. (2016). The Dark Triad and Nascent Entrepreneurship: An Examination of Unproductive versus Productive Entrepreneurial Motives. *Journal of Small Business Management*, 54, 7–32. doi:10.1111/jsbm.12296
- Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. *Journal of Business Venturing*, 18(2), 165–187. doi:10.1016/S0883-9026(02)00081-2
- Hobbs, J., Grigore, G., & Molesworth, M. (2016). Success in the management of crowdfunding projects in the creative industries. *Internet Research*, 26(1), 146–166. doi:10.1108/IntR-08-2014-0202
- Hoekman, J., Frenken, K., & Tijssen, R. (2010). Research collaboration at a distance: Changing spatial patterns of scientific collaboration within Europe. *Research Policy*, 39(5), 662–673. doi:10.1016/j.respol.2010.01.012
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1). doi:10.9707/2307-0919.1014
- Hofstede, G. (1980). Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics*, 9(1), 42–63. doi:10.1016/0090-2616(80)90013-3
- Hofstede, G. (1991). *Culturas e Organizações, Compreender a Nossa Programação Mental*. Edições Sílabo, Lda.
- Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and Organizations: Software of the Mind*. McGraw-Hill.
- Holland, J. L. (1997). *Making vocational choices*. Psychological Assessment Resources.
- Holorn, L., & Eddy, G. (2011). Fractured families: A crisis for South Africa. *A research paper by the South African Institute of Race Relations*. <http://www.sairr.org.za/services/publications/occasional-reports/files/first-steps-to-healing-the-south-african-family-final-report-mar-2011.pdf>
- Holvoet, N. (2005). The impact of microfinance on decision-making agency: Evidence from South India. *Development and Change*, 36(1), 75–102. doi:10.1111/j.0012-155X.2005.00403.x
- Hommerová, D. (2020). Crowdfunding as a new model of nonprofit funding. In I. Garcia-Rodriguez & M. E. Romero-Merino (Eds.), *Financing Nonprofit Organizations*. Routledge. doi:10.4324/9780429265419-16
- Honig, B., Davidsson, P., & Karlsson, T. (2005). Learning strategies of nascent entrepreneurs. *Journal of Competence-based Management*, 1(3), 67–88.

## Compilation of References

- Honig, B., & Samuelsson, M. (2014). Data replication and extension: A study of business planning and venture-level performance. *Journal of Business Venturing Insights*, 1(1-2), 18–25. doi:10.1016/j.jbvi.2014.09.006
- Honig, B., & Samuelsson, M. (2015). Replication in entrepreneurship research: A further response to Delmar. *Journal of Business Venturing Insights*, 3, 30–34. doi:10.1016/j.jbvi.2015.03.001
- Hoogendoorn, B., Guerra, D., & Zwan, P. (2015). What drives environmental practices of SMEs? *Small Business Economics*, 44(4), 759–781. doi:10.1007/11187-014-9618-9
- Hopkins, M. (2003). *The Planetary Bargain - Corporate Social Responsibility Matters*. Earthscan.
- Hopp, C., & Greene, F. J. (2018). In pursuit of time: Business plan sequencing, duration and intraentrainment effects on new venture viability. *Journal of Management Studies*, 55(2), 320–351. doi:10.1111/joms.12251
- Hörisch, J. (2015). Crowdfunding for Environmental Ventures: An Empirical Analysis of the Influence of Environmental Orientation on the Success of Crowdfunding Initiatives. *Journal of Cleaner Production*, 107, 636–645. doi:10.1016/j.jclepro.2015.05.046
- Hörisch, J., Kollat, J., & Brieger, S. A. (2019). Environmental orientation among nascent and established entrepreneurs: An empirical analysis of differences and their causes. *International Journal of Entrepreneurial Venturing*, 11(4), 373–393. doi:10.1504/IJEV.2019.101623
- Horta, H., Meoli, M., & Vismara, S. (2016). Skilled unemployment and the creation of academic 38 spin-offs: A recession-push hypothesis. *The Journal of Technology Transfer*, 41(4), 798–817. doi:10.1007/10961-015-9405-z
- Hossain, A., Naser, K., Zaman, A., & Nuseibeh, R. (2009). Factors influencing women business development in the developing countries: Evidence from Bangladesh. *The International Journal of Organizational Analysis*, 17(3), 202–224. doi:10.1108/19348830910974923
- Hossain, M., & Oparaocha, G. O. (2017). Crowdfunding: Motives, definitions, typology and ethical challenges. *Entrepreneurship Research Journal*, 7(2), 1–14. doi:10.1515/erj-2015-0045
- Hossinger, S., Chen, X., & Werner, A. (2020). Drivers, barriers and success factors of academic spin-offs: A systematic literature review. *Management Review Quarterly*, 70(1), 97–134. doi:10.1007/11301-019-00161-w
- Huang, C. (2016). The Impact of Governance on Happiness: Evidence from Quantile Regressions. *International Journal of Economics and Management Engineering*, 10(7), 2539-2542.
- Huber, L., Sloof, R., & Van Praag, M. (2012). *The effect of early entrepreneurship education: Evidence from a randomized field experiment*. Tinbergen Institute Discussion Paper n° TI 2012-041/3. Retrieved September, 17, 2016, from <https://papers.tinbergen.nl/12041.pdf>
- Hueso, J.A., Jaén, I., Liñán, F., & Basuki, W. (2020). The influence of collectivistic personal values on the formation of entrepreneurial intentions. *International Small Business Journal: Researching Entrepreneurship*. doi:10.1177/0266242620903007
- Huggins, R., & Thompson, P. (2015). Entrepreneurship, innovation and regional growth: A network theory. *Small Business Economics*, 41(5), 103–128. doi:10.1007/11187-015-9643-3
- Hulme, D., Moore, K., & Barrientos, A. (2009). *Assessing the insurance role of microsavings*. Academic Press.
- Hulsink, W., & Koek, D. (2014). The young, the fast and the furious: A study about the triggers and impediments of youth entrepreneurship. *International Journal of Entrepreneurship and Innovation Management*, 18(2-3), 182–209. doi:10.1504/IJEIM.2014.062876



- Huynh, Q.-L., Nguyen, A.-M. D., & Benet-Martínez, V. (2011). Bicultural identity integration. In S. J. Schwartz, K. Luyck, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 827–844). New York: Springer. doi:10.1007/978-1-4419-7988-9\_35
- IBRU. (2009). *D. M. C. Growing Microfinance Through Hew Technologies*.
- Iftikhar, M. N., Ahmad, M., & Audretsch, D. B. (2020). The knowledge spillover theory of entrepreneurship: The developing country context. *The International Entrepreneurship and Management Journal*. Advance online publication. doi:10.1007/11365-020-00667-w
- Iftikhar, S., Khadim, Z., Munir, S., & Amir, H. (2018). Role of Microfinance in Women Empowerment and Alleviating Poverty: An Overview. *Journal of Socio-Economics*, 4(2), 48–53.
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader–follower outcomes. *The Leadership Quarterly*, 16(3), 373–394. doi:10.1016/j.leaqua.2005.03.002
- Ilonen, S., Heinonen, J., & Stenholm, P. (2018). Identifying and understanding entrepreneurial decision-making logics in entrepreneurship education. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 59–80. doi:10.1108/IJEBR-05-2017-0163
- Imarhiagbe, B. O., Saridakis, G., & Mohammed, A. M. (2017). Do bank credit rejection and financial education affect financial self-confidence? *International Journal of Entrepreneurial Behaviour & Research*, 23(6), 1033–1051. doi:10.1108/IJEBR-05-2016-0168
- Inglehart, R. (1991). *El cambio cultural en las sociedades industriales avanzadas*. Centro de Investigaciones Sociológicas / Siglo XXI Editores.
- Ipate, N., David, K. G., Ipate, I., & Bogdan, A. (2015). The bioeconomy model in future sustainable development. *Studia Universitatis "Vasile Goldis" Arad. Economics Series*, 25(2), 115–123. doi:10.1515/ues-2015-0016
- Iqbal, Z., Iqbal, S., & Mushtaq, M. A. (2015). Impact of microfinance on poverty alleviation: The study of District Bahawal Nagar, Punjab, Pakistan. *Management and Administrative Sciences Review*, 4(3), 487–503.
- IRI. (2017). *Natural*. Trends and Drivers in the Self-care Space.
- IRI. (2018). *IRI European Shopper Insights Survey*. Retrieved from <https://www.iriworldwide.com/gr-GR/Insights/news/Healthy-eating-trend-boost-for-vegetarian,-free-from-and-organic-food-producers-el>
- ISCATE-IUL & SPI Ventures. (2013). *GEM Portugal 2012 - Estudo sobre o Empreendedorismo*. Retrieved January 13, 2016, from <https://www.gemconsortium.org/docs/download/3120>
- Isenberg, D. (2014). What an entrepreneurship ecosystem actually is. *Harvard Business Review Blog*.
- Isenberg, D. (2010). The big idea: How to start an entrepreneurial revolution. *Harvard Business Review*, 88(6), 40–51.
- Ismail, K., Mason, C., Cooper, S., Omar, W., & Majid, I. (2010). University Spin-off Formations: How decision-making process has been made? *International Journal of Business and Social Science*, 1(2), 103–123.
- Iyigun, M. F., & Owen, A. L. (1998). Risk, entrepreneurship, and human capital accumulation. *The American Economic Review*, 88, 454–457.
- İyigün, N. O. (2015). What could entrepreneurship do for sustainable development? A corporate social responsibility-based approach. *Procedia: Social and Behavioral Sciences*, 195, 1226–1231. doi:10.1016/j.sbspro.2015.06.253
- Jacobs, J. (1969). *The Economy of Cities*. Random House.

## Compilation of References

- Jaffe, A. B. (1998). The importance of “spillovers” in the policy mission of the advanced technology program. *The Journal of Technology Transfer*, 23(2), 11–19. doi:10.1007/BF02509888
- Jamali, D., & Mirshak, R. (2007). Corporate social responsibility (CSR): Theory and practice in a developing country context. *Journal of Business Ethics*, 72(3), 243–262. doi:10.1007/10551-006-9168-4
- Jamieson, I. (1984). Schools and Enterprise. In A. Watts & P. Moran (Eds.), *Education for Enterprise, Careers Research and Advisory Centre* (pp. 19–27). Ballinger.
- Janku, J., & Kucerova, Z. (2018). Successful Crowdfunding Campaigns: The role of project specifics, competition and founders’ experience. *Czech Journal of Economics and Finance*, 68(4), 351–373.
- Jarvis, C. (2020). Global Shapers has launched in Launceston. *The Examiner*. Retrieved March 19, 2020, from <https://www.examiner.com.au/story/6482029/young-people-shaping-the-world-from-launceston/>
- Jayawarna, D., Rouse, J., & Macpherson, A. (2014). Life course pathways to business start-up. *Entrepreneurship and Regional Development*, 26(3-4), 282–312. doi:10.1080/08985626.2014.901420
- Jena, R. K. (2020). Measuring the impact of business management Student’s attitude towards entrepreneurship education on entrepreneurial intention: A case study. *Computers in Human Behavior*, 107, 106275. doi:10.1016/j.chb.2020.106275
- Jenkins, H. (2004). A critique of conventional CSR theory: An SME perspective. *Journal of General Management*, 29(4), 37–57. doi:10.1177/030630700402900403
- Jenssen, J. I., & Greve, A. (2002). Does The Degree Of Redundancy in Social Networks Influence the Success of Business Start-Ups? *International Journal of Entrepreneurial Behaviour & Research*, 8(5), 254–267. doi:10.1108/13552550210448357
- Jiang, Z., & Benbasat, I. (2007). The Effects of Presentation Formats and Task Complexity on Online Consumers’ Product Understanding. *Management Information Systems Quarterly*, 31(3), 475–500. doi:10.2307/25148804
- Jiménez Escobar, J., & Morales Gutiérrez, A. C. (2011). Social economy and the fourth sector, base and protagonist of social innovation. *CIRIEC-España Revista de Economía Pública. Social y Cooperativa*, 73, 33–60.
- Jiménez, L., & Muñoz, M. (2012). Educar en creatividad: Un programa formativo para maestros de Educación Infantil basado en el juego libre. *Electronic Journal In Education Psychology*, 10(3), 1099–1122.
- Jo, H., Song, M. H., & Tsang, A. (2015). Corporate social responsibility and stakeholder governance around the world. *Global Finance Journal*, 27, 18–45. doi:10.1016/j.gfj.2015.05.001
- Johansson, M., Jacob, M., & Hellstrom, T. (2005). The strength of strong ties: University spin-offs and the significance of historical relations. *The Journal of Technology Transfer*, 30(3), 271–286. doi:10.1007/10961-005-0930-z
- John, O., Naumann, L., & Soto, C. (2008). Paradigm shift to the integrative big-five trait taxonomy: History, measurement, and conceptual issues. In *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press. Retrieved April, 16, 2016, from [http://www.colby.edu/psych/wp-content/uploads/sites/50/2013/08/John\\_et\\_al\\_2008.pdf](http://www.colby.edu/psych/wp-content/uploads/sites/50/2013/08/John_et_al_2008.pdf)
- Johnson, P., Parker, S., & Wijbenga, F. (2006). Nascent entrepreneurship research: Achievements and opportunities. *Small Business Economics*, 27(1), 1–4. doi:10.1007/11187-006-9004-3
- Jones, B., & Iredale, N. (2014). Enterprise and entrepreneurship education: towards a comparative analysis. *Journal of Enterprising Communities: People and Places in the Global Economy*, 8(1), 34-50. doi:10.1108/JEC-08-2012-0042
- Jones, M., & Parker, J. (2014). Life skills programs: what makes them work? In A. R. Gomes, R. Resende & A. Albuquerque (Eds.), *Positive Human Functioning from a multidimensional perspective – volume 2. Promoting Healthy Lifestyles* (pp. 15- 36). New York: Nova Science Publishers, Inc.

- Jones, R. J., & Barnir, A. (2019). Properties of opportunity creation and discovery: Comparing variation in contexts of innovativeness. *Technovation*, 79, 1–10. doi:10.1016/j.technovation.2018.02.014
- Judge, T., & Kristof-Brown, A. (2004). Personality, interactional psychology, and person-organization fit. In B. Schneider & D. B. Smith (Eds.), *Personality and Organizations* (pp. 87–109). Lawrence Erlbaum Associates Publishers.
- Kaartemo, V. (2017). The elements of a successful crowdfunding campaign: A systematic literature review of crowdfunding performance. *International Review of Entrepreneurship*, 15(3), 291–318.
- Kabeer, N. (2005). Is microfinance a 'magic bullet' for women's empowerment? Analysis of findings from South Asia. *Economic and Political Weekly*, 4709–4718.
- Kacar, S. O., & Essers, C. (2019). The interplay between identity construction and opportunity structures: Narratives of Turkish migrant women entrepreneurs in the Netherlands. *International Small Business Journal: Researching Entrepreneurship*, 37(7), 713–731. doi:10.1177/0266242619856809
- Kakouris, A. (2016). Exploring entrepreneurial conceptions, beliefs and intentions of Greek graduates. *International Journal of Entrepreneurial Behaviour & Research*, 22(1), 109–132. doi:10.1108/IJEBR-07-2014-0137
- Kangas, J., Tikkanen, J., Leskinen, P., Kurttila, M., & Kajanus, M. (2016). Developing hybrid SWOT methodologies for choosing joint bioeconomy co-operation priorities by three Finnish universities. *Biofuels*, 8(4), 459–471. doi:10.1080/17597269.2016.1271625
- Kanter, R. (1983). *The change masters: Innovations for productivity in the American corporation*. Simon & Schuster.
- Kapila, M., Singla, A., & Gupta, M. (2016). Impact of Microcredit on Women Empowerment in India: An Empirical Study of Punjab State. *Proceedings of the World Congress on Engineering*.
- Karassin, O., & Bar-Haim, A. (2016). Multilevel corporate environmental responsibility. *Journal of Environmental Management*, 183, 110–120. doi:10.1016/j.jenvman.2016.08.051 PMID:27595527
- Kargytė, V., Värnik, R., & Aleknevičienė, V. (2018). Assessment of bioeconomy development potential from the perspective of innovation economics in European regions. *Management Theory and Studies for Rural Business and Infrastructure Development*, 40(4), 492–513. doi:10.15544/mts.2018.45
- Kariv, D., Menzies, T. V., Brenner, G., & Fillion, L. J. (2009). Transnational networking and business performance: Ethnic entrepreneurs in Canada. *Entrepreneurship and Regional Development*, 21(3), 239–264. doi:10.1080/08985620802261641
- Karnani, A. (2007). *Microfinance misses its mark*. Academic Press.
- Karp, T. (2006). The inner entrepreneur: A constructivistic view of entrepreneurial reality construction. *Journal of Change Management*, 6(3), 291–304.
- Katila, R., & Ahuja, G. (2002). Something old, something new: A longitudinal study of search behaviour and new product introduction. *Academy of Management Journal*, 45(6), 1183–1194.
- Kato, M. (2020). Founders' human capital and external knowledge sourcing: Exploring the absorptive capacity of start-up firms. *Economics of Innovation and New Technology*, 29(2), 184–205. doi:10.1080/10438599.2019.1598670
- Katrodia, A., & Sibanda, R. (2018). Challenges experienced by young entrepreneurs entering the Small and Medium Enterprise sector (SME) in Rajkot region, Gujarat-India. *Academy of Entrepreneurship Journal*, 24(4), 1–14.
- Kazmi, S. Z., Khan, S., & Nabradi, A. (2017). What Differentiates The Entrepreneurs From Non-Entrepreneurs On Nature And Nurture? *APSTRACT: Applied Studies in Agribusiness and Commerce, AGRIMBA*, 11(3-4), 45–52. Advance online publication. doi:10.19041/APSTRACT/2017/3-4/7

## Compilation of References

- Kelley, D., Singer, S., & Herrington, M. (2016). *GEM 2015/16 global report: GEM Global Entrepreneurship Monitor*. Global Entrepreneurship Research Association.
- Kelley, R. E. (1998). Followership in a leadership world. In L. Spears (Ed.), *Insights on Leadership: Service, stewardship, spirit, and servant-leadership* (pp. 170–184). Wiley.
- Kernis, M., & Goldman, B. (2004). A multicomponent conceptualization of authenticity: Theory and research. *Advances in Experimental Social Psychology*, 38, 283–357. doi:10.1016/S0065-2601(06)38006-9
- Kerr, S. P., Kerr, W. R., & Xu, T. (2017). *Personality Traits of Entrepreneurs: A Review of Recent Literature*. Working Paper 18-047. Harvard Business School. Available from: [https://www.hbs.edu/faculty/publication%20files/18-047\\_b0074a64-5428-479b-8c83-16f2a0e97eb6.pdf](https://www.hbs.edu/faculty/publication%20files/18-047_b0074a64-5428-479b-8c83-16f2a0e97eb6.pdf)
- Kessler, A., & Frank, H. (2009). Nascent entrepreneurship in a longitudinal perspective: The impact of person, environment, resources and the founding process on the decision to start business activities. *International Small Business Journal*, 27(6), 720–742. doi:10.1177/0266242609344363
- Kessy, J., Msuya, S., Mushi, D., Stray-Pedersen, B., & Botten, G. (2016). Integration of microfinance institutions and health programs in northern Tanzania. *PARIPEX-Indian Journal of Research*, 5(1).
- Kibler, E., Kautonen, T., & Fink, M. (2014). Regional Social Legitimacy of Entrepreneurship: Implications for Entrepreneurial Intention and Start-up Behaviour. *Regional Studies*, 48(6), 995–1015. doi:10.1080/00343404.2013.851373
- Kim, P. H., & Li, M. (2014). Seeking assurances when taking action: Legal systems, social trust, and starting businesses in emerging economies. *Organization Studies*, 35(3), 359–391. doi:10.1177/0170840613499566
- Kim, P., Aldrich, H., & Keister, L. (2007). Access (not) denied: The impact of financial, human, and cultural capital on entrepreneurial entry in the United States. *Small Business Economics*, 27(1), 5–22. doi:10.1007/11187-006-0007-x
- Kinner, C. (2015). *Boosting High-Impact Entrepreneurship in Australia—A Role for Universities*. Australian Government: Office of the Chief Scientist.
- Kirby, D. A. (2004). Entrepreneurship education: Can business schools meet the challenge? *Education + Training*, 46(8), 510–519. doi:10.1108/00400910410569632
- Kircher, M. (2019). Bioeconomy: Markets, implications, and investment opportunities. *Economies*, 7(3), 73. doi:10.3390/economies7030073
- Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221–232. doi:10.1016/j.resconrec.2017.09.005
- Kirzner, I. (1973). *Competition and Entrepreneurship*. The University of Chicago Press.
- Kishor, N. R., Prahalad, C., & Loster, T. (2013). Micro insurance in India—Protecting the poor. *Journal of Business Management & Social Sciences Research*, 2(3), 39–44.
- Kithae, P. P., Nyaga, J. G., & Kimani, J. G. (2013). Role of microfinance factors on the sustainability of women managed micro and small enterprises (MSEs) in Kenya. *International NGO Journal*, 8(4), 94–99.
- Kivunja, C. (2015). Teaching Students to Learn and to Work Well with 21st Century Skills: Unpacking the Career and Life Skills Domain of the New Learning Paradigm. *International Journal of Higher Education*, 4(1), 1–11.
- Klarin, T. (2018). The concept of sustainable development: From its beginning to the contemporary issues. *Zagreb International Review of Economics and Business*, 21(1), 67–94. doi:10.2478/zireb-2018-0005

- Klein, P. (2008). Opportunity discovery, entrepreneurial action, and economic organization. *Strategic Entrepreneurship Journal*, 2(3), 175–190. doi:10.1002ej.50
- Klepper, S., & Thompson, P. (2007). Spin-off entry in high-tech industries: Motives and consequences. In F. Malerba & S. Brusoni (Eds.), *Perspectives on innovation* (pp. 187–218). Cambridge University Press. doi:10.1017/CBO9780511618390.010
- Klinthäll, M., & Urban, S. (2014). Second-Generation Immigrants in the Small-Business Sector in Sweden. *Journal of Immigrant & Refugee Studies*, 12(3), 210–232. doi:10.1080/15562948.2013.827768
- Klofsten, M. (2005). New venture ideas: An analysis of their origin and early development. *Technology Analysis and Strategic Management*, 17(1), 105–119. doi:10.1080/09537320500044776
- Klonoski, R. (2012). How important is creativity? The impact of age, occupation and cultural background on the assessment of ideas. *Journal of Applied Business Research*, 28(3), 411–425. doi:10.19030/jabr.v28i3.6958
- Kloosterman, R. C., & Rath, J. (2001). Immigrant entrepreneurs in advanced economies: Mixed embeddedness further explored. *Journal of Ethnic and Migration Studies*, 27(2), 189–201. doi:10.1080/13691830020041561
- Kloosterman, R. C., & Rath, J. (2018). Mixed Embeddedness Revisited: A Conclusion to the Symposium. *Sociologica*, 12(2), 103–114. doi:10.6092/issn.1971-8853/8625
- Gluckhohn, C. (1951). Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification. In T. Parsons & E. Shils (Eds.), *Toward a General Theory of Action* (pp. 388–433). Harvard University Press., doi:10.4159/harvard.9780674863507.c8
- Klyver, K., Honig, B., & Steffens, P. (2018). Social support timing and persistence in nascent entrepreneurship: Exploring when instrumental and emotional support is most effective. *Small Business Economics*, 51(3), 709–734. doi:10.100711187-017-9964-5
- Klyver, K., & Schenkel, M. T. (2013). From Resource Access to Use: Exploring the Impact of Resource Combinations on Nascent Entrepreneurship. *Journal of Small Business Management*, 51(4), 539–556. doi:10.1111/jsbm.12030
- Knight, F. (1921). *Risk, Uncertainty, and Profit*. Augustus Kelly.
- Kniūkšta, B. (2009). Preconditions for developing a knowledge-based bioeconomy in Lithuania. *Proceedings of the Fourth International Scientific conference - Development*, 4(1), 214–218.
- Knowles, J. (2013). *Increasing the Productivity and Earnings of Rural Women: What Works? A Roadmap for Promoting Women's Economic Empowerment*. Available at: [www.womeneconroadmap.org](http://www.womeneconroadmap.org)
- Knox, M. W., & Crawford, J. (2020). Authentic Leaders and Business Tourism: An Exploration of Authentic Relationships. In M. W. Bari, S. Shaheen, & M. Fanchen (Eds.), *Accelerating Knowledge Sharing, Creativity, and Innovation Through Business Tourism* (pp. 54–72). IGI Global. doi:10.4018/978-1-7998-3142-6.ch004
- Knox, M., Crawford, J., & Young, S. (2020). Ecotourism emergence in Tasmania through social entrepreneurs and authentic leaders. In D. Batabyal (Ed.), *Global Entrepreneurial Trends in the Tourism and Hospitality Industry* (pp. 84–111). IGI Global.
- Knudsen, E., Heckman, J., Cameron, J., & Shonkoff, J. (2006). *Economic, neurobiological and behavioral perspectives on building America's future workforce*. NBER Working Paper 12298. Retrieved February, 12, 2016, from <https://www.pnas.org/content/103/27/10155.full.pdf+html>
- Koch, J., & Siering, M. (2015). Crowdfunding Success Factors: The Characteristics of Successfully Funded Projects on Crowdfunding Platforms. *Twenty-Third European Conference on Information Systems (ECIS)*.

## Compilation of References

- Koch, J., & Siering, M. (2019). The Recipe of Successful Crowdfunding Campaigns: An analysis of crowdfunding success factors and their interrelations. *Electronic Markets*, 29(4), 661–679. doi:10.1007/12525-019-00357-8
- Koh, H. (1996). Testing hypotheses of entrepreneurial characteristics. *Journal of Managerial Psychology*, 11(3), 12–25. doi:10.1108/02683949610113566
- Köllinger, P., & Minniti, M. (2006). Not for lack of trying: American entrepreneurship in black and white. *Small Business Economics*, 27(1), 59–79. doi:10.1007/11187-006-0019-6
- Kollmann, T., Stöckmann, C., & Kensbock, J. M. (2017). Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity—An experimental approach. *Journal of Business Venturing*, 32(3), 280–301. doi:10.1016/j.jbusvent.2017.02.002
- Kolvereid, L., & Moen, O. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference? *Journal of European Industrial Training*, 21(4/5), 154–160. doi:10.1108/03090599710171404
- Konings, J. (1995). Gross jobs flows and the evolution of size in UK establishments. *Small Business Economics*, 7(3), 213–221. doi:10.1007/BF01135366
- Ko, S., & Butler, J. E. (2007). Creativity: A key link to entrepreneurial behavior. *Business Horizons*, 50(5), 365–372. doi:10.1016/j.bushor.2007.03.002
- Kotha, S. (2010). Spillovers, spill-ins, and strategic entrepreneurship: America's first commercial jet airplane and Boeing's ascendancy in commercial aviation. *Strategic Entrepreneurship Journal*, 4(4), 284–306. doi:10.1002/ej.97
- Koukios, E., Monteleone, M., Teixeira Carrondo, M. J., Charalambous, A., Girio, F., López Hernández, E., & ... (2018). Targeting sustainable bioeconomy: A new development strategy for Southern European countries. The Manifesto of the European Mezzogiorno. *Journal of Cleaner Production*, 172(1), 3931–3941. doi:10.1016/j.jclepro.2017.05.020
- Kourilsky, M., & Walstad, M. (1998). Entrepreneurship and female youth: Knowledge, attitudes, gender differences and educational practices. *Journal of Business Venturing*, 13(1), 77–88. doi:10.1016/S0883-9026(97)00032-3
- Ko, W. W., & Liu, G. (2015). Understanding the process of knowledge spillovers: Learning to become social enterprises. *Strategic Entrepreneurship Journal*, 9(3), 263–285. doi:10.1002/ej.1198
- Krabel, S., & Mueller, P. (2009). What drives scientists to start their own company? an empirical investigation of Max Planck society scientists. *Research Policy*, 38(6), 947–956. doi:10.1016/j.respol.2009.02.005
- Kraus, S., Richter, C., Brem, A., Cheng, C.-F., & Chang, M.-L. (2016). Strategies for reward-based crowdfunding campaigns. *Journal of Innovation & Knowledge*, 1(1), 13–23. doi:10.1016/j.jik.2016.01.010
- Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology*, 58(2), 281–342. doi:10.1111/j.1744-6570.2005.00672.x
- Kroeger, A., & Weber, C. (2014). Developing a conceptual framework for comparing social value creation. *Academy of Management Review*, 39(4), 513–540. doi:10.5465/amr.2012.0344
- Krueger, N. F. Jr, & Brazeal, D. V. (1994). Entrepreneurial potential and potential entrepreneurs. *Entrepreneurship Theory and Practice*, 18(3), 91–91. doi:10.1177/104225879401800307
- Kuckertz, A. (2020). Bioeconomy transformation strategies worldwide require stronger focus on entrepreneurship. *Sustainability*, 12(7), 2911. doi:10.3390/u12072911

- Kuckertz, A., Berger, E. S. C., & Morales Reyes, C. A. (2018). Entrepreneurial ventures and the bioeconomy. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 273–284). Springer.
- Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions - Investigating the role of business experience. *Journal of Business Venturing*, 25(5), 524–539. doi:10.1016/j.jbusvent.2009.09.001
- Kuppuswamy, V., & Bayus, B. L. (2018). A review of crowdfunding research and findings. In P. Golder & D. Mitra (Eds.), *Handbook of Research on New Product Development* (pp. 361–373). Edward Elgar Publishing. doi:10.4337/9781784718152.00028
- Kuratko, D. (2005). The emergence of entrepreneurship education: Development, trends and challenges. *Entrepreneurship Theory and Practice*, 29(5), 577–598. doi:10.1111/j.1540-6520.2005.00099.x
- Kuratko, D., & Hodgetts, R. (1995). *Entrepreneurship*. Dryden Press.
- Kuratko, D., & Hodgetts, R. (2004). *Entrepreneurship: Theory, Process, Practice*. Thomson/South-Western.
- Kuwaza, K. (2016). *Graduate vendors: A clear sign of failed government policies*. Retrieved June 1, 2020, from <https://www.theindependent.co.zw/2016/06/03/graduate-vendors-clear-sign-failed-govt-policies/>
- Kuzilwa, J. A. (2005). The role of credit for small business success: A study of the National Entrepreneurship Development Fund in Tanzania. *The Journal of Entrepreneurship*, 14(2), 131–161. doi:10.1177/097135570501400204
- Kuznets, S. (1971). *Economic growth of nations, total output and production structure*. Harvard University Press/Belknap Press.
- Kvale, S. (2007). Introduction to Interview Research. In *Doing Interviews* (pp. 2–10). SAGE Publications, Ltd., doi:10.4135/9781849208963.n1
- Kwapisz, A. (2019). Do government and legal barriers impede entrepreneurship in the U.S.? an exploratory study of perceived vs. actual barriers. *Journal of Business Venturing Insights*, 11, e00114. Advance online publication. doi:10.1016/j.jbvi.2019.e00114
- Kwapisz, A. (2019). Minimum Wages and Nascent Entrepreneurship in the US. *The B.E. Journal of Economic Analysis & Policy*, 20(1). Advance online publication. doi:10.1515/bejeap-2018-0140
- Kwaramba, N. (2017). *The role and importance of key entrepreneurship development*. The Zimbabwe Independent. Retrieved May 28, 2020, from <https://www.theindependent.co.zw/2017/05/26/role-importance-key-entrepreneurship-development/>
- Lagazio, C., & Querci, F. (2018). Exploring the multi-sided nature of crowdfunding campaign success. *Journal of Business Research*, 90, 318–324. doi:10.1016/j.jbusres.2018.05.031
- Lainez, M., González, J. M., Aguilar, A., & Vela, C. (2018). Spanish strategy on bioeconomy: Towards a knowledge based sustainable innovation. *New Biotechnology*, 40, 87–95. doi:10.1016/j.nbt.2017.05.006 PMID:28552816
- Lange, L., & Lindedam, J. (2016). *The Fundamentals of Bioeconomy The Biobased Society*. United Federation of Danish Workers 3F.
- Langowitz, N., & Minniti, M. (2007). The Entrepreneurial Propensity of Women. *Entrepreneurship Theory and Practice*, 31(3), 341–364. doi:10.1111/j.1540-6520.2007.00177.x
- Lanteri, A. (2015). The creation of social enterprises: Some lessons from Lebanon. *Journal of Social Entrepreneurship*, 6(1), 42–69. doi:10.1080/19420676.2014.954256

## Compilation of References

- Lapp, H., & Hunter, R. (2016). The dynamic genome: Transposons and environmental adaptation in the nervous system. *Epigenomics*, 8(2), 237–249. doi:10.2217/epi.15.107 PMID:26791965
- Larson, A. (2000). Sustainable innovation through an entrepreneurship lens. *Business Strategy and the Environment*, 9(5), 304–307. doi:10.1002/1099-0836(200009/10)9:5<304::AID-BSE255>3.0.CO;2-O
- Laschinger, H., & Fida, R. (2014). New nurses' burnout and workplace wellbeing: The influence of authentic leadership and psychological capital. *Burnout Research*, 1(1), 19–28. doi:10.1016/j.burn.2014.03.002
- Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018). The bioeconomist. In I. Lewandoski (Ed.), *Bioeconomy: Shaping the transitions to a sustainable, biobased economy*. Springer., doi:10.1007/978-3-319-68152-8\_12
- Laureti, C., & Szafarz, A. (2016). The price of deposit liquidity: Banks versus microfinance institutions. *Applied Economics Letters*, 23(17), 1244–1249. doi:10.1080/13504851.2016.1148249
- Layard, R. (2011). *Happiness: Lessons from a new science*. Penguin Books.
- Lazear, E. (2005). Entrepreneurship. *Journal of Labor Economics*, 23(4), 649–800. doi:10.1086/491605
- Lee, E., & Lee, B. (2012). Herding Behavior in Online P2P Lending: An Empirical Investigation. *Electronic Commerce Research and Applications*, 11(5), 495–503. doi:10.1016/j.elerap.2012.02.001
- Lee, J. (1996). The motivation of women entrepreneurs in Singapore. *Women in Management Review*, 11(2), 18–29. doi:10.1108/09649429610112574
- Lee, K., Choo, K., & Yoon, M. (2016). Comparing the productivity impacts of knowledge spillovers from network and arm's length industries: Findings from business groups in Korea. *Industrial and Corporate Change*, 25(3), 407–427. doi:10.1093/icc/dtv036
- Legas, H. (2015). Challenges to entrepreneurial success in Sub-Saharan Africa: A comparative perspective. *European Journal of Business and Management*, 7(11), 23–35.
- Legazkue, I., Guerrero, M., González-Pernía, J., Navarro, J., Medina, C., Tamayo, R., & Hoyos, J. (2014). *Global Entrepreneurship Monitor. Informe GEM España 2013*. Ed. Universidad de Cantabria.
- Lehmann, E., Meoli, M., Paleari, S., & Stockinger, S. (2020). The role of higher education for the development of entrepreneurial ecosystems. *European Journal of Higher Education*, 10(1), 1–9. doi:10.1080/21568235.2020.1718924
- Lehner, O. M. (2013). Crowdfunding social ventures: A model and research agenda. *Venture Capital*, 15(4), 289–311. doi:10.1080/13691066.2013.782624
- Lehner, O. M., & Nicholls, A. (2014). Social finance and crowdfunding for social enterprises: A public–private case study providing legitimacy and leverage. *Venture Capital*, 16(3), 271–286. doi:10.1080/13691066.2014.925305
- Leitão, A. (2016). Bioeconomy: The challenge in the management of natural resources in the 21st century. *Open Journal of Social Sciences*, 4(11), 26–42. doi:10.4236/jss.2016.411002
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, 45(1), 79–122. doi:10.1006/jvbe.1994.1027
- Leroy, H., Anseel, F., Gardner, W. L., & Sels, L. (2015). Authentic leadership, authentic followership, basic need satisfaction, and work role performance: A cross-level study. *Journal of Management*, 41(6), 1677–1697.



- Leutner, F., Ahmetoglu, G., Akhtar, R., & Chamorro-Premuzic, T. (2014). The relationship between the entrepreneurial personality and the Big Five personality traits. *Personality and Individual Differences*, 63, 58–63. doi:10.1016/j.paid.2014.01.042
- Levie, J., Autio, E., Acs, Z., & Hart, M. (2014). Global entrepreneurship and institutions: An introduction. *Small Business Economics*, 42(3), 437–444. doi:10.1007/11187-013-9516-6
- Lewandowski, I. (Ed.). (2018). *Bioeconomy: Shaping the transition to a sustainable, biobased economy*. Springer. doi:10.1007/978-3-319-68152-8
- Lewandowski, I., Gaudet, N., Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018a). Bioeconomy concepts and research methods. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 5–16). Springer. doi:10.1007/978-3-319-68152-8\_2
- Lewandowski, I., Gaudet, N., Lask, J., Maier, J., Tchouga, B., & Vargas-Carpintero, R. (2018b). Introduction. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 1–2). doi:10.1007/978-3-319-68152-8\_1
- Lewis, P. (2006). The quest for invisibility: Female entrepreneurs and the masculine norm of entrepreneurship. *Gender, Work and Organization*, 13(5), 453–469. doi:10.1111/j.1468-0432.2006.00317.x
- Liavoga, A., Virgin, I., Ecuru, J., Morris, J., & Komen, J. (2016). *Fostering a bio-economy in eastern Africa: Insights from Bio-Innovate*. International Livestock Research Institute.
- Lichtenstein, B. B., Carter, N. M., Dooley, K. J., & Gartner, W. B. (2007). Complexity dynamics of nascent entrepreneurship. *Journal of Business Venturing*, 22(2), 236–261. doi:10.1016/j.jbusvent.2006.06.001
- Life in a Bag. (2019). *About Us*. Retrieved from <https://www.lifeinabag.pt/en/>
- Liñán, F., Urbano, D., & Guerrero, M. (2011). Regional variations in entrepreneurial cognitions: Start-up intentions of university students in Spain. *Entrepreneurship and Regional Development*, 23(3-4), 187–215. doi:10.1080/08985620903233929
- Lindner, M., Hanewinkel, M., & Nabuurs, G. (2017). How can a forest-based bioeconomy contribute to climate change adaptation and mitigation? In G. Winkel (Ed.), *Towards a Sustainable European Forest-based Bioeconomy: Assessment and the Way Forward*. European Forest Institute.
- Lindquist, M., Sol, J., & Van Praag, M. (2012). *Why do entrepreneurial parents have entrepreneurial children?* IZA Discussion Paper N°. 6740. Retrieved April, 23, 2016, from <http://ftp.iza.org/dp6740.pdf>
- Lin, N. (2001). *Social capital: A theory of social structure and action*. Cambridge University Press. doi:10.1017/CBO9780511815447
- Lin, T., Rodríguez, L. F., Davis, S., Khanna, M., Shastri, Y., Grift, T., Long, S., & Ting, K. C. (2014). Biomass feedstock preprocessing and long-distance transportation logistics. *Bioenergy*, 8(1), 160–170.
- Liu, X., Wright, M., Filatotchev, I., Dai, O., & Lu, J. (2010). Human mobility and international knowledge spillovers: Evidence from high-tech small and medium enterprises in an emerging market. *Strategic Entrepreneurship Journal*, 4(4), 340–355. doi:10.1002/ej.100
- Locke, E. A. (2000). *The prime movers: Traits of the great wealth creators*. Amacom.
- Löher, J. (2017). The interaction of equity crowdfunding platforms and ventures: An analysis of the preselection process. *Venture Capital*, 19(1-2), 51–74. doi:10.1080/13691066.2016.1252510

## Compilation of References

- Longoni, A., & Cagliano, R. (2018). Sustainable Innovativeness and the Triple Bottom Line: The Role of Organizational Time Perspective. *Journal of Business Ethics*, 151(4), 1097–1120. doi:10.1007/10551-016-3239-y
- López-Cózar, C., & Priede, T. (2015). Identificación de las principales fuentes de financiación empleadas por la empresa social en la actualidad. *Economía Agraria y Recursos Naturales*, 15(1), 41–59. doi:10.7201/earn.2015.01.03
- López-Núñez, M. I., Rubio-Valdehita, S., Aparicio-García, M. E., & Díaz-Ramiro, E. M. (2020). Are entrepreneurs born or made? The influence of personality. *Personality and Individual Differences*, 154(1), 109699. doi:10.1016/j.paid.2019.109699
- Lortie, J., Barreto, T., & Cox, K. (2019). The implications of national and regional long-term orientation on entrepreneurial activity. *International Journal of Entrepreneurial Behaviour & Research*, 25(6), 1236–1258. doi:10.1108/IJEER-01-2018-0026
- Lounsbury, M., & Glynn, M. A. (2001). Cultural entrepreneurship: Stories, legitimacy, and the acquisition of resources. *Strategic Management Journal*, 22(6–7), 545–564. doi:10.1002/mj.188
- Lowrey, Y. L. (2003). *The Entrepreneur and Entrepreneurship: A Neoclassical Approach*. Office of Advocacy, U.S. Small Business Administration Economic Research Working Paper. Available at SSRN: <https://ssrn.com/abstract=744785>
- Lubis, R. L. (2014). Students' entrepreneurial strategy: Connecting minds? *The International Journal of the Arts in Society*, 7(3), 545–568.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172. doi:10.5465/amr.1996.9602161568
- Lumpkin, G., & Lichtenstein, B. (2005). The role of organizational learning in the opportunity-recognition process. *Entrepreneurship Theory and Practice*, 29(4), 451–472. doi:10.1111/j.1540-6520.2005.00093.x
- Luthans, F. (2002). The need for and meaning of positive organizational behavior. *Journal of Organizational Behavior*, 23(6), 695–706. doi:10.1002/job.165
- Luthans, F., & Avolio, B. (2003). Authentic leadership development. In K. Cameron & J. Dutton (Eds.), *Positive Organizational Scholarship* (pp. 241–258). Berrett-Koehler Publishers.
- Lyon, D., Lumpkin, G., & Dess, G. (2000). Enhancing entrepreneurial orientation research: Operational-izing and measuring a key strategic decision making process. *Journal of Management*, 26(5), 1055–1085. doi:10.1177/014920630002600503
- Maciejczak, M. (2015). What are production determinants of bioeconomy? *Scientific Journal Warsaw University of Life Sciences – SGGW Problems of World Agriculture*, 15(30), 137–146.
- Madichie, N. O., & Gallant, M. (2012). Broken silence: A commentary on women's entrepreneurship in the United Arab Emirates. *Journal of Entrepreneurship and Innovation*, 13(2), 81–92. doi:10.5367/ijei.2012.0071
- Maestripieri, D., Baran, N., Sapienza, P., & Zingales, L. (2010). Between- and within-sex variation in hormonal responses to psychological stress in a large sample of college students. *Stress (Amsterdam, Netherlands)*, 13, 413–424. doi:10.3109/10253891003681137 PMID:20666639
- Mafumbate, R., Gondo, T., & Mutekwe, E. (2014). Graduate employment challenges in Zimbabwe: A case of Zimbabwe Open University graduates. *Journal of Education and Practice*, 5(20), 57–63.
- Ma, H., Guo, H., & Shen, R. (2019). Organisational regulatory legitimacy, entrepreneurial orientation, and SME innovation: An optimal distinctiveness perspective. *Technology Analysis and Strategic Management*, 31(7), 833–847. doi:10.1080/09537325.2018.1555320

- Mahmood, S. (2011). *Politics of piety: The Islamic revival and the feminist subject*. Princeton University Press.
- Mahmood, T. M., Al Mamun, A., Ahmad, G. B., & Ibrahim, M. D. (2019). Predicting Entrepreneurial Intentions and Pre-Start-Up Behaviour among Asnaf Millennials. *Sustainability*, *11*(18), 4939. doi:10.3390/u11184939
- Mahoney, L. S., & Thorne, L. (2005). Corporate social responsibility and long-term compensation: Evidence from Canada. *Journal of Business Ethics*, *57*(3), 241–253. doi:10.1007/10551-004-5367-z
- Mahroum, S., & Al-Saleh, Y. (2013). Demand-led related diversification: An innovation policy approach to economic diversification and development. *Science & Public Policy*, *40*(3), 406–418. doi:10.1093/cipolcs126
- Maine, E., Soh, P.-H., & Dos Santos, N. (2015). The role of entrepreneurial decision-making in opportunity creation and recognition. *Technovation*, *39*(40), 53–72. doi:10.1016/j.technovation.2014.02.007
- Mair, J., & Marti, I. (2006). Social entrepreneurship research: A source of explanation, prediction, and delight. *Journal of World Business*, *41*(1), 36–44. doi:10.1016/j.jwb.2005.09.002
- Mair, J., & Marti, I. (2009). Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of Business Venturing*, *24*(5), 419–435. doi:10.1016/j.jbusvent.2008.04.006
- Malekipirbazari, M., & Aksakalli, V. (2015). Risk Assessment in Social Lending via Random Forests. *Expert Systems with Applications*, *42*(10), 4621–4631. doi:10.1016/j.eswa.2015.02.001
- Malerba, F., & McKelvey, M. (2018). Knowledge-intensive innovative entrepreneurship: Integrating Schumpeter, evolutionary economics, and innovation systems. *Small Business Economics*, *54*(2), 503–522. doi:10.1007/11187-018-0060-2
- Malerba, F., & McKelvey, M. (2019). Knowledge-intensive innovative entrepreneurship. *Foundations and Trends in Entrepreneurship Series*, *14*(6), 555–681. doi:10.1561/03000000075
- Malhotra, N. (2001). *Pesquisa de marketing: uma orientação aplicada*. Bookman.
- Mani, M. (2015). Entrepreneurship Education: A students' perspective. *International Journal of Entrepreneurship and Innovation*, *5*(1), 1–14. doi:10.4018/ijeei.2015010101
- Manolova, T. C., Brush, C. G., Edelman, L. F., & Shaver, K. G. (2012). One size does not fit all: Entrepreneurial expectancies and growth intentions of US women and men nascent entrepreneurs. *Entrepreneurship and Regional Development: An International Journal*, *24*(1/2), 7–27. doi:10.1080/08985626.2012.637344
- Manolova, T. S., Edelman, L. F., Shirokova, G., & Tsukanova, T. (2019). Youth entrepreneurship in emerging economies: Can family support help navigate institutional voids? *Journal of East-West Business*, *25*(4), 363–395. doi:10.1080/10669868.2019.1624672
- Mansoori, Y., Karlsson, T., & Lundqvist, M. (2019). The influence of the lean startup methodology on entrepreneur-coach relationships in the context of a startup accelerator. *Technovation*, *84–85*(June–July), 37–47. doi:10.1016/j.technovation.2019.03.001
- Marlow, S. (2002). Women and self-employment: A part of or apart from theoretical construct? *International Journal of Entrepreneurship and Innovation*, *3*(2), 83–91. doi:10.5367/000000002101299088
- Marlow, S., & Patton, D. (2005). All credit to men? Entrepreneurship, finance, and gender. *Entrepreneurship Theory and Practice*, *29*(6), 717–735. doi:10.1111/j.1540-6520.2005.00105.x
- Marom, D., Robb, A., & Sade, O. (2014). Gender dynamics in crowdfunding (Kickstarter): Evidence on entrepreneurs, investors, deals and taste-based discrimination. *SSRN Electronic Journal*. Available at SSRN: <http://ssrn.com/abstract=2442954>

## Compilation of References

- Marques, H. (2019). Export activity, innovation and institutions in Southern European nascent entrepreneurship. *Economics: The Open-Access, Open Assessment E-Journal*, 13(2019-53), 1-48. . doi:10.5018/economics-ejournal.ja.2019-53
- Marques, C. S., Valente, S., & Lages, M. (2018). The influence of personal and organisational factors on entrepreneurship intention: An application in the health care sector. *Journal of Nursing Management*, 26(6), 696–706. doi:10.1111/jonm.12604 PMID:29504177
- Marques, L., & Albuquerque, C. (2012). Entrepreneurship education and the development of young people life competencies and skills. *ACRN Journal of Entrepreneurship Perspectives*, 1(2), 55–68.
- Martínez, A., Levie, J., Kelley, D., Sæmundsson, R., & Schøtt, T. (2010). *A global perspective on entrepreneurship education and training - Global entrepreneurship monitor special report*. Retrieved November 19, 2015, from <https://www.gemconsortium.org/docs/download/275>
- Martínez-Rodríguez, I., Callejas-Albiñana, F. E., & Callejas-Albiñana, A. I. (2020). Economic and socio-cultural drivers of necessity and opportunity entrepreneurship depending on the business cycle phase. *Journal of Business Economics and Management*, 21(2), 373–394. doi:10.3846/jbem.2020.11848
- Martins, I., Monsalve, J. P. P., & Martinez, A. V. (2018). Self-confidence and fear of failure among university students and their relationship with entrepreneurial orientation: Evidence from Colombia. *Academia (Caracas)*, 31(3), 471–485. doi:10.1108/ARLA-01-2018-0018
- Marzocchi, C., Kitagawa, F., & Sánchez-Barrioluengo, M. (2019). Evolving missions and university entrepreneurship: Academic spin-offs and graduate start-ups in the entrepreneurial society. *The Journal of Technology Transfer*, 44(1), 167–188. doi:10.1007/10961-017-9619-3
- Masekesa, C., & Chibaya, M. (2014). *Unemployment turns graduates into vendors*. Retrieved May 27, 2020, from <https://www.thestandard.co.zw/2014/02/09/unemployment-turns-graduates-vendors/>
- Masocha, K. C. (2016). *Can entrepreneurship be the answer to Zimbabwe's unemployment crisis: A case study of Epworth* (Bachelor's Thesis). Midlands State University, Zimbabwe.
- Mason, C., & Harvey, C. (2013). Entrepreneurship: Contexts, opportunities, and processes. *Business History*, 55(1), 1–8. doi:10.1080/00076791.2012.687542
- Mata, J. (1994). Firm growth during infancy. *Small Business Economics*, 6(1), 27–39. doi:10.1007/BF01066110
- Mathur-Helm, B. (2005). Equal opportunity and affirmative action for South African women: A benefit or barrier? *Women in Management Review*, 20(1), 56–71. doi:10.1108/09649420510579577
- Matos, M., & Tomé, G. (Eds.). (2012). *Aventura Social: promoção de competências e do capital social para o empreendedorismo com saúde na escola e na comunidade*. Lisboa: Editora Placebo.
- Mauchi, F. N., Mutengezanwa, M., & Damiyano, D. (2014). Challenges faced by women entrepreneurs: A case study of Mashonaland Central Province. *International Journal of Development and Sustainability*, 3(3), 466–480.
- Maurer, J. G. (1971). *Readings in organization theory: open-system approaches*. Random House.
- Ma, Y., Yin, Q., Pan, Y., Cui, W., Xin, B., & Rao, Z. (2018). Green product innovation and firm performance: Assessing the moderating effect of novelty-centered and efficiency-centered business model design. *Sustainability (Switzerland)*, 10(6), 1–13. doi:10.3390/u10061843
- Mayoux, L. (2005). *Women's Empowerment through Sustainable Microfinance*. Rethinking Best.

- Mboko, S., & Hunter-Smith, P. (2009). Applying theories of entrepreneurship to a comparative analysis of white and minority women business owners. *Women in Management Review*, 19(2), 20–21.
- McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychological Inquiry*, 7(4), 295–321. doi:10.1207/15327965pli0704\_1
- McClelland, D. (1961). *The achieving society*. Free Press. doi:10.1037/14359-000
- McCrae, R. (1987). Creativity, divergent thinking, and openness to experience. *Journal of Personality and Social Psychology*, 52(6), 1258–1265. doi:10.1037/0022-3514.52.6.1258
- McCrae, R., & Costa, P. (1990). *Personality in adulthood*. Guilford Press.
- McCrae, R., Costa, P., Ostendorf, F., Angleitner, A., Hrebickova, M., Avia, M., Sanz, J., Sánchez-Bernardos, M. L., Kusdil, M. E., Woodfield, R., Saunders, P. R., & Smith, P. (2000). Nature over nurture: Temperament, personality, and life span development. *Journal of Personality and Social Psychology*, 78(1), 173–186. doi:10.1037/0022-3514.78.1.173 PMID:10653513
- McGowan, P., Redeker, C. L., Cooper, S. Y., & Greenan, K. (2012). Female entrepreneurship and the management of business and domestic roles: Motivations, expectations and realities. *Entrepreneurship and Regional Development*, 24(1/2), 53–72. doi:10.1080/08985626.2012.637351
- McGrath, R. (2013). Transient Advantage. *Harvard Business Review*, 91(6), 62–70.
- McGrath, R., & MacMillan, I. (2000). *The entrepreneurial mindset*. Harvard Business School.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132–152. doi:10.5465/amr.2006.19379628
- McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review*, 26(1), 117–127. doi:10.5465/amr.2001.4011987
- Meek, W. R., Pacheco, D. F., & York, J. G. (2010). The impact of social norms on entrepreneurial action: Evidence from the environmental entrepreneurship context. *Journal of Business Venturing*, 25(5), 493–509. doi:10.1016/j.jbusvent.2009.09.007
- Menger, C. (1871). *Principles of Economics*. Institute for Humane Studies. Retrieved from: [https://cdn.mises.org/Principles%20of%20Economics\\_5.pdf](https://cdn.mises.org/Principles%20of%20Economics_5.pdf)
- Mergemeier, L., Moser, J., & Flatten, T. C. (2018). The influence of multiple constraints along the venture creation process and on start-up intention in nascent entrepreneurship. *Entrepreneurship and Regional Development*, 30(7–8), 848–876. doi:10.1080/08985626.2018.1471163
- Mesquita, L., Lazzarini, S., & Cronin, P. (2007). Determinants of firm competitiveness in Latin American emerging economies: Evidence from Brazil's auto-parts industry. *International Journal of Operations & Production Management*, 27(5), 501–523. doi:10.1108/01443570710742384
- Metcalf, H., Modood, T., & Virdee, S. (1996). *Asian self-employment: The interaction of culture and economics in England*. Policy Studies Institute.
- Metha, P., & Josephs, R. (2010). Testosterone and cortisol jointly regulate dominance: Evidence for a dual-hormone hypothesis. *Hormones and Behavior*, 58(5), 898–906. doi:10.1016/j.yhbeh.2010.08.020 PMID:20816841
- Meyer, R. (2017). Bioeconomy strategies: Contexts, visions, guiding implementation, principles and resulting debates. *Sustainability*, 9(6), 1031. doi:10.3390/s9061031

## Compilation of References

- Mezei, J. (2018). Credit risk evaluation in peer-to-peer lending with linguistic data transformation and supervised learning. In *Proceedings of the 51st Hawaii International Conference on System Sciences* (pp. 1366–1375). doi:10.24251/HICSS.2018.169
- Miao, C., Qian, S., & Ma, D. (2017). The Relationship between Entrepreneurial Self-Efficacy and Firm Performance: A Meta-Analysis of Main and Moderator Effects. *Journal of Small Business Management*, 55(1), 87–107. doi:10.1111/jsbm.12240
- Mieczysław, A. (2017). Bio-economy as a concept of development strategies in the European Union. *Journal of International Business Research and Marketing*, 2(4), 7–12. doi:10.18775/jibrm.1849-8558.2015.24.3001
- Mihaela, E. (2009). The knowledge – as production factor. *Studies and Scientific Researches - Economic Edition*, 14, 39–43.
- Miles, M. P., & Covin, J. G. (2000). Environmental marketing: A source of reputational, competitive, and financial advantage. *Journal of Business Ethics*, 23(3), 299–311. doi:10.1023/A:1006214509281
- Millán, A., Millán, J., & Román, C. (2016). The role of start-up incentives on entrepreneurship dynamics in a post-crisis era: Evidence from European countries. CESifo DICE Report, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770–791. doi:10.1287/mnsc.29.7.770
- Miller, D. (2015). A downside to the entrepreneurial personality? *Entrepreneurship Theory and Practice*, 39(1), 1–8. doi:10.1111/etap.12130
- Miller, L., & Budd, J. (1999). The development of occupational sex-role stereotypes, occupational preferences and academic subject preferences in children at ages 8, 12, and 16. *Educational Psychology*, 19(1), 17–35. doi:10.1080/0144341990190102
- Minguzzi, A., & Passaro, R. (2001). The network of relationships between the economic environment and the entrepreneurial culture in small firms. *Journal of Business Venturing*, 16(2), 181–207. doi:10.1016/S0883-9026(99)00045-2
- Minniti, M., & Arenius, P. (2003, April). Women in entrepreneurship. In *The entrepreneurial advantage of nations: First annual global entrepreneurship symposium* (pp. 1–28). United Nations. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.471.7819&rep=rep1&type=pdf>
- Minniti, M., & Levesque, M. (2008). Recent developments in the economics of entrepreneurship. *Journal of Business Venturing*, 23(6), 603–612. doi:10.1016/j.jbusvent.2008.01.001
- Minniti, M., & Nardone, C. (2007). Being in Someone Else's Shoes: The Role of Gender in Nascent Entrepreneurship. *Small Business Economics*, 28(2), 223–238. doi:10.1007/1187-006-9017-y
- Mises, L. (1951). *Profit and loss*. Consumers-Producers Economic Service.
- Mkpado, M., & Arene, C. (2007). Effects of democratization of group administration on the sustainability of agricultural micro credit groups in Nigeria. *International Journal of Rural Studies*, 14(2).
- Moberg, K., Vestergaard, L., Redford, D., Cooney, T., Singer, S., Sailer, ... Fayolle, A. (2014). *How to assess and evaluate the influence of entrepreneurship education: A report of the ASTEE project with a user guide to the tools*. The ASTEE project – Assessment Tools and Indicators for Entrepreneurship Education.
- Mohan, P., Watson, P., & Strobl, E. (2018). Nascent entrepreneurs in Caribbean small island developing states: Opportunity versus necessity. *Journal of Developmental Entrepreneurship*, 23(4), 1850022. doi:10.1142/S108494671850022X

- Molina-Azorín, J. F., López-Gamero, M. D., Pereira-Moliner, J., & Pertusa-Ortega, E. M. (2012). Mixed methods studies in entrepreneurship research: Applications and contributions. *Entrepreneurship and Regional Development: An International Journal*, 24(5/6), 425–456. doi:10.1080/08985626.2011.603363
- Molino, M., Dolce, V., Cortese, C. G., & Ghislieri, C. (2018). Personality and social support as determinants of entrepreneurial intention. Gender differences in Italy. *PLoS One*, 13(6), e0199924. doi:10.1371/journal.pone.0199924 PMID:29953517
- Mollick, E. R., & Kuppaswamy, V. (2014). *After the Campaign: Outcomes of Crowdfunding*. UNC Kenan-Flagler Research Paper No. 2376997. Available at SSRN: <https://ssrn.com/abstract=2376997>
- Mollick, E. R. (2014). The dynamics of crowdfunding: An exploratory study. *Journal of Business Venturing*, 29(1), 1–16. doi:10.1016/j.jbusvent.2013.06.005
- Monitor, G. E. (2013). *Uma década de Empreendedorismo em Portugal*. Lisboa: GEM Portugal.
- Monzón, J. L. (2006). Economía Social y conceptos afines: Fronteras borrosas y ambigüedades conceptuales del Tercer Sector. *CIRIEC-España. C.I.R.I.E.C. España*, 56, 9–24.
- Monzón, J. L., & Chaves, R. (2008). The European social economy: Concept and dimensions of the third sector. *Annals of Public and Cooperative Economics*, 79(3-4), 549–577. doi:10.1111/j.1467-8292.2008.00370.x
- Monzón, J. L., & Chaves, R. (2012). *The Social Economy in the European Union*. European Economic and Social Committee.
- Monzón, J. L., & Chaves, R. (2017). *Recent evolutions of the Social Economy in the European Union*. European Economic and Social Committee, EESC-CIRIEC.
- Moran, P. (2005). Structural vs. relational embeddedness: Social capital and managerial performance. *Strategic Management Journal*, 26(12), 1129–1151. doi:10.1002/mj.486
- Mordi, C., Simpson, R., Singh, S., & Okafor, C. (2010). The role of cultural values in understanding the challenges faced by female entrepreneurs in Nigeria. *Gender in Management*, 25(1), 5–21. doi:10.1108/17542411011019904
- Moreira, A. C., Dantas, J. G., & Valente, F. (2017). *Nascent Entrepreneurship and Successful New Venture Creation*. IGI Global.
- Moreira, A. C., & Martins, S. L. (2009). CRER: An integrated methodology for the incubation of business ideas in Portugal. *Journal of Enterprising Communities*, 3(2), 176–192. doi:10.1108/17506200910960860
- Moriano León, J. A., Palací Descals, F. J., & Morales Domínguez, J. F. (2006). El perfil psicosocial del emprendedor universitario. *Revista de Psicología del Trabajo y de las Organizaciones*, 22(1).
- Moritz, A., & Block, J. H. (2016). Crowdfunding: A Literature Review and Research Directions. In *Crowdfunding in Europe* (pp. 25-53). Springer, Cham. doi:10.1007/978-3-319-18017-5\_3
- Morris, M. H., Pryor, C. G., Schindehutte, M., & Kuratko, D. F. (2012). *Entrepreneurship as Experience: How Events Create Ventures and Ventures Create Entrepreneurs*. Edward Elgar Publishing Ltd. doi:10.4337/9781781005187
- Mortazavi, S. H., & Bahrami, M. (2012). Integrated approach to entrepreneurship – knowledge based economy: A conceptual model. International Conference on Leadership, Technology and Innovation Management. *Procedia: Social and Behavioral Sciences*, 41, 281–287. doi:10.1016/j.sbspro.2012.04.032
- Moudry, D. V., & Thaichon, P. (2020). Enrichment for retail businesses: How female entrepreneurs and masculine traits enhance business success. *Journal of Retailing and Consumer Services*, 54, 102068. doi:10.1016/j.jretconser.2020.102068

## Compilation of References

- Moulaert, F., & Ailenei, O. (2005). Social economy, third sector and solidarity relations: A conceptual synthesis from history to present. *Urban Studies (Edinburgh, Scotland)*, 42(11), 2037–2053. doi:10.1080/00420980500279794
- Moyo, J. (2016). *Graduates living in Poverty*. Retrieved June 1, 2020, from <https://www.dandc.eu/en/article/many-university-graduates-zimbabwe-are-unemployed>
- Mueller, P. (2006). Entrepreneurship in the region: Breeding ground for nascent entrepreneurs? *Small Business Economics*, 27(1), 41–58. doi:10.1007/11187-006-6951-7
- Mueller, S. L., & Thomas, A. S. (2001). Culture and entrepreneurial potential: A nine country study of locus of control and innovativeness. *Journal of Business Venturing*, 16(1), 51–75. doi:10.1016/S0883-9026(99)00039-7
- Mumford, M. D. (2003). Where have we been, where are we going? Taking stock in creativity research. *Creativity Research Journal*, 15(2-3), 107–120. doi:10.1080/10400419.2003.9651403
- Mungaray-Moctezuma, A. B., Perez-Nunez, S. M., & Lopez-Leyva, S. (2015). Knowledge-based economy in Argentina, Costa Rica and Mexico: A comparative analysis from the bio-economy perspective. *Management Dynamics in the Knowledge Economy*, 3(2), 213–236.
- Munir, H., Jianfeng, C., & Ramzan, S. (2019). Personality traits and theory of planned behavior comparison of entrepreneurial intentions between an emerging economy and a developing country. *International Journal of Entrepreneurial Behaviour & Research*, 25(3), 554–580. doi:10.1108/IJEER-05-2018-0336
- Munyanyi, W. (2013). Agriculture infrastructure development imperative for sustainable food production: A Zimbabwe perspective. *Russian Journal of Agricultural and Socio-Economic Sciences*, 24(12), 13–21. doi:10.18551/rjoas.2013-12.02
- Murnieks, C. Y., Klotz, A. C., & Shepherd, D. (2019). Entrepreneurial motivation: A review of the literature and an agenda for future research. *Journal of Organizational Behavior*, 41(2), 115–143. doi:10.1002/job.2374
- Mustar, P., Renault, M., Colombo, M., Piva, E., Fontes, M., Lockett, A., Wright, M., Clarysse, B., & Moray, N. (2006). Conceptualising the heterogeneity of research-based spin-offs: A multi-dimensional taxonomy. *Research Policy*, 35(2), 289–308. doi:10.1016/j.respol.2005.11.001
- Musthofa, W. S., Farida, N., & Ngatno. (2017). Effect of entrepreneurial orientation on business performance. *International Journal of Civil Engineering and Technology*, 8(9), 82-90. Available from: <http://http://www.iaeme.com/ijciet/issues.asp?JType=IJCIET&VType=8&IType=9>
- Mwasalwiba, E. (2010). Entrepreneurship education: A review of its objectives, teaching methods, and impact indicators. *Education + Training*, 52(1), 20–47. doi:10.1108/00400911011017663
- Mwenje, S. (2016). The challenge of graduate unemployment: A case of university graduates in the City of Mutare-Zimbabwe. *International Journal of Innovative Social Sciences and Humanities Research*, 4(4), 50–57.
- Nair, S. R. (2016). Women entrepreneurship across nations. In *Handbook of Research on Entrepreneurship in the Contemporary Knowledge-Based Global Economy* (pp. 189–216). IGI Global., doi:10.4018/978-1-4666-8798-1.ch009
- Najmi, H. S., Bashir, D., & Zia, M. (2015). *Socioeconomic Impact of Microfinance on Borrowers: A Case Study of NRSP Bank Minchanabad*. Academic Press.
- Naldi, L., Nordqvist, M., Sjöberg, K., & Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33–47. doi:10.1111/j.1741-6248.2007.00082.x
- Nasiri, N., & Hamelin, N. (2018). Entrepreneurship driven by opportunity and necessity: Effects of educations, gender, and occupation in MENA. *Asian Journal of Business Research*, 8(2), 57–71. doi:10.14707/ajbr.180049



- Nasir, S. (2013). Microfinance in India: Contemporary issues and challenges. *Middle East Journal of Scientific Research*, 15(2), 191–199.
- Nasir, S., & Farooqi, S. (2016). Impact of Microfinance on Women Empowerment with Special Reference to District Aligarh (India). *Middle East Journal of Scientific Research*, 24(3), 491–497.
- Natarajan, R., & Angur, M. G. (2014). Innovative ability and entrepreneurial activity: Two factors to enhance “quality of life”. *Journal of Business and Industrial Marketing*, 29(6), 469–475. doi:10.1108/JBIM-09-2013-0205
- Natário, M. M. S., Braga, A. M. M., & Fernandes, G. J. P. (2015). Entrepreneurship in Frontier Regions: Study of Four Municipalities from BIN. *Revista de Estudios Regionales*, 104, 83–109.
- Natário, M. M., Braga, A. M., & Fernandes, G. P. (2018). Determinantes do desempenho empreendedor e inovador nas regiões transfronteiriças. *Innovar (Universidad Nacional de Colombia)*, 28(70), 39–54. doi:10.15446/innovar.v28n70.74445
- Naudé, W. A. (2010). Entrepreneurship, developing countries and development economics: New approaches and insights. *Small Business Economics Journal*, 34(1), 1–12. doi:10.1007/11187-009-9198-2
- Naudé, W., Amorós, J. E., & Cristi, O. (2014). “Surfeiting, the appetite may sicken”: Entrepreneurship and happiness. *Small Business Economics*, 42(3), 523–540. doi:10.1007/11187-013-9492-x
- Nazareno, J., Zhou, M., & You, T. (2019, August 13). Global dynamics of immigrant entrepreneurship: Changing trends, ethnonational variations, and reconceptualizations. *International Journal of Entrepreneurial Behaviour and Research*. doi:10.1108/IJEER-03-2018-0141
- Ndiweni, E., & Verhoeven, H. A. L. (2013). The rise of informal entrepreneurs in Zimbabwe: Evidence of economic growth or failure of economic policies? *African Journal of Accounting, Auditing and Finance*, 2(3), 260–276.
- Ndofirepi, T. M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: Psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(2), 1–20. doi:10.1186/13731-020-0115-x
- Ndofor, H. A., & Priem, R. L. (2011). Immigrant Entrepreneurs, the Ethnic Enclave Strategy, and Venture Performance. *Journal of Management*, 37(3), 790–818. doi:10.1177/0149206309345020
- Neergaard, H., & Ulhøi, J. P. (2007). *Handbook of qualitative research methods in entrepreneurship*. Edward Elgar. doi:10.4337/9781847204387
- Neffke, F., Henning, M., & Boschma, R. (2012). The impact of aging and technological relatedness on agglomeration externalities: A survival analysis. *Journal of Economic Geography*, 12(2), 485–517. doi:10.1093/jeg/lbr001
- Netherlands Offices for Science and Technology. (2013). *The bio-based economy in the Netherlands*. NL Agency Ministry of Economic Affairs.
- Newbert, S. L., & Tornikoski, E. T. (2013). Resource acquisition in the emergence phase: Considering the effects of embeddedness and resource dependence. *Entrepreneurship Theory and Practice*, 37(2), 249–280. doi:10.1111/j.1540-6520.2011.00461.x
- Newstead, T., Dawkins, S., Macklin, R., & Martin, A. (2019). The virtues project: An approach to developing good leaders. *Journal of Business Ethics*. Advance online publication. doi:10.1007/10551-019-04163-2
- Newstead, T., Macklin, R., Dawkins, S., & Martin, A. (2018). What is virtue? Advancing the conceptualization of virtue to inform positive organizational inquiry. *The Academy of Management Perspectives*, 32(4), 443–457. doi:10.5465/amp.2016.0162

## Compilation of References

- Ngoasong, M. (2018). Digital entrepreneurship in a resource-scarce context: A focus on entrepreneurial digital competencies. *Journal of Small Business and Enterprise Development*, 25(3), 483–500. doi:10.1108/JSBED-01-2017-0014
- Nguyen, A.-M. D., & Benet-Martínez, V. (2007). Biculturalism unpacked: Components, measurement, individual differences, and outcomes. *Social and Personality Psychology Compass*, 1(1), 101–114. doi:10.1111/j.1751-9004.2007.00029.x
- Nguyen, A.-M. D., & Benet-Martínez, V. (2013). Biculturalism and Adjustment: A Meta-Analysis. *Journal of Cross-Cultural Psychology*, 44(1), 122–159. doi:10.1177/0022022111435097
- Ng, Y. (2001). Is Public Spending Good for You? *World Economy*, 2(2), 1–19.
- Nhuta, S., & Mukumba, E. (2017). Empowerment of Zimbabwean women through entrepreneurship an economic and social perspective. *International Journal of Management and Social Sciences*, 7(3), 373–409. doi:10.21013/jmss.v7.n3.p1
- Nickell, S., Nicolitsas, D., & Dryden, N. (1997). What makes firms perform well? *European Economic Review*, 41(3-5), 783–796. doi:10.1016/S0014-2921(97)00037-8
- Nicolaou, N., Lockett, A., Ucbasaran, D., & Rees, G. (2019). Exploring the potential and limits of a neuroscientific approach to entrepreneurship. *International Small Business Journal: Researching, Entrepreneurship.*, 37(6), 557–580. doi:10.1177/0266242619843234
- Nicolaou, N., Shane, S., Cherkas, L., Hunkin, J., & Spector, T. (2008). Is the tendency to engage in entrepreneurship genetic? *Management Science*, 54(1), 167–179. doi:10.1287/mnsc.1070.0761
- Nicolaou, N., Shane, S., Cherkas, L., & Spector, T. (2009). Opportunity recognition and the tendency to be an entrepreneur: A bivariate genetics perspective. *Organizational Behavior and Human Decision Processes*, 110(2), 108–117. doi:10.1016/j.obhdp.2009.08.005
- Nidhi, N., & Kumari, K. (2018). Personality traits as determinants of entrepreneur intention: A study on college students. *International Journal for Research in Engineering Application & Management*, 4(5), 34–39. doi:10.18231/2454-9150.2018.0582
- Nielsen, J., Stojanović-Aleksić, V., & Bošković, A. (2020). Promoting Entrepreneurship in HEIs: Leading and Facilitating University Spin-Off Ventures. In V. Babic & Z. Nedelko (Eds.), *Handbook of Research on Enhancing Innovation in Higher Education Institutions* (pp. 216–238). IGI Global. doi:10.4018/978-1-7998-2708-5.ch010
- Nieman, G., Hough, J., & Nieuwenhuizen, C. (2007). *Entrepreneurship: A South African perspective* (8th ed.). Van Schaik Publishers.
- Nikolka, T. (2012). *Admission Criteria and Policies for Immigrant entrepreneurs in OECD Countries*. Academic Press.
- Nishimura, J. S., & Tristán, O. M. (2011). Using the theory of planned behavior to predict nascent entrepreneurship [Utilizando la teoría del comportamiento planeado para predecir el emprendimiento naciente]. *Academia (Caracas)*, (46), 55–71. www.scopus.com
- Nishimura, J. S., & Tristán, O. M. (2011). Using the theory of planned behavior to predict nascent entrepreneurship. *Academia (Caracas)*, 46, 55–71.
- Njaya, T. (2015). Informal sector, panacea to the high unemployment in Zimbabwe? Case of informal sector enterprises of Harare Metropolitan. *International Journal of Research in Humanities and Social Studies*, 2(2), 97–106.
- Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company. How Japanese companies create the dynamics of innovation*. Oxford University Press.

- Nyoni, T. (2018). *The entrepreneurship miracle: A desperate move to rectify Zimbabwe's socio-economic herculean?* Retrieved June 1, 2020, from [https://mpra.ub.uni-muenchen.de/87735/1/MPRA\\_paper\\_87735.pdf](https://mpra.ub.uni-muenchen.de/87735/1/MPRA_paper_87735.pdf)
- O'Donnell, A., Gilmore, A., Cummins, D., & Carson, D. (2001). The network construct in entrepreneurship research: A review and critique. *Management Decision*, 39(9), 749–760. doi:10.1108/EUM0000000006220
- O'Neill, R. C. (2008). Is sufficient attention being given to the development of women entrepreneurs, especially the support of entrepreneurial initiatives emerging from poor people? Dialogue on poverty reduction strategies and interventions, Poverty and Women. *Public Service Commission*, 1, 1–9.
- O'Reilly, P. (2017). *Making the bioeconomy market: A review of international literature*. A Report of the Bio-Éire Project Funded by the Department of Agriculture, Food and the Marine's Competitive Research Programme.
- O'Sullivan, D., & Haklay, M. (2000). Agent-based models and individualism: Is the world agent-based? *Environment & Planning A*, 32(8), 1409–1425. doi:10.1068/a32140
- Obschonka, M., Silbereisen, R. K., Schmitt-Rodermund, E., & Stuetzer, M. (2011). Nascent entrepreneurship and the developing individual: Early entrepreneurial competence in adolescence and venture creation success during the career. *Journal of Vocational Behavior*, 79(1), 121–133. doi:10.1016/j.jvb.2010.12.005
- Odewale, G., Rani, S., Migiro, S., & Adeyeye, O. (2019). Does communication skills matter to a nascent entrepreneur? *Journal of Contemporary Management*, 16(1), 209–225. doi:10.35683/jcm18038.0011
- Odinokova, T., Bozhinova, M., & Petrova, M. (2018). Promotion of innovative entrepreneurship under sustainable development. E3S Web of Conferences 41, 04015. *IIIrd International Innovative Mining Symposium*. doi: 10.1051/e3sconf/20184104015
- OECD - Organisation for Economic Co-operation and Development. (2019). *OECD SME and Entrepreneurship Outlook 2019*. OECD Publishing. doi:10.1787/34907e9c
- OECD. (2011). *Families are changing. Doing better for families*. <http://www.oecd.org/els/familiesandchildren/47701118.pdf>
- OECD. (2017). *Relatórios económicos da OCDE Portugal*. Organisation for Economic Co-operation and Development - Economic Surveys.
- OECD. (2018). *International Migration Outlook 2018*. OECD., doi:10.1787/migr\_outlook-2018-
- OECD. (2020). *Working age population (indicator)*. doi:10.1787/d339918b-en
- Oguntuase, O. J. (2019). Bioeconomy: An opportunity for entrepreneurial development in Nigeria. *MTU Journal of Entrepreneurship and Sustainable Development*, 1(1), 124–134.
- Oguntuase, O. J. (2020). Academic entrepreneurship, bioeconomy, and sustainable development. In J. G. L. Dantas & L. C. Carvalho (Eds.), *Handbook of research on approaches to alternative entrepreneurship opportunities* (pp. 32–57). IGI Global. doi:10.4018/978-1-7998-1981-3.ch003
- Oguntuase, O. J., & Adu, O. B. (2020). Bioeconomy as climate action: How ready are African countries? In L. W. Leal, N. Ogugu, L. Adelake, D. Ayal, & I. da Silva (Eds.), *African Handbook of Climate Change Adaptation* (pp. 1–15). Springer. doi:10.1007/978-3-030-42091-8\_82-1
- Oguntuase, O. J., Adu, O. B., & Obayori, O. S. (2018). Stimulating diffusion of bio-based products: The role of responsible research and innovation (RRI) approach. *Journal of Research and Review in Science*, 5, 130–135.
- Okoyeuzu, C., Nwakoby, I., & Onwujekwe, O. (2019). Crowdfunding: An Alternative to Funding Women Entrepreneurs. *South Asian Journal of Social Studies and Economics*, 5(2), 1–10. doi:10.9734ajsse/2019/v5i230140

## Compilation of References

- Olomi, D., & Sinyamule, R. (2009). Entrepreneurial inclinations of vocational education students: A comparative study of male and female trainees in Iringa region, Tanzania. *Journal of Enterprising Culture*, 17(1), 103–125. doi:10.1142/S0218495809000242
- Olsson, O., Bruce, L., Roos, A., Hektor, B., Guisson, R., & Lamers, P. (2016). *Cascading of woody biomass: Definitions, policies and effects on international trade. IEA Bioenergy Task 40*. Retrieved from <http://task40.ieabioenergy.com/wp-content/uploads/2013/09/t40-cascading-2016.pdf>
- Omoredé, A., Thorgren, S., & Wincent, J. (2015, December). (21015). Entrepreneurship psychology: A review. *The International Entrepreneurship and Management Journal*, 11(4), 743–768. doi:10.1007/11365-014-0307-6
- Oosterbeek, H., Van Praag, M., & Ijsselstein, A. (2010). The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), 442–454. doi:10.1016/j.euroecorev.2009.08.002
- Organization of Economic Cooperation and Development. (1996). *The knowledge-based economy*. OECD.
- Orhan, M., & Scott, D. (2001). Why women enter into entrepreneurship: An explanatory model. *Women in Management Review*, 16(5), 232–247. doi:10.1108/09649420110395719
- Oviatt, B. M., & McDougall, P. P. (2004). Toward a theory of international new ventures. *Journal of International Business Studies*, 36(1), 29–41. doi:10.1057/palgrave.jibs.8400128
- Pal'ová, D., Vejačka, M., & Kakalejčík, L. (2020). Project-based learning as a tool of enhancing of entrepreneurial attitude of students. *Advances in Science. Technology and Engineering Systems*, 5(1), 346–354. doi:10.25046/aj050144
- Palatnik, R. R., & Zilberman, D. (2017). Economics of natural resource utilization - the case of macroalgae. In A. Pinto & D. Zilberman (Eds.), *Modeling, dynamics, optimization and bioeconomics II* (pp. 1–21). Springer. doi:10.1007/978-3-319-55236-1\_1
- Parasuraman, S., & Simmers, C. A. (2001). Type of employment, work–family conflict and well-being: A comparative study. *Journal of Organizational Behavior*, 22(5), 551–568. doi:10.1002/job.102
- Parhankangas, A., Mason, C., & Landström, H. (2019). Crowdfunding: an introduction. In A. Parhankangas, C. Mason, & H. Landström (Eds.), *Handbook of Research on Crowdfunding* (pp. 1–21). Edward Elgar Publishing Limited. doi:10.4337/9781788117210.00005
- Parker, S. C. (2011). Intrapreneurship or entrepreneurship? *Journal of Business Venturing*, 26(1), 19–34. doi:10.1016/j.jbusvent.2009.07.003
- Parker, S. C., & Belghitar, Y. (2006). What happens to nascent Entrepreneurs? An econometric analysis of the PSED. *Small Business Economics*, 27(1), 81–101. doi:10.1007/11187-006-9003-4
- Park, G., Shin, S. R., & Choy, M. (2020). Early mover (dis)advantages and knowledge spillover effects on blockchain startups' funding and innovation performance. *Journal of Business Research*, 109(March), 64–75. doi:10.1016/j.jbusres.2019.11.068
- Park, O.-C., & Hopkins, R. (1993). Instructional conditions for using dynamic visual displays: A review. *Instructional Science*, 21(6), 427–449. doi:10.1007/BF00118557
- Paschen. (2017). Choose wisely: Crowdfunding through the stages of the startup life cycle. *Business Horizons*, 60, 179–188.
- Pasculea, M. (2015). Perspectives on developing the bioeconomy sector in Romania. *Annales Universitatis Apulensis Series Oeconomica*, 17(1), 39–45. doi:10.29302/oeconomica.2015.17.1.3

- Patermann, C., & Aguilar, A. (2017). The origins of the bioeconomy in the European Union. *New Biotechnology*, 25, 20–24. doi:10.1016/j.nbt.2017.04.002 PMID:28411152
- Patton, M. Q. (2005). Qualitative Research. In *Encyclopedia of Statistics in Behavioral Science*. Chichester, UK: John Wiley & Sons, Ltd. doi:10.1002/0470013192.bsa514
- Pennicott Wilderness Journeys. (2020). Community sustainability. *Pennicott Wilderness Journeys*. Retrieved March, 22, 2020, from <https://www.pennicottjourneys.com.au/about/community>
- Peranginangin, J., & Bakar, U. A. (2020). Antecedents of developing entrepreneurial orientation among college students in Indonesia. *International Journal of Scientific and Technology Research*, 9(2), 3230–3237.
- Pérez-Fernández, H., Delgado-García, J. B., Martín-Cruz, N., & Rodríguez-Escudero, A. I. (2020). The Role of Affect in the Development of Entrepreneurial Intentions. *Entrepreneurship Research Journal*, 20190124(0). Advance online publication. doi:10.1515/erj-2019-0124
- Pérez, M. P., & Sánchez, A. M. (2003). The development of university spin-offs: Early dynamics of technology transfer and networking. *Technovation*, 23(10), 823–831. doi:10.1016/S0166-4972(02)00034-2
- Perlack, R. D., Wright, L. L., Turhollow, A. F., Graham, R. L., Stokes, B. J., & Erbach, D. C. (2005). *Biomass as feedstock for a bioenergy and byproducts industry: The technical feasibility of a billion-ton annual supply*. U.S. Department of Energy and U.S. Department of Commerce.
- Peters, N. (2002). Mixed embeddedness: Does it really explain immigrant enterprise in Western Australia (WA)? *International Journal of Entrepreneurial Behaviour & Research*, 8(1/2), 32–53. doi:10.1108/13552550210423705
- Peterson, R. (1985). Raising risk-takers. *Metropolitan Toronto Business Journal*, 75(7), 30–34.
- Peterson, R. A., & Altounian, D. (2019). Self-perceived Performance of Female-owned Firms and Male-owned Firms: Insights from Black and Mexican-American Entrepreneurs. In V. L. Crittenden (Ed.), *Go-to-Market Strategies for Women Entrepreneurs* (pp. 95–105). Emerald Publishing Limited., doi:10.1108/978-1-78973-289-420191014
- Petridou, E., Sarri, A., & Kyrgidou, L. P. (2009). Entrepreneurship education in higher educational institutions: The gender dimension. *Gender in Management*, 24(4), 286–309. doi:10.1108/17542410910961569
- Pettersson, K. (2012). Support for women’s entrepreneurship: A Nordic spectrum. *International Journal of Gender and Entrepreneurship*, 4(1), 4–19. doi:10.1108/17566261211202954
- Pfau, S.F., Hagens J.E., Dankbaar, B., & Smits, A.J.M. (2014). Visions of sustainability in bioeconomy research. *Sustainability*, 6(3), 1222-1249. doi: 10.339./su6031222
- Pfeiffer, F., & Reuß, K. (2007). *Age-dependent skill formation and returns to education: simulation based evidence*. IZA Discussion Paper N°. 2882. Retrieved August, 30, 2016, from <http://ftp.iza.org/dp2882.pdf>
- Phillips, W., Lee, H., Ghobadian, A., O’Regan, N., & James, P. (2015). Social innovation and social entrepreneurship: A systematic review. *Group & Organization Management*, 40(3), 428–461. doi:10.1177/1059601114560063
- Philp, J.C. (2018, November). *Realizing the circular bioeconomy*. OECD Science, Technology and Industry Policy Paper No 60.
- Pierce, S., Gould, D., & Camiré, M. (2017). Definition and model of life skills transfer. *International Review of Sport and Exercise Psychology*, 10(1), 186–211. doi:10.1080/1750984X.2016.1199727
- Pines, A. M., Lerner, M., & Schwartz, D. (2010). Gender differences in entrepreneurship: Equality, diversity and inclusion in times of global crisis. *Equality, Diversity and Inclusion*, 29(2), 186–198. doi:10.1108/02610151011024493

## Compilation of References

- Pines, A., Lerner, M., & Schwartz, D. (2012). Gender differences among social vs. business entrepreneurs. Social entrepreneurship. In T. Burger-Helmchen (Ed.), *Entrepreneurship - Gender, geographies and social context* (pp. 171–190). InTech.
- Piotrowski, A. (2020). Aussie farm goes from brink of collapse to Chinese tourism hotspot. *Nine Now*. Retrieved March, 12, 2020, from <https://9now.nine.com.au/a-current-affair/bridestow-lavender-estate-online-tourist-hotspot-tasmania/fe3ffb14-0d5b-4f7a-9667-ed66f7361d31>
- Pirnay, F., Surlemont, B., & Nlemvo, F. (2003). Toward a Typology of University Spin-offs. *Small Business Economics*, 21(4), 355–369. doi:10.1023/A:1026167105153
- Planko, J., Cramer, J., Hekkert, M. P., & Chappin, M. M. H. (2017). Combining the technological innovation systems framework with the entrepreneurs' perspective on innovation. *Technology Analysis and Strategic Management*, 29(6), 614–625. doi:10.1080/09537325.2016.1220515
- Platt, L. (2014). Is there assimilation in minority groups' national, ethnic and religious identity? *Ethnic and Racial Studies*, 37(1), 46–70. doi:10.1080/01419870.2013.808756
- Pluess, M. (2015). Individual differences in environmental sensitivity. *Child Development Perspectives*, 9(3), 138–143. doi:10.1111/cdep.12120
- Pokhriyal, A. K., Rani, R., & Uniyal, J. (2014). Role of micro-finance in the empowerment of the women. *Journal of Business and Finance*, 2(1), 21–31.
- Porter, M.E., & Kramer, M.R. (2003). *Corporate philanthropy: Taking the high ground*. Foundation Strategy Group, document n° 13.
- Porter, M. E. (2008). The Five Competitive Forces that Shape Strategy. *Harvard Business Review*, 86, 78–93. <http://search.ebscohost.com/login.aspx?direct=true&db=bth&AN=28000138&site=eds-live> PMID:18271320
- Porter, M. E., & Kramer, M. R. (2002). The competitive advantage of corporate philanthropy. *Harvard Business Review*, 80(12), 56–69. PMID:12510538
- Portes, A. (2001). Introduction: The debates and significance of immigrant transnationalism. *Global Networks*, 1(3), 181–194. doi:10.1111/1471-0374.00012
- Portes, A., & Rumbaut, R. G. (2001). *Legacies : the story of the immigrant second generation*. University of California Press.
- Portugal, J. A. (2015). *Relatório anual 2014/2015. Inspiring young mind's*. Retrieved June, 21, 2016, from [http://japortugal.org/index.php?option=com\\_attachments&task=download&id=99](http://japortugal.org/index.php?option=com_attachments&task=download&id=99)
- Powell, D. (2019). Women-only ride –sharing startup Shebah bags \$3 million in biggest-ever equity crowdfunding raise. *Smart Company*. Retrieved March 22, 2020, from <https://www.smartcompany.com.au/startupsmart/news/shebah-3-million-equity-crowdfunding/>
- Prencipe, A., Corsi, C., Rodríguez-Gulías, M., Fernández-López, S., & Rodeiro-Pazos, D. (2020). Influence of the regional entrepreneurial ecosystem and its knowledge spillovers in developing successful university spin-offs. *Socio-Economic Planning Sciences*. doi:10.1016/j.seps.2020.100814
- Price, D. P., Stoica, M., & Boncella, R. J. (2013). The relationship between innovation, knowledge, and performance in family and non-family firms: An analysis of SMEs. *Journal of Innovation and Entrepreneurship*, 2(1), 14. doi:10.1186/2192-5372-2-14

- Priede, T., Hilliard, I., & López-Cózar, C. (2014). Parallel Paths—A Comparison of CSR Firms and Social Enterprises. *Journal of US-China Public Administration*, 11(10), 852–861.
- Priede, T., López-Cózar, C., & Rodríguez, Á. (2014). Análisis del marco económico-jurídico específico para los emprendedores sociales. Un estudio comparado entre diversos países. *CIRIEC-España, Revista de Economía Pública. Social y Cooperativa*, 80, 4–28.
- Pujol, J., Vendrell, P., Junque, C., Martf-Vilalta, J., & Capdevila, A. (1993). When does human brain development end? Evidence of corpus callosum growth up to adulthood. *Annals of Neurology*, 34(1), 71–75. doi:10.1002/ana.410340113 PMID:8517683
- Pyka, A., & Prettnner, K. (2018). Economic growth, development, and innovation: The transformation towards a knowledge-based bioeconomy. In I. Lewandowski (Ed.), *Bioeconomy: Shaping the transition to a sustainable, biobased economy* (pp. 331–342). Springer. doi:10.1007/978-3-319-68152-8\_11
- Pyke, K., & Dang, T. (2003). “FOB” and “Whitewashed”: Identity and Internalized Racism Among Second Generation Asian Americans. *Qualitative Sociology*, 26(2), 147–172. doi:10.1023/A:1022957011866
- Qamruzzaman, M., & Ferdaous, J. (2014). Building a knowledge-based economy in Bangladesh. *Asian Business Review*, 4(3), 41–49. doi:10.18034/abr.v4i3.266
- Qian, H., & Acs, Z. J. (2013). An absorptive capacity theory of knowledge spillover entrepreneurship. *Small Business Economics*, 40(2), 185–197. doi:10.1007/11187-011-9368-x
- Qian, H., Acs, Z., & Stough, R. (2013). Regional systems of entrepreneurship: The nexus of human capital, knowledge and new firm formation. *Journal of Economic Geography*, 13(4), 559–587. doi:10.1093/jeg/lbs009
- Ramcilovic-Suominen, S., & Pülzl, H. (2018). Sustainable development – A ‘selling point’ of the emerging EU bioeconomy policy framework? *Journal of Cleaner Production*, 172, 4170–4180. doi:jclepro.2016.12.157 doi:10.1016/j
- Ram, M., & Jones, T. P. (2008). Ethnic-minority businesses in the UK: A review of research and policy developments. *Environment and Planning. C, Government & Policy*, 26(2), 352–374. doi:10.1068/c0722
- Ranagem, H. (2015). Stakeholder management in reality: Moving from conceptual frameworks to operational strategies and interactions. *Sustainable Production and Consumption*, 3, 21–33. doi:10.1016/j.spc.2015.07.008
- Rao, P. H. (2008). *Greening the supply chain: A guide for Asian managers*. SAGE Publications India.
- Rasel, B. U. A. (2014). *Opportunity-driven immigrant entrepreneurship: A comparative case study of immigrant entrepreneurship in the Norwegian-host country context* (Master thesis). University of Oslo, Norway.
- Rasel, B. U. A. (2014). *Opportunity-driven Immigrant Entrepreneurship*. University of Oslo.
- Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin-off venture emergence. *Journal of Management Studies*, 48(6), 1314–1345. doi:10.1111/j.1467-6486.2010.00995.x
- Rath, J., & Kloosterman, R. C. (2000). Outsiders’ Business: A Critical Review of Research on Immigrant Entrepreneurship. *The International Migration Review*, 34(3), 657–681. doi:10.2307/2675940
- Rath, J., & Swagerman, A. (2011). Promoting ethnic entrepreneurship in European cities. *Network (Bristol, England)*. Advance online publication. doi:10.1177/1745691612459060

## Compilation of References

Rauch, A., & Frese, M. (2000). Psychological approaches to entrepreneurial success: A general model and an overview of findings. In C. Cooper & I. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 101–142). Wiley.

Rauch, A., & Frese, M. (2007). Let's put the person back into entrepreneurship research: A meta-analysis on the relationship between business owners' personality traits, business creation, and success. *European Journal of Work and Organizational Psychology*, 16(4), 353–385. doi:10.1080/13594320701595438

Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning & Education*, 14(2), 187–204. doi:10.5465/amle.2012.0293

Rauch, A., Wiklund, J., Lumpkin, G., & Frese, M. (2009). Entrepreneurial orientation and business performance: An assessment of past research and suggestions for the future. *Entrepreneurship Theory and Practice*, 33(3), 761–787. doi:10.1111/j.1540-6520.2009.00308.x

Raufflet, E., Cruz, L. B., & Bres, L. (2014). An assessment of corporate social responsibility practices in the mining and oil and gas industries. *Journal of Cleaner Production*, 84, 256–270. doi:10.1016/j.jclepro.2014.01.077

Ray, D. M. (1994). The role of risk-taking in Singapore. *Journal of Business Venturing*, 9(2), 157–177. doi:10.1016/0883-9026(94)90007-8

Razin, E., & Langlois, A. (1996). Metropolitan Characteristics and Entrepreneurship among Immigrants and Ethnic Groups in Canada. *The International Migration Review*, 30(3), 703–727. doi:10.1177/019791839603000303

Razzaq, S., Maqbool, N., & Hameed, W. U. (2019). Factors Effecting The Elasticity Of Micro Credit Demand In Southern Punjab, Pakistan. *International Journal of Social Sciences and Economic Review*, 1(2), 46–53. doi:10.36923/ijsser.v1i2.34

Rebernik, M., Tominc, P., Crnogaj, K., Bradač Hojnik, B., Rus, M., & Širec, K. (2018). *The growth of entrepreneurial aspirations*. University of Maribor Press.

Rebernik, M., Tominc, P., Crnogaj, K., Širec, K., Bradač Hojnik, B., & Rus, M. (2016). *Entrepreneurship between opportunity and necessity: GEM Slovenia 2015*. University of Maribor Press.

Redford, D. (2006). Entrepreneurship education in Portugal: 2004/2005 national survey. *Comportamento Organizacional e Gestão*, 12(1), 19–41.

Renko, M., Kroeck, K. G., & Bullough, A. (2012). Expectancy theory and nascent entrepreneurship. *Small Business Economics*, 39(3), 667–684. doi:10.1007/11187-011-9354-3

Republic of South Africa. (1995). *National strategy for the development and promotion of small business in South Africa*. Government Printer.

Republic of South Africa. (1995). *National strategy for the development and promotion of small business: White Paper*. <https://www.gov.za/documents/national-strategy-development-and-promotion-small-business-white-paper>

Republic of South Africa. (2004). *National Small Business Act, No. 29*. <http://www.info.gov.za/view/DownloadFileAction?id=67967>

Reynolds, P. D., & Curtin, R. T. (2007). *Panel study of entrepreneurial dynamics program rationale and description*. Academic Press.

Reynolds, P. (2008). Screening item effects in estimating the prevalence of nascent entrepreneurs. *Small Business Economics*, 33(2), 151–163. doi:10.1007/11187-008-9112-3



- Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. (2001). *The Global Entrepreneurship Monitor 2001 Executive Report*. London Business School and Babson College.
- Reynolds, P. D., Camp, S. M., Bygrave, W. D., Autio, E., & Hay, M. (2002). *Global Entrepreneurship Monitor: 2001 summary report*. London Business School.
- Reynolds, P. D., Carter, N. M., Gartner, W. B., & Greene, P. G. (2004). The prevalence of nascent entrepreneurs in the United States: Evidence from the panel study of entrepreneurial dynamics. *Small Business Economics*, 23(4), 263–284. doi:10.1023/B:SBEJ.0000032046.59790.45
- Reynolds, P. D., Hay, M., Bygrave, W. D., Camp, S. M., & Autio, E. (1999). *Global Entrepreneurship Monitor: 2000 Executive Report*. Kauffman Center for Entrepreneurial Leadership.
- Reynolds, P. D., & White, S. B. (1992). Finding the nascent entrepreneur: Network sampling and entrepreneurship gestation. *Frontiers of Entrepreneurship Research*, 12, 199–209.
- Reynolds, P., Bosma, N., Autio, E., Hunt, S., De Bono, N., Servais, I., Lopez-Garcia, P., & Chin, N. (2005). Global entrepreneurship monitor: Data collection design and implementation 1998-2003. *Small Business Economics*, 24(3), 205–231. doi:10.1007/11187-005-1980-1
- Ridley, M. (2011). *Nature via Nurture – Genes, Experience and what Makes us Human*. Fourth Estate.
- Robinson, P. B., Stimpson, D. V., Huefner, J. C., & Hunt, H. K. (1991). An attitude approach to the prediction of entrepreneurship. *Entrepreneurship Theory and Practice*, 15(4), 13–32. doi:10.1177/104225879101500405
- Rodino, S., Butu, A., Gheorghe, C., & Butu, M. (2020). Monitoring transformation of bioeconomy entrepreneurship in Romania. In: R. Pamfilie, V. Dinu, L. Tăchiciu, D. Plesea, & C. Vasiliu (Eds.), *New Trends in Sustainable Business and Consumption* (pp. 879-885). Basiq International Conference, Messina, Italy.
- Rodrigo, P., & Arenas, D. (2008). Do employees care about CSR programs? A typology of employees according to their attitudes. *Journal of Business Ethics*, 83(2), 265–283. doi:10.1007/10551-007-9618-7
- Rodríguez-Gulías, M. J., Rodeiro-Pazos, D., & Fernández-López, S. (2016). The effect of university and regional knowledge spillovers on firms' performance: An analysis of the Spanish USOs. *The International Entrepreneurship and Management Journal*, 13, 1–19. doi:10.1007/11365-016-0399-2
- Rogers, E. M. (1995). *Diffusion of innovations*. The Free Press.
- Rong, Z., & Xiao, S. (2017). Innovation-Related Diversification and Firm Value. *European Financial Management*, 23(3), 475–518. doi:10.1111/eufm.12110
- Roomi, M. A., Harrison, P., & Beaumont-Kerridge, J. (2009). Women-owned small and medium enterprises in England: Analysis of factors influencing the growth process. *Journal of Small Business and Enterprise Development*, 16(2), 270–288. doi:10.1108/14626000910956056
- Rosário, A., & Cruz, R. (2019). Determinants of Innovation in Digital Marketing, Innovation Policy and Trends in the Digital Age. *Journal of Reviews on Global Economics*, 8, 1722–1731. doi:10.6000/1929-7092.2019.08.154
- Rothaermel, F., Agung, S., & Jiang, L. (2007). University entrepreneurship: A taxonomy of the literature. *Industrial and Corporate Change*, 16(4), 691–791. doi:10.1093/icc/dtm023
- Rothwell, R., & Zegveld, W. (1982). *Innovation and the Small and Medium Sized Firm*. Frances Pinter.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(1), 1–27. doi:10.1037/h0092976 PMID:5340840

## Compilation of References

- Rowlands, J., Knox, M., De Jesus, L., Cui, Z.-Y., & Campbell, T. (in press). Leadership in tourism: authentic leaders as facilitators of sustainable development in Tasmanian tourism. In *Role of Tourism in Achieving the Sustainable Development Goals*. IGI Global.
- Roy, A. (2011). Inclusive Growth through MFIs' Outreach in Assam. *Asia Pacific Business Review*, 7(3), 47–62. doi:10.1177/097324701100700305
- Rubio-Mozos, E., García-Muiña, F. E., & Fuentes-Moraleta, L. (2019). Rethinking 21st-Century Businesses: An Approach to Fourth Sector SMEs in Their Transition to a Sustainable Model Committed to SDGs. *Sustainability*, 11(20), 5569. 1-23.
- Rudin, R. (2019, December 1). Analysis of inequality in South Africa remains shallow. *Mail & Guardian*. <https://mg.co.za/article/2019-12-01-00-analysis-of-inequality-in-south-africa-remains-shallow/>
- Runco, M. A. (2004). Personal creativity and culture. In S. Lau, A. N. Hui, & G. Y. Ng (Eds.), *Creativity: When East Meets West* (pp. 9–22). World Scientific Publishing Co. doi:10.1142/9789812567192\_0002
- Russo, M. V. (2003). The emergence of sustainable industries: Building on natural capital. *Strategic Management Journal*, 24(4), 317–331. doi:10.1002/mj.298
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*. Guilford Publications.
- Sacavém, A., Cruz, R., Sousa, M., & Rosário, A. (2019). An integrative literature review on leadership models for innovative organizations, innovation policy and trends in the digital age. *Journal of Reviews on Global Economics*, 8, 1741–1751. doi:10.6000/1929-7092.2019.08.156
- Sacks, D. W., Stevenson, B., & Wolfers, J. (2010). *Subjective Well-being, Income, Economic Development and Growth*. Working paper 16441, National Bureau of Economic Research.
- Sadi, M. A., & Al-Ghazali, B. M. (2012). The dynamics of entrepreneurial motivation among women: A comparative study of businesswomen in Saudi Arabia and Bahrain. In *The GCC Economies* (pp. 217–227). Springer. doi:10.1007/978-1-4614-1611-1\_18
- Saebi, T., Foss, N. J., & Linder, S. (2019). Social entrepreneurship research: Past achievements and future promises. *Journal of Management*, 45(1), 70–95. doi:10.1177/0149206318793196
- Sahai, R., & Frese, M. (2019). If you have a hammer, you only look for nails: The relationship between the einstellung effect and business opportunity identification. *Journal of Small Business Management*, 57(3), 927–942. doi:10.1111/jsbm.12346
- Sajardo, A., & Chaves, R. (2006). Balance y tendencias en la investigación sobre Tercer Sector No Lucrativo. Especial referencia al caso español. *CIRIEC-España Revista de Economía Pública. Social y Cooperativa*, 56, 87–116.
- Sakarya, S., Bodur, M., Yildirim Öktem, Ö., & Selekler Göksen, N. (2012). Social alliances: Business and social enterprise collaboration for social transformation. *Journal of Business Research*, 65(12), 1710–1720. doi:10.1016/j.jbusres.2012.02.012
- Salami, C. G. E. (2011). Entrepreneurial interventionism and challenges of youth unemployment in Nigeria. *Global Journal of Management and Business Research*, 11(7), 16–24.
- Salamon, L. M., & Sokolowski, S. W. (2016). Beyond nonprofits: Re-conceptualizing the third sector. *Voluntas*, 27(4), 1515–1545. doi:10.1007/11266-016-9726-z

- Salamon, L., & Anheier, H. (1992). In search of the non-profit sector. I: The question of definitions. *Voluntas*, 3(2), 125–151. doi:10.1007/BF01397770
- Salamzadeh, A., & Kawamorita Kesim, H. (2015). Startup companies: Life cycle and challenges. *4th International conference on employment, education and entrepreneurship (EEE)*.
- Salt, B. (2017). *The Launceston lifestylepreneur*. NBN Business.
- Sánchez, J. C., & Hernández-Sánchez, B. (2014). Gender, Personal Traits, and Entrepreneurial Intentions. *Business and Management Research*, 3(1). Available at SSRN: <https://ssrn.com/abstract=2486749>
- Sánchez-García, J. C., Sánchez, B. H., Flórez, J., Saraiva, H. I. B., & Gabriel, V. M. S. (2017). Entrepreneurial potential, realism and optimism as predictor variables of entrepreneurial intention: Differences between Spain and Portugal. *Journal of Business. Universidad del Pacífico (Lima, Perú)*, 9(1), 67–82.
- Sánchez-García, J. C., Vargas-Morúa, G., & Hernández-Sánchez, B. R. (2018). Entrepreneurs' Well-Being: A Bibliometric Review. *Frontiers in Psychology*, 9, 1696. doi:10.3389/fpsyg.2018.01696
- Sánchez, J. (2013). The Impact of an Entrepreneurship Education Program on Entrepreneurial Competencies and Intention. *Journal of Small Business Management*, 51(3), 447–465. doi:10.1111/jsbm.12025
- Sánchez, J. C. (2010). Evaluation of Entrepreneurial Personality: Factorial Validity of Entrepreneurial Orientation Questionnaire (COE). *Revista Latinoamericana de Psicología*, 42(1), 75–90.
- Sánchez, J. C., Lanero, A., & Yurrebaso, A. (2005). Variables determinantes de la intención emprendedora en el contexto universitario. *Revista de Psicología Social Aplicada*, 15(1), 37–60.
- Sánchez, J. C., & Licciardello, O. (2012). Gender differences and attitudes in entrepreneurial intentions: The role of career choice. *Journal of Women's Entrepreneurship and Education*, 1-2, 7–27.
- Sánchez, J., Carballo, T., & Gutiérrez, A. (2011). The entrepreneur from a cognitive approach. *Psicothema*, 23(3), 433–438. PMID:21774897
- Sandberg, B. (2002). Creating the market for disruptive innovation: Market proactiveness at the launch stage. *Journal of Targeting, Measurement, and Analysis for Marketing*, 11(2), 184–196. doi:10.1057/palgrave.jt.5740076
- Santos, F. J., Roomi, M. A., & Liñán, F. (2016). About gender differences and the social environment in the development of entrepreneurial intentions. *Journal of Small Business Management*, 54(1), 49–66. doi:10.1111/jsbm.12129
- Santos, F. M. (2012). A positive theory of social entrepreneurship. *Journal of Business Ethics*, 111(3), 335–351. doi:10.1007/10551-012-1413-4
- Santos, S. C., Caetano, A., Spagnoli, P., Costa, S. F., & Neumeyer, X. (2017). Predictors of entrepreneurial activity before and during the European economic crisis. *The International Entrepreneurship and Management Journal*, 13(4), 1263–1288. doi:10.1007/11365-017-0453-8
- Santos, S., Pimpão, A., Costa, S., & Caetano, A. (2013). A formação em empreendedorismo: Análise comparativa no ensino superior português. In D. Redford (Ed.), *Handbook de Educação em Empreendedorismo no Contexto Português* (2nd ed., pp. 219–242). Universidade Católica Editora.
- Sapienza, P., Zingales, L., & Maestripieri, D. (2009). Gender differences in financial risk aversion and career choices are affected by testosterone. *Proceedings of the National Academy of Sciences of the United States of America*, 106(36), 15268–15273. doi:10.1073/pnas.0907352106 PMID:19706398

## Compilation of References

- Saraiva, H., & Carqueja, H. (2018). Ensaio sobre o papel da Organização das Nações Unidas no processo de harmonização contábilística - Iniciativas durante o período 1953-2009. *De Computis - Revista Española de Historia de la Contabilidad*, 15(2), 108-132. doi:10.26784/issn.1886-1881.v15i2.336
- Saraiva, H., & Paiva, T. (2020). Entrepreneurship Education: Background and Future. In J. G. Dantas & L. C. Carvalho (Eds.), *Handbook of Research on Approaches to Alternative Entrepreneurship Opportunities* (pp. 1–12). IGI Global. doi:10.4018/978-1-7998-1981-3.ch001
- Sarasvathy, S. D., Dew, N., Velamuri, S. R., & Venkataraman, S. (2010). Three views of entrepreneurial opportunity. In Z. J. Acs & D. B. Audretsch (Eds.), *Handbook of entrepreneurship research* (pp. 77–98). Springer-Verlag., doi: 10.1007/978-1-4419-1191-9\_4
- Sarkar, S. (2014). *Empreendedorismo e Inovação* (3rd ed.). Escolar Editora.
- Sawyer, R. K. (2006). Group creativity: Musical performance and collaboration. *Psychology of Music*, 34(2), 148–165. doi:10.1177/0305735606061850
- Say, J. (1816). *A treatise on political economy*. Neely and Jones.
- Say, J. B. (1816). *England and the English People* (2nd ed.; J. Richter, Trans.). Sherwood, Neely et Jones.
- Scafarto, F., Poggesi, S., & Mari, M. (2019). Entrepreneurial Intentions, Risk-Taking Propensity and Environmental Support: The Italian Experience. *Contributions to Management Science*, 213-234. doi:10.1007/978-3-030-19685-1\_10
- Scarlat, N., Dallemand, J.-F., Monforti-Ferrario, F., & Nita, V. (2015). The role of biomass and bioenergy in a future bioeconomy: Policies and facts. *Environmental Development*, 15, 3–34. doi:10.1016/j.envdev.2015.03.006
- Schlaegel, C., & Koenig, M. (2014). Determinants of entrepreneurial intent: A meta-analytic test and integration of competing models. *Entrepreneurship Theory and Practice*, 38(2), 291–332. doi:10.1111/etap.12087
- Schleinkofer, M., & Schmude, J. (2013). Determining factors in founding university spin-offs. *International Journal of Entrepreneurship and Small Business*, 18(4), 400–427. doi:10.1504/IJESB.2013.053484
- Schneck, S. (2013). Nonlinear evaluation of status and signal effects. *Evidence-Based HRM: A Global Forum for Empirical Scholarship*, 1(2), 112-129. doi:10.1108/EBHRM-12-2012-0020
- Schneider, R. (2014). Tailoring the bioeconomy to food security. *The International Journal for Rural Development Rural 21*. [https://www.rural21.com/fileadmin/downloads/2014/en-03/rural2014\\_03-S19-21.pdf](https://www.rural21.com/fileadmin/downloads/2014/en-03/rural2014_03-S19-21.pdf)
- Schultz, T. (1980). Investment in entrepreneurial ability. *The Scandinavian Journal of Economics*, 82(4), 437–448. doi:10.2307/3439676
- Schultz, T. P. (1990). Women's changing participation in the labor force: A world perspective. *Economic Development and Cultural Change*, 38(3), 457–488. doi:10.1086/451811
- Schumpeter, J. A. (1982). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle (1912/1934)*. Transaction Publishers.
- Schumpeter, J. (1934). *The theory of economic development*. Harvard University Press.
- Schumpeter, J. (1934). *The Theory of Economic Development*. Harvard University Press.
- Schumpeter, J. (1934). *Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle*. Harvard University Press.

- Schurr, U. (2020). Food security and healthy nutrition in the context of the bioeconomy. In J. Pietzsch (Ed.), *Bioeconomy for beginners* (pp. 67–75). Springer. doi:10.1007/978-3-662-60390-1\_3
- Schwab, K. (2018). *The Global Competitiveness Report 2018*. World Economic Forum.
- Schwab, K. (2019). *The Global Competitiveness Report 2019*. World Economic Forum.
- Schwab, K., & Sala-i-Martin, X. (2015). *The Global Competitiveness Report 2015–2016*. Geneva: World Economic Forum.
- Schwartz, S. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology*. Academic Press. doi:10.1016/S0065-2601(08)60281-6
- Schwarz, E. J., Wdowiak, M. A., Almer-Jarz, D. A., & Breitenecker, R. J. (2009). The effects of attitudes and perceived environment conditions on students' entrepreneurial intent: An Austrian perspective. *Education + Training, 51*(4), 272–291. doi:10.1108/00400910910964566
- Schwienbacher, A., & Larralde, B. (2012). Crowdfunding of Small Entrepreneurial Ventures. In D. Cumming (Ed.), *The Oxford Handbook of Entrepreneurial Finance*. Oxford University Press.
- Scott, L., Dolan, C., Johnstone-Louis, M., Sugden, K., & Wu, M. (2012). Enterprise and Inequality: A Study of Avon in South Africa. *Entrepreneurship Theory and Practice, 36*(3), 543–568. doi:10.1111/j.1540-6520.2012.00507.x
- Scott, W. R. (2007). *Institutions and organizations : ideas, interests, and identities* (1st ed.). SAGE Publications, Inc.
- SDSN - Sustainable Development Network Solutions – A Global Initiative for the United Nations. (n.d.). *Sobre nós – Visão e Organização*. Retrieved from: <http://unsdsn.org/about-us/vision-and-organization/>
- Seligman, M. E. P. (2002). *Authentic happiness*. Free Press.
- Selsky, J. W., & Parker, B. (2005). Cross-sector partnerships to address social issues: Challenges to theory and practice. *Journal of Management, 31*(6), 849–873. doi:10.1177/0149206305279601
- Senge, P. M., & Carstedt, G. (2001). Innovating our way to the next industrial revolution. *MIT Sloan Management Review, 42*(2), 24–38.
- Sesen, H., & Ekemen, M. A. (2020). Data on personal and contextual factors of university students on their entrepreneurial intentions in some Turkish universities. *Data in Brief, 28*, 105086. doi:10.1016/j.dib.2019.105086 PMID:31921957
- Seyb, S. K., Shepherd, D. A., & Williams, T. A. (2019). Exoskeletons, entrepreneurs, and communities: A model of co-constructing a potential opportunity. *Journal of Business Venturing, 34*(6), 105947. doi:10.1016/j.jbusvent.2019.105947
- Shahab, Y., Ye, Z., Riaz, Y., & Ntim, C. G. (2019). Individual's financial investment decision-making in reward-based crowdfunding: Evidence from China. *Applied Economics Letters, 26*(4), 261–266. doi:10.1080/13504851.2018.1464643
- Shah, I. A., Amjed, S., & Jaboob, S. (2020). The moderating role of entrepreneurship education in shaping entrepreneurial intentions. *Journal of Economic Structures, 9*(19), 1–15. doi:10.118640008-020-00195-4
- Shalley, C., & Gilson, L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The Leadership Quarterly, 15*(1), 33–53. doi:10.1016/j.leaqua.2003.12.004
- Shane, S. (2000). Prior knowledge and the discovery of entrepreneurial opportunities. *Organization Science, 11*(4), 448–469. doi:10.1287/orsc.11.4.448.14602
- Shane, S. (2003). *A general theory of entrepreneurship*. Edward Elgar. doi:10.4337/9781781007990

## Compilation of References

- Shane, S. (2005). *Economic development through entrepreneurship. Government, university and business linkages*. Edward Elgar. doi:10.4337/9781845428181
- Shane, S. (2008). *The illusions of entrepreneurship: The costly myths that entrepreneurs, investors, and policy makers live by*. Yale University Press.
- Shane, S., Locke, E. A., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resource Management Review*, 13(2), 257–279. doi:10.1016/S1053-4822(03)00017-2
- Shane, S., & Nicolaou, N. (2015). Creative personality, opportunity recognition and the tendency to start businesses: A study of their genetic predispositions. *Journal of Business Venturing*, 30(3), 407–419. doi:10.1016/j.jbusvent.2014.04.001
- Shane, S., Nicolaou, N., Cherkas, L., & Spector, T. (2010). Genetics, the big five, and the tendency to be self-employed. *The Journal of Applied Psychology*, 95(6), 1154–1162. doi:10.1037/a0020294 PMID:20718525
- Shane, S., & Venkataramann, S. (2000). The promise of Entrepreneurship as a field research. *Academy of Management Review*, 25(1), 217–226. doi:10.5465/amr.2000.2791611
- Shapiro, A., & Sokol, L. (1982). Social Dimensions of Entrepreneurship. In C. Kent, D. Sexton, & K. Vespers (Eds.), *The Encyclopedia of Entrepreneurship* (pp. 72–90). Prentice-Hall.
- Sharfman, M. P., & Fernando, C. S. (2008). Environmental risk management and the cost of capital. *Strategic Management Journal*, 29(6), 569–592. doi:10.1002/mj.678
- Sharifi, O., & Hossein, B. K. (2015). Understanding the financing challenges faced by start-ups in India. *International Journal of Science Technology and Management*, 4, 115–120.
- Sharma, L., & Madan, P. (2015). Affect of individual factors on youth entrepreneurship – A study of Uttarakhand State, India. *Romanian Economic Business Review*, 8(2), 131–143.
- Shebah. (2020). About Shebah All Women Rideshare. *Shebah*. Retrieved March 22, 2020, from <https://www.shebah.com.au/about>
- Sheeran, P., & Silverman, M. (2003). Evaluation of three interventions to promote workplace health and safety: Evidence for the utility of implementation intentions. *Social Science & Medicine*, 56(10), 2153–2163. doi:10.1016/S0277-9536(02)00220-4 PMID:12697204
- Sheerwood, J., Clark, J. H., Farmer, T. J., Herrero-Davila, L., & Moity, L. (2016). Recirculation: A new concept to drive innovation in sustainable product design for bio-based products. *Molecules (Basel, Switzerland)*, 22(1), 48. doi:10.3390/molecules22010048 PMID:28036077
- Shen, D., Krumme, C., & Lippman, A. (2010) Follow the Profit or the Herd? Exploring Social Effects in Peer-to-Peer Lending. *2nd International Conference on Social Computing*, 137-144.
- Shepherd, D. A., Williams, T. A., & Patzelt, H. (2015). Thinking about entrepreneurial decision making: Review and research agenda. *Journal of Management*, 41(1), 11–46. doi:10.1177/0149206314541153
- Shinnar, R. S., Giacomini, O., & Janssen, F. (2012). Entrepreneurial perceptions and intentions: The role of gender and culture. *Entrepreneurship Theory and Practice*, 36(3), 465–493. doi:10.1111/j.1540-6520.2012.00509.x
- Shir, N. (2015). *Entrepreneurial Well-Being: The Payoff Structure of Business Creation* (Dissertation for the Degree of Doctor of Philosophy). Stockholm School of Economics. Retrieved from: <https://ex.hhs.se/dissertations/849175-FULLTEXT02.pdf>

- Shir, N., Nikolaevc, B. N., & Wincentb, J. (2019). Entrepreneurship and well-being: The role of psychological autonomy, competence, and relatedness. *Journal of Business Venturing*, 34(5), 105875. doi:10.1016/j.jbusvent.2018.05.002
- Shirokova, G., Osiyevskyy, O., & Bogatyreva, K. (2016). Exploring the Intention – behaviour Link in Student Entrepreneurship: Moderating Effects of Individual and Environmental Characteristics. *European Management Journal*, 34(4), 386–399. doi:10.1016/j.emj.2015.12.007
- Shonkoff, J., & Phillips, D. (Eds.). (2000). *From neurons to neighborhoods: the science of early child development*. National Academy Press.
- Short, J. C., Ketchen, D. J. Jr, Shook, C. L., & Ireland, R. D. (2010). The concept of “opportunity” in entrepreneurship research: Past accomplishments and future challenges. *Journal of Management*, 36(1), 40–65. doi:10.1177/0149206309342746
- Simón-Moya, V., Revuelto-Taboada, L., & Ribeiro-Soriano, D. (2016). Influence of economic crisis on new SME survival: Reality or fiction? *Entrepreneurship and Regional Development*, 28(1–2), 157–176. doi:10.1080/08985626.2015.1118560
- Simonton, D. (1999). Creativity as blind variation and selective retention: Is the creative process Darwinian? *Psychological Inquiry*, 10(4), 309–328.
- Simonton, D. (2000). Creativity: Cognitive, personal, developmental, and social aspects. *The American Psychologist*, 55(1), 151–158. doi:10.1037/0003-066X.55.1.151 PMID:11392859
- Singer, S., Amoros, J. E., & Arreola, D. M. (2015). *Global Entrepreneurship Monitor 2014 Global Report*. Global Entrepreneurship Research Association (GERA). Retrieved from [https://www.researchgate.net/publication/281290871\\_Global\\_Entrepreneurship\\_Monitor\\_2014\\_Global\\_Report](https://www.researchgate.net/publication/281290871_Global_Entrepreneurship_Monitor_2014_Global_Report)
- Singh, G., & Belwal, R. (2008). Entrepreneurship and SMEs in Ethiopia: Evaluating the role, prospects and problems faced by women in this emergent sector. *Gender in Management*, 23(2), 120–136. doi:10.1108/17542410810858321
- Singh, H., & Gera, M. (2015). Strategies for Development of Life Skills and Global Competencies. *IJSR - International Journal of Scientific Research (Ahmedabad, India)*, 4(6), 760–763.
- Singh, V., & Padhi, P. (2017). Dynamic incentives and microfinance borrowers: A comparative study of self-help groups and joint liability groups: A case study of Mirzapur District in India. *Journal of Land and Rural Studies*, 5(1), 67–92. doi:10.1177/2321024916677609
- Sinha, M., Mahapatra, S. S., Dutta, A., & Sengupta, P. P. (2019). *Microfinance and Women Empowerment: An Empirical Analysis*. In *Handbook of Research on Microfinancial Impacts on Women Empowerment, Poverty, and Inequality*. IGI Global.
- Sirkin, T., & Ten Houten, M. (1994). The cascade chain: A theory and tool for achieving resource sustainability with applications for product design. *Resources, Conservation and Recycling*, 10(3), 213–276. doi:10.1016/0921-3449(94)90016-7
- Ślędzik, K. (2013). *Schumpeter's View on Innovation and Entrepreneurship*. SSRN Electronic Journal., doi:10.2139/ssrn.2257783
- Smallbone, D. (2005). *Entrepreneurship by Ethnic Minorities: Institutions* (Background paper). Brussels: Academic Press.
- Smith, A. (1776). *An Inquiry Into the Nature and Causes of the Wealth of Nations*. New York: Modern Library. Retrieved from: [https://www.ibiblio.org/ml/libri/s/SmithA\\_WealthNations\\_p.pdf](https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf)
- Smith, B. R. (2007). *Entrepreneurial team formation: The effects of technological intensity and decision making on organizational emergence* (Doctoral dissertation). University of Cincinnati.

## Compilation of References

- Smith, A. D. (2007). Making the case for competitive advantage of corporate social responsibility. *Business Strategy Series*, 3(3), 186–195. doi:10.1108/17515630710684187
- Smith, E. A. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, 5(4), 311–321. doi:10.1108/13673270110411733
- Smith, H., & Ho, K. (2006). Measuring the performance of Oxford University, Oxford Brookes University and the government laboratories' spin-off companies. *Research Policy*, 35(10), 1554–1568. doi:10.1016/j.respol.2006.09.022
- Smith, L. M., Case, J. L., Smith, H. M., Harwell, L. C., & Summers, J. K. (2013). Relating ecosystem services to domains of human well-being: Foundation for a US index. *Ecological Indicators*, 28, 79–90. doi:10.1016/j.ecolind.2012.02.032
- Solomon, G. (1989). Youth: Tomorrow's entrepreneurs. *International Council of Small Businesses Bulletin*, 26(5), 1–2.
- Sommer, L., & Haug, M. (2011). Intention as a cognitive antecedent to international entrepreneurship— Understanding the moderating roles of knowledge and experience. *The International Entrepreneurship and Management Journal*, 7(1), 111–142. doi:10.1007/11365-010-0162-z
- Sorenson, J. (2007). Closure versus exposure: Mechanisms in the intergenerational transition of self-employment. In M. Ruef & M. Lounsbury (Eds.), *Research in the Sociology of Organizations* (pp. 83–124). Elsevier.
- Sousa, P., Wilks, D. C., & Cruz, J. N. (2018). Entrepreneurial intentions of law students: The moderating role of personality traits on attitude's effects. *Journal of Entrepreneurship Education*, 21(3).
- South Africa, S. M. E. (2019, August 26). *Where to Access Funding for Women-Owned Businesses in South Africa*. Retrieved from <https://smesouthafrica.co.za/where-to-access-funding-for-women-owned-businesses-in-south-africa/>
- South African Government. (2013). *The Bio-economy Strategy*. Department of Science and Technology.
- Sowole, O. E., Hogue, M. E., & Adeyeye, O. P. (2018). Entrepreneurship: Psychological Factors Influencing Youth's Desire for Self-Sustenance in Mpumalanga. *Academy of Entrepreneurship Journal*, 24(2). <https://www.abacademies.org/articles/Entrepreneurship-Psychological-Factors-Influencing-Youths-Desire-For-Self-1528-2686-24-2-150.pdf>
- Spence, M., Gherib, J. B. B., & Biwole, V. O. (2011). Sustainable entrepreneurship: Is entrepreneurial will enough? A North-South Comparison. *Journal of Business Ethics*, 99(3), 335–367. doi:10.1007/10551-010-0656-1
- Spigel, B. (2016). Developing and governing entrepreneurial ecosystems: The structure of entrepreneurial support programs in Edinburgh, Scotland. *International Journal of Innovative Research and Development*, 7(2), 141–160. doi:10.1504/IJIRD.2016.077889
- Spilling, O. R. (1996). Regional variation of new firm formation: The Norwegian case. *Entrepreneurship and Regional Development*, 8(3), 217–244. doi:10.1080/08985629600000014
- Stack, P., Faller, J., O'Reilly, P., Gleasure, R., Li, S., & Cristoforo, J. (2017). Managing Risk in Business Centric Crowdfunding Platforms. *13th International Symposium, OpenSym '17*. DOI: 10.1145/3125433.3125460
- Statista. (2020). *Percentage of successfully funded Kickstarter projects as of December 2019*. Retrieved February 27, 2020, from <https://www.statista.com/statistics/235405/kickstarter-project-funding-success-rate/>
- Statistics South Africa. (2002). *Gross Domestic Products*. <http://www.statssa.gov.za/publications/P0441/P04411stQuarter2002.pdf>
- Statistics South Africa. (2012). *Gross Domestic Products*. <http://www.statssa.gov.za/publications/P0441/P04413rdQuarter2012.pdf>



- Statistics South Africa. (2015). *Unemployment increases in the third quarter of 2015*. <http://www.statssa.gov.za/?p=5681>
- Statistics South Africa. (2017). *GDP in the third quarter of 2017 grew by 2,0%*. <http://www.statssa.gov.za/?p=10775>
- Statistics South Africa. (2018). *General Household Survey, 2018*. <http://www.statssa.gov.za/publications/P0318/P03182018.pdf>
- Statistics South Africa. (2019). *Five facts about poverty in South Africa*. <http://www.statssa.gov.za/?p=12075>
- Statistics South Africa. (2019). *Marriages and divorces, 2019*. <http://www.statssa.gov.za/publications/P0307/P03072017.pdf>
- Statistics South Africa. (2019). *Mid-year population estimates, South Africa: 2019*. <https://www.statssa.gov.za/publications/P0302/P03022019.pdf>
- Statistics South Africa. (2019). *Unemployment rises slightly in third quarter of 2019*. <http://www.statssa.gov.za/?p=12689>
- Statistics South Africa. (2020). *GDP in the fourth quarter of 2019 decreased by 1,4%*. <http://www.statssa.gov.za/?s=gdp>
- Steen, M., & Hansen, G. H. (2014). Same sea, different ponds: Cross-sectorial knowledge spillovers in the North Sea. *European Planning Studies*, 22(10), 2030–2049. doi:10.1080/09654313.2013.814622
- Stenholm, P., Acs, Z. J., & Wuebker, R. (2013). Exploring country-level institutional arrangement on the rate and type of entrepreneurial activity. *Journal of Business Venturing*, 28(1), 176–193. doi:10.1016/j.jbusvent.2011.11.002
- Stenstrom, E., Saad, G., Nepomuceno, M., & Mendenhall, Z. (2011). Testosterone and domain-specific risk: Digit ratios (2D:4D and rel2) as predictors of recreational, financial, and social risk-taking behaviors. *Personality and Individual Differences*, 51(4), 412–416. doi:10.1016/j.paid.2010.07.003
- Stephan, U., Patterson, M., Kelly, C., & Mair, J. (2016). Organizations driving positive social change. A review and an integrative framework of change processes. *Journal of Management*, 42(5), 1250–1281. doi:10.1177/0149206316633268
- Sternberg, R. J., & Lubart, T. I. (1995). *Defying the crowd: Cultivating creativity in a culture of conformity*. Free Press.
- Sternberg, R. J., & Lubart, T. I. (1999). The concept of creativity: Prospects and paradigms. In R. J. Sternberg (Ed.), *Handbook of Creativity*. Cambridge University Press.
- Steurer, R. (2010). *The Role of Governments in Corporate Social Responsibility: Characterising Public Policies on CSR in Europe*. Institute of Forest, Environmental and Natural Resource Policy.
- Stevenson, L., & Lundström, A. (2002). *Beyond the Rhetoric: Defining Entrepreneurship Policy and its Best Practice Components*. Stockholm: Swedish Foundation for Small Business Research.
- Stewart, W., & Roth, P. (2001). Risk taking propensity differences between entrepreneurs and managers: A meta-analytic review. *The Journal of Applied Psychology*, 86(1), 145–153. doi:10.1037/0021-9010.86.1.145 PMID:11302226
- Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). *Report by the Commission on the measurement of economic performance and social progress*. Retrieved from: <https://ec.europa.eu/eurostat/documents/118025/118123/Fitoussi+Commission+report>
- Stiglitz, J. E. (2002). *Globalization and its Discontents*. W.W. Norton.
- Still, L. V., & Walker, E. A. (2006). The self-employed woman owner and her business: An Australian profile. *Women in Management Review*, 21(4), 294–310. doi:10.1108/09649420610666597
- Stoica, O., Roman, A., & Rusu, V. D. (2020). The nexus between entrepreneurship and economic growth: A comparative analysis on groups of countries. *Sustainability*, 12(3), 1186. doi:10.3390/u12031186

## Compilation of References

- Stomeyer, R. (2007). *Gender gap and segregation in self-employment: On the role of field of study and apprenticeship training*. Academic Press.
- Storti, L. (2014). Being an entrepreneur: Emergence and structuring of two immigrant entrepreneur groups. *Entrepreneurship and Regional Development*, 26(October), 521–545. Advance online publication. doi:10.1080/08985626.2014.959067
- Stuart-Mill, J. (1848). *The principles of Political Economy: with some of their applications to social philosophy*. Parker.
- Stubbs, W., & Cocklin, C. (2008). Conceptualizing a 'Sustainability business model'. *Organization & Environment*, 21(2), 103–127. doi:10.1177/1086026608318042
- Stuetzer, M., Obschonka, M., Brixy, U., Sternberg, R., & Cantner, U. (2014). Regional characteristics, opportunity perception and entrepreneurial activities. *Small Business Economics*, 42(2), 221–244. doi:10.1007/11187-013-9488-6
- Stuetzer, M., Obschonka, M., & Schmitt-Rodermund, E. (2013). Balanced skills among nascent entrepreneurs. *Small Business Economics*, 41(1), 93–114. doi:10.1007/11187-012-9423-2
- Stutzer, A., & Frey, A. (2010). *Recent advances in the economics of individual subjective well-being*. IZA discussion paper no 4850.
- Suchart, T. (2017). Factors influencing opportunity-driven nascent entrepreneurs in Europe and Asia. *European Research Studies Journal*, 20(3), 774–782. doi:10.35808/ersj/745
- Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, 20(3), 571–610. doi:10.5465/amr.1995.9508080331
- Sullivan, D. M., & Meek, W. R. (2012). Gender and entrepreneurship: A review and process model. *Journal of Managerial Psychology*, 27(5), 428–458. doi:10.1108/02683941211235373
- Sundararajan, A. (2016). *The sharing economy: The end of employment and the rise of crowd-based capitalism*. MIT Press.
- Sung, S., & Choi, J. (2009). Do Big Five personality factors affect individual creativity? The moderating role of extrinsic motivation. *Social Behavior and Personality*, 37(7), 941–956. doi:10.2224/bp.2009.37.7.941
- Swartz, E. M., Amatucci, F. M., & Marks, J. T. (2019). Contextual Embeddedness as Framework: The case of entrepreneurship in South Africa. *Journal of Developmental Entrepreneurship*, 24(3), 1950018. Advance online publication. doi:10.1142/S1084946719500183
- Syed, J., Özbilgin, M., Torunoglu, D., & Ali, F. (2009). *Rescuing gender equality from the false dichotomies of secularism versus shariah in Muslim majority countries*. Paper presented at the Women's Studies International Forum. 10.1016/j.wsif.2009.03.007
- Talavyria, M. P., Lyman, V. V., Baidala, V. V., & Holub, R. T. (2016). Approaches to the definition of production determinants of bio-oriented economy. *Ekonomika APK*, 7, 39–44.
- Tamásy, C. (2010). Nascent entrepreneurs and the regional context. *International Journal of Entrepreneurship and Small Business*, 10(2), 205–223. doi:10.1504/IJESB.2010.033109
- Tavassoli, S., Bengtsson, L., & Karlsson, C. (2017). Strategic entrepreneurship and knowledge spillovers: Spatial and aspatial perspectives. *The International Entrepreneurship and Management Journal*, 13(1), 233–249. doi:10.1007/11365-016-0405-8
- Tavassoli, S., & Trippel, M. (2019). The impact of ethnic communities on immigrant entrepreneurship: Evidence from Sweden. *Regional Studies*, 53(1), 67–79. doi:10.1080/00343404.2017.1395007

- Teece, D. J. (2010). Business models, business strategy and innovation. *Long Range Planning*, 43(2-3), 172–194. doi:10.1016/j.lrp.2009.07.003
- ter Weel, B. (2008). The noncognitive determinants of labor market and behavioral outcomes. *The Journal of Human Resources*, 43(4), 729–737. doi:10.1353/jhr.2008.0014
- The White House. (2012). *National bioeconomy blueprint*. [https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national\\_bioeconomy\\_blueprint\\_april\\_2012.pdf](https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/national_bioeconomy_blueprint_april_2012.pdf)
- Thebe, P., & Ncube, G. (2015). Street entrepreneurship in Zimbabwe: Survivalist or growth-oriented? A case of Bulawayo city centre. *International Journal of Development and Sustainability*, 49(2), 126–144.
- Thierry, A. R. (2007). The elephant in the room: Gender and export-led poverty reduction. *Management Decision*, 45(8), 1359–1378. doi:10.1108/00251740710819087
- Thiess, D., Sirén, C., & Grichnik, D. (2016). How does heterogeneity in experience influence the performance of nascent venture teams?: Insights from the US PSED II study. *Journal of Business Venturing Insights*, 5, 55–62. doi:10.1016/j.jbvi.2016.04.001
- Thomas, V. J., Bliemel, M., Shippam, C., & Mainel, E. (2020). Endowing university spin-offs pre-formation: Entrepreneurial capabilities for scientist-entrepreneurs. *Technovation*, 96–97, 102153. Advance online publication. doi:10.1016/j.technovation.2020.102153
- Thompson, E. R. (2009). Individual entrepreneurial intent: Construct clarification and development of an internationally reliable metric. *Entrepreneurship Theory and Practice*, 33(3), 669–694. doi:10.1111/j.1540-6520.2009.00321.x
- Thornton, P., & Flynn, K. (2003). Entrepreneurship, networks and geographies. In Z. Acs & D. Audretsch (Eds.), *Handbook of Entrepreneurship Research* (pp. 401–436). Kluwer.
- Tidd, J., & Bessant, J. (2011). *Managing innovation: Integrating technological, market and organizational change* (3rd ed.). Wiley.
- Tietenberg, T.H. (2000). *Environmental and Natural Resource Economics*. Addison Wesley Longman.
- Tillmar, M. (2007). Gendered small-business assistance: Lessons from a Swedish project. *Journal of European Industrial Training*, 31(2), 84–99. doi:10.1108/03090590710734327
- Timmons, J. (1989). *The entrepreneurial mind*. Brick House Publishing Co.
- Timmons, J., & Spinelli, S. (2007). *New venture creation-entrepreneurship for the 21<sup>st</sup> century* (7th ed.). McGraw-Hill.
- Ting, M. B., & Philp, J. (2018). Revitalization of agricultural biomass for an industrial bio-economy: Case studies on South Africa and Netherlands bio-economy. In W. Leal Filho, D. Pociovălișteanu, P. Borges de Brito, & I. Borges de Lima (Eds.), *Towards a sustainable bioeconomy: Principles, challenges and perspectives*. World Sustainability Series. Springer. doi:10.1007/978-3-319-73028-8\_15
- Tkachev, A., & Kolvereid, L. (1999). Self-employment intentions among Russian students. *Entrepreneurship and Regional Development*, 11(3), 269–280. doi:10.1080/089856299283209
- Todaro, M. P., & Smith, S. C. (2011). *Economic Development* (11th ed.). Pearson Education Limited.
- Tolbert, P. S., David, R. J., & Sine, W. D. (2011). Studying Choice and Change: The Intersection of Institutional Theory and Entrepreneurship Research. *Organization Science*, 22(5), 1332–1344. doi:10.1287/orsc.1100.0601

## Compilation of References

- Tomić, I. (2018). What drives youth unemployment in Europe? Economic vs non-economic determinants. *International Labour Review*, 157(3), 379–408. doi:10.1111/ilr.12113
- Tominc, P. (2019). Perceived innovativeness and competitiveness of early-stage entrepreneurs. *Croatian Economic Survey*, 21(1), 87–108. doi:10.15179/ces.21.1.3
- Tomkins, G., & Martin, D. Jr. (1970). Hormones and gene expression. *Annual Review of Genetics*, 4(1), 91–106. doi:10.1146/annurev.ge.04.120170.000515 PMID:4354441
- Treanor, L., & Henry, C. (2010). Gender in campus incubation: Evidence from Ireland. *International Journal of Gender and Entrepreneurship*, 2(2), 130–149. doi:10.1108/17566261011051008
- Tuazon, G., Bellavitis, C., & Filatotchev, I. (2018). *Nascent Entrepreneurship: Current Research Directions and Controversies (2018)*. Available at SSRN: <https://ssrn.com/abstract=3112511>
- Tupes, E., & Christal, R. (1961). *Recurrent personality factors based on trait ratings* (USAF ASD Technical Report No. 61-97). Lackland Air Force Base, TX: U.S. Air Force. Retrieved July, 30, 2016, from <http://www.dtic.mil/dtic/tr/fulltext/u2/267778.pdf>
- Turkheimer, E., Haley, A., Waldron, M., D’Onofrio, B., & Gottesman, I. (2003). Socioeconomic status modifies heritability of IQ in young children. *Psychological Science*, 14(6), 623–628. doi:10.1046/j.0956-7976.2003.psci\_1475.x PMID:14629696
- Überbacher, F. (2014, June 1). Legitimation of New Ventures: A Review and Research Programme. *Journal of Management Studies*. doi:10.1111/joms.12077
- Udayanan, P. (2019). The role of self-efficacy and entrepreneurial self-efficacy on the entrepreneurial intentions of graduate students: A study among omani graduates. *Entrepreneurial Business and Economics Review*, 7(4), 7–20. doi:10.15678/EBER.2019.070401
- UNCTAD – United Nations Conference on Trade and Development. (2012). *Entrepreneurship Policy Framework and Implementation Guidance*. United Nations.
- UNESCO. (2018). *The Global Alliance for Literacy*. <https://uil.unesco.org/literacy/global-alliance>
- United Nations Children’s Fund (UNICEF). (2012). *Life Skills (Online life skills education [LSE] fact sheet)*. Retrieved September, 28, 2016, from [https://www.unicef.org/lifeskills/index\\_4105.html](https://www.unicef.org/lifeskills/index_4105.html)
- United Nations. (2019). *World Economic Situation and Prospects: October 2019 Briefing, No. 131*. <https://www.un.org/development/desa/dpad/publication/world-economic-situation-and-prospects-october-2019-briefing-no-131/>
- UNOP, United Nations Office for Partnerships. (2009). *Yearly report about the United Nations Office for Partnerships*. Data obtained from <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N09/370/02/pdf/N0937002.pdf?OpenElement>
- UNSDSN – United Nations Sustainable Development Network Solutions. (n.d.). *The World’s Knowledge Network for the Sustainable Development Goals*. Retrieved from: <http://unsdsn.org/wp-content/uploads/2018/05/180627-SDSN-Overview-Formatted-MASTER.pdf>
- Urmetzer, S., & Pyka, A. (2017). Varieties of knowledge-based bioeconomies. In S. Dabbert, I. Lewandowski, J. Weiss, & A. Pyka (Eds.), *Knowledge-driven developments in the bioeconomy* (pp. 57-82). *Economic Complexity and Evolution*. Springer. doi:10.1007/978-3-319-58374-7\_4
- Urmetzer, S., Schlaile, M. P., Bogner, K. B., Mueller, M., & Pyka, A. (2018). Exploring the dedicated knowledge base of a transformation towards a sustainable bioeconomy. *Sustainability*, 10(6), 1694. doi:10.3390/u10061694

- Usman, B., & Yennita. (2019). Understanding the entrepreneurial intention among international students in Turkey. *Journal of Global Entrepreneurship Research*, 9(10), 10. Advance online publication. doi:10.118640497-018-0136-0
- Uy, M. A., Sun, S., & Foo, M. D. (2017). Affect spin, entrepreneurs' well-being, and venture goal progress: The moderating role of goal orientation. *Journal of Business Venturing*, 32(4), 443–460. doi:10.1016/j.jbusvent.2016.12.001
- Vagesh, M. V., Thaddaeus, S., & Udhaya, K. D. (2017). Nascent entrepreneur: Challenges and Issues. *Journal of Business and Management*, 19(10), 1–4.
- Valencia-Arias, A., & Restrepo, L. A. M. (2020). Entrepreneurial intentions among engineering students: Applying a theory of planned behavior perspective. *Periodica Polytechnica Social and Management Sciences*, 28(1), 59–69. doi:10.3311/PPso.12731
- Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: Dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, 9(5), 1–26. doi:10.118613731-020-0112-0
- van de Ven, A. (1993). The development of an infrastructure for entrepreneurship. In P. Westhead & M. Wright (Eds.), *Advances in Entrepreneurship* (pp. 377–398). Edward Elgar. doi:10.1016/0883-9026(93)90028-4
- van der Loos, M., Haring, R., Rietveld, C., Baumeister, S., Groenen, P., Hofman, A., de Jong, F. H., Koellinger, P. D., Kohlmann, T., Nauck, M. A., Rivadeneira, F., Uitterlinden, A. G., van Rooij, F. J. A., Wallaschofski, H., & Thurik, A. R. (2013). Serum testosterone levels in males are not associated with entrepreneurial behavior in two independent observational studies. *Physiology & Behavior*, 119, 110–114. doi:10.1016/j.physbeh.2013.06.003 PMID:23770427
- Van Lancker, J., Wauters, E., & Van Huylenbroeck, G. (2016). Managing innovation in the bioeconomy: An open innovation perspective. *Biomass and Bioenergy*, 90, 60–69. doi:10.1016/j.biombioe.2016.03.017
- van Manen, M. (2016). *Researching Lived Experience* (2nd ed.). Routledge., doi:10.4324/9781315421056
- Van Renssen, S. (2014). A bioeconomy to fight climate change. *Nature Climate Change*, 4(11), 951–953. doi:10.1038/nclimate2419
- van Stel, A., Wennekers, S., Thurik, R., Reynolds, P., & de Wit, G. (2003, May). *Explaining nascent entrepreneurship across countries*. SCALES-paper N200301. Retrieved from [https://www.researchgate.net/publication/5012661\\_SCALES-paper\\_N200301\\_Explaining\\_nascent\\_entrepreneurship\\_across\\_countries](https://www.researchgate.net/publication/5012661_SCALES-paper_N200301_Explaining_nascent_entrepreneurship_across_countries)
- van Stel, A. (2006). *Empirical analysis of entrepreneurship and economic growth*. Springer. doi:10.1007/0-387-29419-8
- Van Stel, A., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics*, 24(3), 311–321.
- Van Stel, A., Storey, D. J., & Thurik, A. R. (2007). The effect of business regulations on nascent and young business entrepreneurship. *Small Business Economics*, 28(2-3), 171–186. doi:10.100711187-006-9014-1
- Van Vugt, M. (2006). Evolutionary origins of leadership and followership. *Personality and Social Psychology Review*, 10(4), 354–371. PMID:17201593
- Vecco, M., & Srakar, A. (2020). Direct, indirect and cross-lagged: The effects of cultural policy on nascent cultural entrepreneurship. *International Journal of Arts Management*, 22(2), 66–82. [www.scopus.com](http://www.scopus.com)
- Vegetti, F., & Adăscăliței, D. (2017). The impact of the economic crisis on latent and early entrepreneurship in Europe. *The International Entrepreneurship and Management Journal*, 13(4), 1289–1314. doi:10.100711365-017-0456-5

## Compilation of References

- Velea, S., Oancea, F., & Fischer, F. (2018). Heterotrophic and mixotrophic microalgae cultivation. In C. Gonzalez-Fernandez & R. Muñoz (Eds.), *Microalgae-based biofuels and biofuels: From feedstock cultivation to end-products* (pp. 45-65). Kindlington, UK: Woodhead Publishing Series in Energy. doi:10.1016/C2015-0-05935-4
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research. In J. A. Katz & R. H. Brockhaus (Eds.), *Advances in entrepreneurship, firm emergence and growth* (pp. 119–138). JAI Press.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. K. Brockhaus (Ed.), *Advances in entrepreneurship, firm emergence, and growth* (pp. 119–138). JAI Press.
- Veréb, V. N., & Ferreira, J. J. (2018). Transnational entrepreneurship as a win-win scenario of international knowledge spillover. *Journal of the Knowledge Economy*, 9(2), 446–472. doi:10.1007/13132-017-0496-7
- Verheul, I., & Van Stel, A. J. (2007). *Entrepreneurial diversity and economic growth* (Intern rapport, ERIM Research in Management, no ERS-2007-070- ORG). Rotterdam: ERIM.
- Verhuel, I., & Thurik, R. (2001). Startup capital: Does gender matter? *Small Business Economics*, 20(4), 443–476.
- Vermeulen, H. (2010). Segmented assimilation and cross-national comparative research on the integration of immigrants and their children. *Ethnic and Racial Studies*, 33(7), 1214–1230. doi:10.1080/01419871003615306
- Vetrivel, S. C., & Krishnamoorthy, V. (2019). A study on factors stimulate passion among management students to become entrepreneur. *International Journal of Scientific and Technology Research*, 8(11), 832–839. <http://www.ijstr.org/final-print/nov2019/A-Study-On-Factors-Stimulate-Passion-Among-Management-Students-To-Become-Entrepreneur.pdf>
- Vickers, I., & Lyon, F. (2014). Beyond green niches? Growth strategies of environmentally-motivated social enterprises. *International Small Business Journal*, 32(4), 449–470. doi:10.1177/0266242612457700
- Victorian Government. (2020, March 21). *Working for Victoria*. Retrieved from <https://www.vic.gov.au/workingforvictoria>
- Vinall, F. (2018). Provenance Coffee founder's love for Launceston lifestyle. *The Examiner*. Retrieved March 19, 2020, from <https://www.examiner.com.au/story/5675748/provenance-coffee-founders-love-for-launcestons-lifestyle/>
- Vinchur, A., Schippmann, J., Switzer, F., & Roth, P. (1998). A meta-analytic review of predictors of job performance for sales people. *The Journal of Applied Psychology*, 83(4), 586–597. doi:10.1037/0021-9010.83.4.586
- Virgin, I., Fielding, M., Sundell, M. F., Hoff, H., & Granit, J. (2017). Benefits and challenges of a new knowledge-based economy. In I. Virgin, & E.J. Morris (Eds.), *Creating sustainable bioeconomies – the bioscience revolution in Europe and Africa* (pp. 11-25). Routledge Studies in Ecological Economies. Oxon: Routledge.
- Vlassopoulos, M. (2009). Quality, reputation and the choice of organizational form. *Journal of Economic Behavior & Organization*, 71(2), 515–527. doi:10.1016/j.jebo.2009.02.014
- Voda, A. I., & Florea, N. (2019). Impact of Personality Traits and Entrepreneurship Education on Entrepreneurial Intentions of Business and Engineering Students. *Sustainability*, 11(4), 1192. doi:10.3390/s11041192
- Vogel, R. C. (1984). *Savings mobilization: the forgotten half of rural finance*. Academic Press.
- Vohora, A., Wright, M., & Lockett, A. (2004). Critical Junctures in the Development of University High-Tech Spinout Companies. *Research Policy*, 33(1), 147–174. doi:10.1016/S0048-7333(03)00107-0
- Vo, T. L. H., & Nguyen, T. L. A. (2017). CSR collaboration in multi-level supply chains : A conceptual model. *Logistique & Management*, 25(2), 96–106. doi:10.1080/12507970.2017.1326857

- Waddock, S. A. (1991). A typology of social partnership organizations. *Administration & Society*, 22(4), 480–515. doi:10.1177/009539979102200405
- Wagner, J. (2004, September). *Nascent entrepreneurs*. Discussion Paper Series No. 1293. IZA. Retrieved from <http://ftp.iza.org/dp1293.pdf>
- Wagner, J. (2004). Are young and small firms hot-houses for nascent entrepreneurship? Evidence from German micro data. *Applied Economics Quarterly*, 50(4), 379–391.
- Wagner, J. (2007). What a Difference a Y makes—Female and Male Nascent Entrepreneurs in Germany. *Small Business Economics*, 28(1), 1–21. doi:10.1007/11187-005-0259-x
- Wagner, J., & Sternberg, R. (2004). Start-up activities, individual characteristics, and the regional milieu: Lessons for entrepreneurship support policies from German micro data. *The Annals of Regional Science*, 38(2), 219–240. doi:10.1007/00168-004-0193-x
- Wahba, H. (2008). Does the market value corporate environmental responsibility? An empirical examination. *Corporate Social Responsibility and Environmental Management*, 15(2), 89–99. doi:10.1002/csr.153
- Wang, C. L. (2008). Entrepreneurial orientation, learning orientation, and firm performance. *Entrepreneurship Theory and Practice*, 32(4), 635–657. doi:10.1111/j.1540-6520.2008.00246.x
- Wang, D., Wang, L., & Chen, L. (2018). Unlocking the influence of family business exposure on entrepreneurial intentions. *The International Entrepreneurship and Management Journal*, 14(4), 951–974. doi:10.1007/11365-017-0475-2
- Wang, F., Yang, J., Pan, F., Ho, R. C., & Huang, J. H. (2020). Editorial: Neurotransmitters and emotions. *Frontiers in Psychology*, 11, 10–12. doi:10.3389/fpsyg.2020.00021 PMID:32116891
- Wang, X., & Tu, Y. (2016). The Existence of Herding in P2P Lending and the Rationality of It - An Empirical Study from China. *Journal of Economics. Business and Management*, 4(11), 652–659.
- Ward, A., Hernández-Sánchez, B. R., & Sánchez-García, J. C. (2019). Entrepreneurial Potential and Gender Effects: The Role of Personality Traits in University Students' Entrepreneurial Intentions. *Frontiers in Psychology*, 10(4), 2700. doi:10.3389/fpsyg.2019.02700 PMID:31866902
- Ward, T. B. (2004). Cognition, creativity, and entrepreneurship. *Journal of Business Venturing*, 19(2), 173–188. doi:10.1016/S0883-9026(03)00005-3
- Warnecke, T. (2013). *Can female entrepreneurship programs support social and solidarity economy? Insights from China and India*. United Nations Research Institute for Social Development. Retrieved May 28, 2020, from <http://www.unrisd.org/80256B3C005BE6B5/search/8C7D189297B145E1C1257B3A00504F17?OpenDocument>
- Washington State University. (2020). Three reasons an ethical business leads to profits. *Carson College of Business*. Retrieved March 22, 2020, from <https://onlinemba.wsu.edu/blog/3-reasons-an-ethical-business-leads-to-profits/>
- Watson, A., Dada, O., Wright, O., & Perrigot, R. (2019). Entrepreneurial Orientation Rhetoric in Franchise Organizations: The Impact of National Culture. *Entrepreneurship Theory and Practice*, 43(4), 751–772. doi:10.1177/1042258717738519
- Watson, K., McGowan, P., & Cunningham, J. A. (2018). An exploration of the business plan competition as a methodology for effective nascent entrepreneurial learning. *International Journal of Entrepreneurial Behaviour & Research*, 24(1), 121–146. doi:10.1108/IJEBR-05-2017-0158
- WCED. (1987). World commission on environment and development. *Our Common Future*, 17, 1-91.

## Compilation of References

- Webb, J. W., Tihanyi, L., Ireland, R. D., & Sirmon, D. G. (2009). You Say Illegal, I Say Legitimate: Entrepreneurship in the Informal Economy. *Academy of Management Review*, *34*(3), 492–510. doi:10.5465/amr.2009.40632826
- Wennekers, S., Stel, A., Thurik, A. R., & Reynolds, P. D. (2005). Nascent entrepreneurship and the level of economic development. *Small Business Economics*, *24*(3), 293–309. doi:10.1007/11187-005-1994-8
- Wennekers, S., van Stel, A., Carree, M., & Thurik, R. (2009). The relationship between entrepreneurship and economic development: Is it U-shaped? *Foundations and Trends in Entrepreneurship*, *6*(3), 167–237. doi:10.1561/03000000023
- Wesselink, R., Blok, V., van Leur, S., Lans, T., & Dentoni, D. (2015). Individual competencies for managers engaged in corporate sustainable management practices. *Journal of Cleaner Production*, *106*, 497–506. doi:10.1016/j.jclepro.2014.10.093
- Whetten, D. A., & Mackey, A. (2002). A social actor conception of organizational identity and its implications for the study of organizational reputation. *Business & Society*, *41*(4), 393–414. doi:10.1177/0007650302238775
- White, R., Thornhill, S., & Hampson, E. (2006). Entrepreneurs and evolutionary biology: The relationship between testosterone and new venture creation. *Organizational Behavior and Human Decision Processes*, *100*(1), 21–34. doi:10.1016/j.obhdp.2005.11.001
- White, R., Thornhill, S., & Hampson, E. (2007). A biosocial model of entrepreneurship: The combined effects of nurture and nature. *Journal of Organizational Behavior*, *28*(4), 451–466. doi:10.1002/job.432
- Wiedemann, A. U., Schütz, B., Sniehotta, F., Scholz, U., & Schwarzer, R. (2009). Disentangling the relation between intentions, planning, and behaviour: A moderated mediation analysis. *Psychology & Health*, *24*(1), 67–79. doi:10.1080/08870440801958214 PMID:20186640
- Wiklund, J., Nikolaev, B., Shir, N., Food, M., & Bradley, S. (2019). Entrepreneurship and well-being: Past, present, and future. *Journal of Business Venturing*, *34*(4), 579–588. doi:10.1016/j.jbusvent.2019.01.002
- Wiklund, J., & Shepherd, D. (2003). Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, *24*(13), 1307–1314. doi:10.1002/mj.360
- Williams, C. C., & Nadin, S. (2011). Evaluating entrepreneurs in the shadow economy: Economic or social entrepreneurship? *International Journal of Management and Enterprise Development*, *11*(1), 20–33. doi:10.1504/IJMED.2011.042970
- Williams, C. C., & Nadin, S. (2011). Re-reading entrepreneurship in the hidden economy: Commercial or social entrepreneurs? *International Journal of Entrepreneurship and Small Business*, *14*(4), 441–455. doi:10.1504/IJESB.2011.043469
- Williams, D. W., & Wood, M. (2015). Rule-based reasoning for understanding opportunity evaluation. *The Academy of Management Perspectives*, *29*(2), 218–236. doi:10.5465/amp.2013.0017
- Williams, N., & Williams, C. C. (2014). Beyond necessity versus opportunity entrepreneurship: Some lessons from English deprived urban neighborhoods. *The International Entrepreneurship and Management Journal*, *10*(1), 23–40. doi:10.1007/11365-011-0190-3
- Williams, T. A., & Shepherd, D. A. (2016). Victim entrepreneurs doing well by doing good: Venture creation and well-being in the aftermath of a resource shock. *Journal of Business Venturing*, *31*(4), 365–387. doi:10.1016/j.jbusvent.2016.04.002
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, *31*(3), 387–406. doi:10.1111/j.1540-6520.2007.00179.x



- Wilson, F., Marlino, D., & Kickul, J. (2004). Our entrepreneurial future: Examining the diverse attitudes and motivations of teens across gender and ethnic identity. *Journal of Developmental Entrepreneurship*. Advance online publication. doi:10.1016/S0072-9752(10)97001-2
- Wirth, H., Kulczycka, J., Hausner, J., & Koński, M. (2016). Corporate social responsibility: Communication about social and environmental disclosure by large and small copper mining companies. *Resources Policy*, 49, 53–60. doi:10.1016/j.resourpol.2016.04.007
- Wittenberg, M., & Leibbrandt, M. (2017). Measuring inequality by asset indices: A general approach with application to South Africa. *Review of Income and Wealth*, 63(4), 706–730. doi:10.1111/roiw.12286
- Wood, M., Bylund, P., & Bradley, S. (2016). The influence of tax and regulatory policies on entrepreneurs' opportunity evaluation decisions. *Management Decision*, 54(5), 1160–1182. doi:10.1108/MD-10-2015-0446
- Wood, M., & Mckinley, W. (2010). The production of entrepreneurial opportunity: A constructivist perspective. *Strategic Entrepreneurship Journal*, 4(1), 66–84. doi:10.1002/ej.83
- Woodside, A. G., Megehee, C. M., Isaksson, L., & Ferguson, G. (2020). Consequences of national cultures and motivations on entrepreneurship, innovation, ethical behavior, and quality-of-life. *Journal of Business and Industrial Marketing*, 35(1), 40–60. doi:10.1108/JBIM-10-2018-0290
- World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.
- World Economic Forum. (2009). *Educating the Next Wave of Entrepreneurs: Unlocking Entrepreneurial Capabilities to Meet the Global Challenges of the 21<sup>st</sup> Century: A Report of the Global Education Initiative*. World Economic Forum.
- World Economic Forum. (2010). *The future of industrial biorefineries*. [www3.weforum.org/docs/WEF\\_FutureIndustrialBiorefineries\\_Report\\_2010.pdf](http://www3.weforum.org/docs/WEF_FutureIndustrialBiorefineries_Report_2010.pdf)
- World Economic Forum. (2020). Global Shapers Launceston Hub. *Global Shapers Community*. Retrieved March 19, 2020, from <https://www.globalshapers.org/hubs/launceston-hub>
- World Health Organisation. (1999). *Partners in life skill education*. World Health Organisation, Department of Mental Health.
- Wright, M. (2019). David Audretsch and new directions in spillover academic entrepreneurship. In E. Lehmann & M. Keilbach (Eds.), *From Industrial Organization to Entrepreneurship* (pp. 163–168). Springer International Publishing., doi:10.1007/978-3-030-25237-3\_17
- Wry, T., & York, J. G. (2017). An Identity Based Approach to Social Enterprise. *Academy of Management Review*, 42(3), 437–460. doi:10.5465/amr.2013.0506
- Xia, B., Olanipekun, A., Chen, Q., Xie, L., & Liu, Y. (2018). Conceptualising the state of the art of corporate social responsibility (CSR) in the construction industry and its nexus to sustainable development. *Journal of Cleaner Production*, 195, 340–353. doi:10.1016/j.jclepro.2018.05.157
- Xu, A., Yang, X., Rao, H., Fu, W. T., Huang, S. W., & Bailey, B. P. (2014). Show me the money! An analysis of project updates during crowdfunding campaigns. In *Proceedings of the 32nd annual ACM conference on human factors in computing systems* (pp. 591–600). ACM. 10.1145/2556288.2557045
- Xu, D., & Wu, X. (2016). The rise of the second generation: Aspirations, motivations and academic success of Chinese immigrants' children in Hong Kong\*. *Journal of Ethnic and Migration Studies*, 9451(April). Advance online publication. doi:10.1080/1369183X.2016.1245132

## Compilation of References

- Yadav, Y. S., & Yadav, Y. K. (2016). Biomass supply chain management: Perspectives and challenges. In S. Kumar, S. Khanal, & Y. Yadav (Eds.), *Proceedings of the First International Conference on Recent Advances in Bioenergy Research* (pp. 267-281). New Delhi: Springer. 10.1007/978-81-322-2773-1\_20
- Yamada, G. (1996). Urban informal employment and self-employment in developing countries: Theory and evidence. *Economic Development and Cultural Change*, 44(2), 289–314. doi:10.1086/452214
- Yang, H., & Steensma, H. K. (2014). When do firms rely on their knowledge spillover recipients for guidance in exploring unfamiliar knowledge? *Research Policy*, 43(9), 1496–1507. doi:10.1016/j.respol.2014.04.016
- Yasmeen, K. (2015). *The impact of microfinance loan on women's empowerment and happiness in Pakistan*. Universiti Utara Malaysia.
- Yin, R. K. (2010). *Qualitative Research from Start to Finish*. The Guilford Press.
- Young, T. (2013). *The Everything Guide to Crowdfunding: Learn How To Use Social Media For Small-Business Funding*. Adams Media.
- Youssef, A. B., Boubaker, S., & Omri, A. (2018). Entrepreneurship and sustainability: The need for innovative and institutional solutions. *Technological Forecasting and Social Change*, 129, 232–241. doi:10.1016/j.techfore.2017.11.003
- Yu, S., Johnson, S., Lai, C., Cricelli, A., & Fleming, L. (2017). Crowdfunding and regional entrepreneurial investment: An application of the CrowdBerkeley database. *Research Policy*, 46(10), 1723–1737. doi:10.1016/j.respol.2017.07.008
- Yusof, M., Sandhu, M. S., & Jain, K. K. (2007). Relationship between psychological characteristics and entrepreneurial inclination: A case study of students at University Tun Abdul Razak (Unitar). *Journal of Asia Entrepreneurship and Sustainability*, 3(2).
- Yu, Y., & Choi, Y. (2016). Stakeholder pressure and CSR adoption: The mediating role of organizational culture for Chinese companies. *The Social Science Journal*, 53(2), 226–235. doi:10.1016/j.soscij.2014.07.006
- Zaccaro, S. J., & Klimoski, R. (2002). The interface of leadership and team processes
- Zahra, S. A., Gedaljovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of Business Venturing*, 24(5), 519–532. doi:10.1016/j.jbusvent.2008.04.007
- Zahra, S. A., & Wright, M. (2016). Understanding the Social Role of Entrepreneurship. *Journal of Management Studies*, 53(4), 610–629. doi:10.1111/joms.12149
- Zahra, S., & Wright, M. (2011). Entrepreneurship's next act. *The Academy of Management Perspectives*, 25(4), 67–83. doi:10.5465/amp.2010.0149
- Zahra, S., Wright, M., & Abdelgawad, S. (2014). Contextualization and the advancement of entrepreneurship research. *International Small Business Journal*, 32(5), 479–500. doi:10.1177/0266242613519807
- Zampetakis, L. A., Lerakis, M., Kafetsios, K., & Moustakis, V. S. (2016). The moderating role of anticipated affective ambivalence in the formation of entrepreneurial intentions. *The International Entrepreneurship and Management Journal*, 12(3), 815–838. doi:10.1007/11365-015-0367-2
- Zanakis, S., Renko, M., & Bullough, A. (2012). Nascent entrepreneurs and the transition to entrepreneurship: Why do people start new businesses? *Journal of Developmental Entrepreneurship*, 17(1), 1–25. doi:10.1142/S108494671250001X
- Zapalska, A. (1997). A profile of woman entrepreneurs and enterprises in Poland. *Journal of Small Business Management*, 35(4), 76–82.

- Zhang, J., & Chen, W. (2019). Crowdfunding technological innovations: Interactions between consumer benefits and rewards. *Technovation*, *84*, 11–20. doi:10.1016/j.technovation.2018.05.001
- Zhang, J., & Liu, P. (2012). Rational Herding in Microloan Markets. *Management Science*, *58*(5), 892–912. doi:10.1287/mnsc.1110.1459
- Zhang, Z., Zyphur, M. J., Narayanan, J., Arvey, R. D., Chaturvedi, S., Avolio, B. J., Lichtenstein, P., & Larsson, G. (2009). The genetic basis of entrepreneurship: Effects of gender and personality. *Organizational Behavior and Human Decision Processes*, *110*(2), 93–107. doi:10.1016/j.obhdp.2009.07.002
- Zhao, H., & Seibert, S. (2006). The Big Five personality dimensions and entrepreneurial status: A meta-analytical review. *The Journal of Applied Psychology*, *91*(2), 259–271. doi:10.1037/0021-9010.91.2.259 PMID:16551182
- Zhao, H., Seibert, S., & Lumpkin, G. (2010). The relationship of personality to entrepreneurial intentions and performance: A meta-analytic review. *Journal of Management*, *36*(2), 381–404. doi:10.1177/0149206309335187
- Zhou, M., Lu, B., Fan, W., & Wang, A. (2018). Project description and crowdfunding success: An exploratory study. *Information Systems Frontiers*, *20*(2), 259–274. doi:10.1007/10796-016-9723-1 PMID:29755287
- Zhu, W., Riggio, R. E., Avolio, B. J., & Sosik, J. J. (2011). The effect of leadership on follower moral identity: Does transformational/transactional style make a difference? *Journal of Leadership & Organizational Studies*, *18*(2), 150–163. doi:10.1177/1548051810396714
- Zimbabwe National Statistics Agency. (2019). *Zimbabwe Poverty Report 2017*. Retrieved June 1, 2020, from [http://www.zimstat.co.zw/sites/default/files/img/publications/Prices/Poverty\\_Report\\_2017.pdf](http://www.zimstat.co.zw/sites/default/files/img/publications/Prices/Poverty_Report_2017.pdf)
- Zvavahera, P., Chigora, F., & Tandri, R. (2018). Entrepreneurship: An engine for economic growth. *International Journal of Academic Research in Business and Social Sciences*, *8*(11), 55–66. doi:10.6007/IJARBSS/v8-i11/4884

## About the Contributors

**António Carrizo Moreira** obtained a Bachelor's degree in Electrical Engineering and a Master's degree in Management, both from the University of Porto, Portugal. He received his PhD in Management from UMIST-University of Manchester Institute of Science and Technology, England. He has a solid international background in industry leveraged working for a multinational company in Germany as well as in Portugal. He has also been involved in consultancy projects and in research activities. He is Associate Professor at the Department of Economics, Management, Industrial Engineering, and Tourism, University of Aveiro, Portugal, where he headed the Bachelor and Master Degrees in Management for five years. He is member of GOVCOPP research unit.

**José Guilherme Leitão Dantas** has a degree in Organization and Business Management from the Technical University of Lisbon, Portugal, a M.B.A in International Management from Autonomous University of Lisbon, Portugal, and a PhD in Economical and Managerial Sciences from the Autonomous University of Madrid, Spain. He is Associate Professor at the Polytechnic of Leiria and he also has an extensive entrepreneurial and managerial experience in companies of various sectors of the economy. He is the author and co-author of several books and articles, mainly in the areas of innovation and entrepreneurship, and works also as trainer and independent consultant in the areas of strategy, marketing, and innovation.

\* \* \*

**Mohammad Bagheri** is a lecturer at IPAM, the oldest marketing school in Portugal. Moe is also pursuing his Ph.D. in Marketing & Strategy at a joint program conducted among three well-known universities in Portugal, namely Universidade do Minho, Universidade de Aveiro, and Universidade da Beira Interior. He holds an MBA with a Marketing specialization from the University of Malaya, Malaysia, and European Business School, Germany, along with a Bachelor's degree in English Education. He has been working for more than a decade in several industries and has published papers in different journals. His research interests include Digital Marketing, Branding Technology-Oriented Product & Services, Startups Branding, Disruptive Technologies, Consumer Behaviour, and Luxury Industries. He is also the founder of a boutique consulting company, Moe's Consulting.

**Susana Bernardino** is an adjunct professor of Management at the Polytechnic of Porto - Institute of Accounting and Administration (ISCAP), S. Mamede de Infesta, Portugal, and researcher at CEOS. PP/ISCAP. She completed her under-graduation degree in Management at the Faculty of Economics of the University of Porto, where also obtained the curricular part of the master's course in Finance. She got her PhD in Management in 2014 from the Portucalense University. Her research interests focus on social entrepreneurship, entrepreneurship, social and solidarity economy, smart cities, urban and regional development. and crowdfunding

**Tessa Campbell** is a third year business student, majoring in business management and international logistics at The University of Tasmania.

**Oscarina Conceição** is Professor at Polytechnic Institute of Cávado and Ave (IPCA) and researcher at Dinâmia' CET-IUL (Instituto Universitário de Lisboa). She has a Master's degree in Industrial Economics and Business and a PhD in Economics, both from University of Minho (Braga, Portugal). Her research interests include the following topics: innovation process and their socio-economic effects; knowledge transfer; knowledge and innovation networks; entrepreneurship.

**Rui Cruz** has been an Assistant Professor at Universidade Europeia in Lisbon, since 2001 Integrated Investigator at UNIDCOM-IADE. PhD in Management and Marketing from the University of Sevilla, Spain, also has a DEA from the same university and an MBA in Strategic Foresight at IESFF, Lisbon. With over 20 years teaching experience at the service of several higher education institutions in the public and private sector, actually teaches academic master's and global graduate programs taught in English in the areas of marketing, logistics and supply chain. Also teaches subjects related with marketing and digital marketing in several of the Executive Masters and post graduation programs. Advisor and Tutor in master's dissertations in the areas of marketing, digital marketing and entrepreneurship his research interests are in the areas of business strategy, strategic marketing, industrial and services marketing and relationship marketing and has scientific articles published national and internationally and books published in Portugal, Spain, Angola and Brazil. Professionally, he worked in the field of advertising at the service of large international agencies such as Publicis, ITT marketing services and BBDO in Portugal and abroad, throughout the 80's. Was also marketing director of one of the largest Portuguese banking groups in the 90's and business consultant in the areas of strategy and innovation in the first decade of the 21st century.

**Anna Cui** is a current undergraduate completing a Bachelor of Business Management at the University of Tasmania. Ms Cui interested in organizational leadership and its impact on various stakeholders including the wider community. Anna believes that good leaders are foundational within organizations and for the health and well-being of society. Based on her own experience and skills in organizational management and leadership, Anna sees the need for continued research in the area of promoting ethical leadership in Australia.

**Cat-My Dang** is a PhD candidate and lecturer at the Chair of Small business and Entrepreneurship, University of Bremen. Her interdisciplinary research expertise is centered on the fields of migrants and their entrepreneurship in the region. Currently, she is involved in international projects on migration and entrepreneurship education.

## **About the Contributors**

**Evelyn Derera** is a senior lecturer in the School of Management, IT & Governance at the University of KwaZulu-Natal (UKZN). Over the years, she has served as Academic Leader for the discipline of Management and Entrepreneurship; programme manager for the Postgraduate Diploma in Management for Self-Funded Teaching Programmes at UKZN Pietermaritzburg Campus; and academic development officer. Evelyn holds a PhD in Entrepreneurship from UKZN. She is passionate about entrepreneurship, particularly the role of women entrepreneurs in developing nations. She has also published in the area of social entrepreneurship and women in leadership. She currently teaches management and entrepreneurship courses at UKZN. Evelyn also holds a Diploma in Banking from the Institute of Bankers of Zimbabwe. Before joining academia, she worked in the banking sector in Zimbabwe where she held several positions including Customer Relationship Manager in Private Banking. Her financial sector experience spans over ten years.

**Isabel Simões Dias** is an Associate Professor at the Polytechnic of Leiria. PhD in Psychology (University of Aveiro – Portugal), Master's Degree in Pedagogical Psychology (University of Coimbra – Portugal) and a Degree in Sport and Physical Activity Psychology (University of Minho – Portugal) and a Degree in Developmental Psychology (University of Coimbra). She is an integrated investigator at the CIEQV - Life Quality Research Center and her research activity focuses, mostly, in the field of childhood education and sport psychology. She is the author and co-author of several books and articles and she has been participating in national and international projects, namely research and intervention projects. Nowadays, she is interested in studying life skills development in different contexts.

**Mufaro Dzingirai** is a PhD candidate in Business Management at Midlands State University and a lecturer in the Department of Business Management, Midlands State University. He received his Master of Commerce in Strategic Management and Corporate Governance degree from Midlands State University in 2016. He was hired as a teacher by the Ministry of Education from 2014 to 2016. In 2013, he received the MSU Book Prize. His research interests include Higher Education, Strategy, Management, Finance, and Entrepreneurship.

**Filipa Fernandes** graduated in Business Administration (ISCTE – University Institute of Lisbon), holds a Mini-MBA from Indeg/ISCTE Business School and Doctoral Studies at Universidad Complutense de Madrid/ Universidad Rey Juan Carlos (Ph.D in Management, Marketing and Economics). Professor and International Coordinator at IPAM Lisbon. Started her career with Young & Rubicam and afterwards worked for Novartis, Tech Data, Multi Development Corporation, Amorim Group and SES Spar Shopping Centers in Austria. Currently Managing Director of the consultancy firm, Expansion Labs International, that operates worldwide with developers, retailers and investors. Jury Member of several international Retail and Shopping Center Awards and active member of different Retail and Real Estate Associations.

**Marisa R. Ferreira** is an Associate Professor at the School of Technology and Management at the Porto Polytechnic and a researcher at CIICESI. She holds a Ph.D. from Porto University on Business Sciences. Her research interests include nonprofit management, sustainability, and entrepreneurship. She is the Director of the MSc in Nonprofit Management.

**Alexandra França** obtained a Master's degree in Management from Porto Accounting and Business School, and she is a doctoral candidate at the University of Vigo. She has a solid background in industry and services leveraged by working for German multinational companies. Her research interests are in strategy and entrepreneurship. Her research has been published in national and international scientific conferences and journals.

**Vítor M. S. Gabriel** is an Adjunct Professor of Accounting and Finance area at the Management and Economics Department, in Guarda Polytechnic Institute. Prof. Gabriel's research areas include Finance, Entrepreneurship, Accounting History.

**Dolores Gallardo Vazquez** is a lecturer and researcher in the Department of Financial Economy and Accounting at the Faculty of Economics Sciences and Business Administration at the University of Extremadura. She is an Economist specialized in Financial Accounting, Intellectual Capital and Corporate Social Responsibility, Expert in Implementation of International Accounting Standards, MSc in Training as University Teaching in the European Higher Education, MSc in Management of Higher Education Institutions; Fellowship at Cranfield University based on a competitive aid from Spanish Government. She has managed the Orientation and Teacher Training Service at the University for four years. Now, she is managing the University Social Responsibility Office. Her research interests range across several key areas within Intellectual Capital, Corporate Social Responsibility, Corporate Volunteering, University Social Responsibility, Social Entrepreneurship and Social Innovation. She has published in various peer reviewed journals, books, international conferences proceedings and monographs. She has also held lectureships at a wide variety of academic institutions.

**Waseem Ul Hameed** is an Assistant Professor at School of Business, Management and Administrative Sciences, The Islamia University of Bahawalpur (IUB), Pakistan. He is a former bank employee. He receives his PhD in Finance and Banking from Universiti Utara Malaysia (UUM), Malaysia and has published his works in reputed journals including Sustainability, Asian Women, International Journal of Finance and Economics, European Journal of International Management, Uncertain Supply Chain Management, Management Sciences letters, Calitatea, Pakistan Journal of Humanities and Social Sciences, Journal of Global Entrepreneurship Research, Social Sciences, and Journal of Applied Economics and Business Research, among others. His research areas include microfinance, women-empowerment, open-innovation, entrepreneurship, hospitality management, banking and finance.

**Brizeida Hernández-Sánchez**, Professor and researcher Department of Social Psychology University of Salamanca Coordinator of training and research programs Chair of Entrepreneurs. His main lines of research include: entrepreneurial methodology; social innovation and public policies.

**Matthew Knox** is a recent graduate of the University of Tasmania with a passion for understanding how to create a better world. His current work is focused on understanding authentic followers and their role in enabling ethical leader behaviors.

### **About the Contributors**

**Cristina López-Cózar-Navarro**, PhD in Business and Economics, is Associate Professor of Business Organization at the Department of Agricultural Economics, Statistics and Management of the Polytechnic University of Madrid (Spain). Her research interest focuses mainly on entrepreneurship and strategic management of the family businesses, with several books and papers published in scientific journals as well as international congresses.

**Joana Malheiro** graduated in English and German Language and Literature (with specialization in Translation) in 2006, at Faculdade de Letras da Universidade do Porto. Specialization in Social Gerontology in 2011, at Instituto Superior de Serviço Social do Porto. Post Graduation in People Management in 2019 at Porto Business School.

**Maria Manuela Santos Natário** is Adjunct Professor at Polytechnics of Guarda, Portugal, Phd. in Economics of Innovation and Competitiveness by University of Évora, and as the MBA by the University of Beira Interior. Teaches Innovation and Creativity, Innovation and Competitiveness, International Management and Economy. She is also Research Fellow at Research Unit for Inland Development (Portugal). Her main interests include Economy of Innovation, Innovation and Competitiveness. She has published articles in international journals such as European Journal of Innovation Management, *Tékhe Studies Review*, Journal of Business Economics and Management, Journal of the American Academy of Business, Journal of Comparative International Management, Journal of Knowledge-based Innovation in China. She has published articles in international books.

**Qasim Ali Nisar** is an Assistant Professor at Faculty of Business Administration and Management Sciences in Superior University Lahore, Pakistan. He has more than five years of teaching experiences in different public and private universities and publishes a number of research publications in international well reputed (e.g. SSCI, ESCI, Scopus, ABDC and HEC indexed) journals. He is the director of Research Solutions Consultancy and organizes more than 50 training workshops using different statistical tools (e.g. Smart PLS, AMOS, SPSS and NVivo) in Malaysia, Indonesia and Pakistan. His research areas include leadership, hospitality management, customer satisfaction, organization performance, entrepreneurship, and innovation.

**Beatriz Nunes** has a BSc in Languages and International Relations (University of Porto) Post Graduation in People Management (Porto Business School) Currently HR Business Partner in Huf Portuguesa.

**Oluwaseun James Oguntuase** holds a master degrees in Environmental Resources Management and Business Administration. His current research focuses on the roles of academic entrepreneurship and responsible innovation in a bioeconomy.

**Juciely Pimentel** has a Bachelor in Translation (Porto Polytechnic Institute); Post Graduation in People Management (Porto Business School); Currently HR Manager at Xing Portugal.



**Tiziana Priede Bergamini.** PhD in Business (Universidad Complutense de Madrid) she is currently a chair professor at Universidad Europea de Madrid (UEM). Her major areas of research and teaching include business and economic management, social entrepreneurship, SMEs and family business. She is the author of several books, international congresses, and articles in scientific journals (journal citation report), as well as responsible for several doctoral theses related to these topics.

**João F. Proenca** is Full Professor at the Faculty of Economics of the University of Porto. Before, he was the Rector of the European University, Laureate International Universities the Dean and the President of the Scientific Council of the Faculty of Economics of the University of Porto, and the Director of the PhD Program in Business and Management Studies, UPorto. He has a strong international teaching and research experience being Visiting Professor and Researcher in several places around the world and he has also held some relevant professional positions in several companies. He has published extensively his work in several academic journals and book chapters.

**Albérico Travassos Rosário,** Ph.D. Marketing and Strategy from the Universities of Aveiro (UA), Minho (UM) and Beira Interior (UBI). With affiliation to the GOVCOPP research centre of the University of Aveiro. Has a Master's degree in Marketing and Graduation in Marketing, Advertising and Public Relations, academic degrees awarded by ISLA Campus Lisbon - Universidade Europeia | Laureate International Universities. It has the title of Specialist in Marketing and teaches with the category of Adjunct Professor of Santarém School of Management and Technology (ESGTS) Santarém Polytechnic Institute, Adjunct Professor IPAM–The Marketing School | Laureate International Universities. He is Director of the Commercial Management Course, Director of the Professional Technical Course (TeSP) of Sales and Commercial Management, President of the Pedagogical Council and Member of the Technical-Scientific Council of ISLA-Santarém. He is also a marketing and strategy consultant for SMEs. His main research interests are: Competitive Strategy, Competitive Dynamics, Strategic Groups and Marketing.

**Josh Rowlands** is an undergraduate student of Business management and Chinese language in Tasmania, Australia. He is passionate about entrepreneurship and the influence leadership has in generating successful ventures. Based in Tasmania, Australia, Josh views ethical and sustainable entrepreneurship as the key forward for the island state. Tasmania's isolation necessitates creative and sound entrepreneurship, something of which research can continue to contribute to in the future. He would love to see the exchange of unique entrepreneurial ideas/solutions being exchanged more between Tasmania, the mainland of Australia and countries and places worldwide.

**Juan de la Cruz Sánchez Domínguez** is a PhD student at the Financial Economy and Accounting Department of the University of Extremadura, Spain. He has a MSc of Research in Economics, Management, and International Trade. His main research interests are Corporate Social Responsibility, entrepreneurship, the Sustainable Development Goals and circular economy, and how these topics are connected with each other. He speaks fluent English and Portuguese, and has basic knowledge of French and German.

### **About the Contributors**

**Jose C. Sánchez-García**, Full Professor of Social Psychology of Entrepreneurship, Faculty of Psychology, University of Salamanca, Spain. He is a researcher and director of the Chair of Entrepreneurship. His research interests are entrepreneurship and innovation management. He has been Dean of the Faculty of Psychology, and is director of several international postgraduate programs in entrepreneurial development and innovation. He has received the OPA award for his research and promotion of entrepreneurship to university students, and Juan Huarte de San Juan award for his career and promotion of psychology. He has authored numerous articles published in international journals, and several books and book chapters published by national and international publishers.

**J. Freitas Santos** is Professor of International Business at the Polytechnic of Porto - Institute of Accounting and Administration (ISCAP), and researcher at CEOS.PP- Centre for Organisational and Social Studies of P. Porto. He obtained his PhD in 1997 from the Minho University. His research interests include tourism, regional development, social entrepreneurship, internationalisation and digital marketing. Besides presentations on these topics at various conferences in Portugal and foreign countries, his articles have been published in several domestic and international journals.

**Helena I. B. Saraiva** is an Adjunct Professor of Accounting and Finance area at the Management and Economics Department, in Guarda Polytechnic Institute. Her research areas include Balanced Scorecard, Management Accounting, Entrepreneurship, Finance, Accounting, Accounting History.

**Fernando Manuel Valente** has a PhD in Management by the School of Economics and Management of the University of Lisbon. He has been a professor for 24 years at the Polytechnic Institute of Setúbal - School of Technology of Setúbal, in the field of Business Science. He is currently a member of the CINEA research center. He participated in several international projects sponsored by the EU and in multiple events related to the areas of innovation and entrepreneurship. He coordinated a unit for four years in supporting entrepreneurship. He is co-author of a book, multiple chapters of books and papers presented at national and international conferences, with greater incidence in the areas of innovation and entrepreneurship. He has, also, managerial experience in a private company and had managed his own businesses.

# Index

## A

Academic entrepreneurship 90, 311, 316-317, 319, 324, 329-331  
 Academic spin-offs companies 316-318, 330-331  
 Analysis of entrepreneurial dynamics in Spain: The role of Corporate Social Responsibility 117  
 Authentic Follower 144, 150-151, 162  
 Authentic Leader 144, 147, 150-153, 155, 158, 162  
 authentic leadership 143-144, 149-150, 153, 155-157, 159, 161-162  
 Authenticity 149-151, 159, 162, 356, 367  
 Autonomous Community 34, 42, 44, 47-48, 58  
 Awareness 16, 48, 70, 117, 132, 145, 149, 151-153, 155, 162, 229, 232, 253, 255, 259, 261-262, 265, 267, 274, 278, 280, 304, 336-339, 345, 347-348, 351, 354, 362

## B

Being creative 43, 47, 70  
 Biobased 295, 307-308, 310, 312  
 Bioeconomy 295-315  
 Biological drivers 61

## C

Challenge 16-17, 118, 137, 145, 148, 198, 201-203, 207, 210, 231, 267, 278, 288, 308, 310, 318, 368  
 Circular Economy 273, 278-280, 287-288, 290-291, 293, 347  
 Collaborative Economy 273, 278-279, 287-288, 290, 293  
 Common Good 154, 277-278, 281, 289, 293  
 Competitive Advantage 3, 65, 72, 74, 82, 127, 129, 138-139, 164-166, 169, 171, 328, 340-341, 354  
 Competitiveness 2, 86, 92-93, 95-97, 99, 103-109, 111-112, 140, 167, 169-170, 301-302, 328, 336, 341

conceptual model 50, 77, 311, 350  
 Contextual Conditions 1, 7, 29, 355  
 Contextual Factors 5, 7, 56, 61, 63, 88, 234, 372  
 Corporate Social Responsibility 117, 126, 133-141, 154, 157, 274, 281, 286, 349  
 Creativity 4-5, 16, 29, 32-33, 40, 61, 63-64, 66-72, 77, 79-80, 82-89, 91, 120, 128, 144, 159, 162, 167-168, 170, 246, 378, 386  
 Critical Success Factors 228-229, 232  
 Crowdfundee 231, 252  
 Crowdfunder 231, 252  
 Crowdfunding 125, 141, 160, 228-230, 232-234, 236-238, 245-252, 273, 284-285, 288-289, 291-293  
 Crowdfunding Campaign 232-233, 236, 246, 249, 252  
 Crowdfunding Platforms 246, 248-250, 252  
 Cultural Dimensions 39, 93, 97-99, 103-105, 107-109, 112  
 Culture 4, 6, 10, 14, 18, 20-22, 26, 33-34, 36, 38-41, 48, 50-51, 54, 58, 66, 73, 75, 81-83, 87, 89, 94, 97, 99, 104, 107-112, 122-124, 132-133, 138-139, 141, 146, 150, 157, 168, 178, 181, 183, 201, 205, 216, 223, 238, 268-269, 318, 339, 350, 353, 359-360, 367, 369, 378, 386

## E

Economy for the Common Good 277-278, 289, 293  
 Education 1-3, 5-10, 12-17, 19-29, 31, 33, 35, 37, 43, 47, 50-52, 54-57, 65-66, 84, 94-95, 97, 99, 104, 108-109, 111, 120, 126, 130, 137-138, 141, 143, 145-149, 152-153, 155-156, 158, 160, 162, 175, 183, 185, 206-207, 218, 223, 227, 238, 256, 261, 272, 287, 302, 307, 316-318, 331, 333, 352, 356-357, 362, 366-367, 376, 388  
 Educational System 1, 16-17, 29  
 Educational Systems 1  
 Entrepreneur 1-3, 5, 7-9, 11, 16, 19, 22, 26-27, 30, 35, 37-39, 42-43, 48-49, 53, 55, 57-59, 62, 64, 66-

## Index

- 68, 70, 78, 83, 87-88, 93-94, 97, 103, 108, 120, 123, 125, 129-130, 132-133, 142, 144, 146-148, 154-155, 157-160, 162, 165, 167, 177-178, 180, 194-196, 202, 208, 210, 231-232, 234-235, 237-238, 247, 252, 263-265, 268, 274, 281, 283, 285, 288, 298, 316, 318, 325, 332, 336, 354, 356-357, 359-362, 365, 370, 375, 381, 387
- Entrepreneurial Activity 1-11, 14, 16-17, 20-21, 29-30, 53, 63, 80-81, 92-94, 97, 103, 108, 110, 119, 131, 133, 148, 161-162, 165, 178, 186, 195, 197, 208, 236, 261, 302, 313, 317, 319-320, 324, 329, 334, 353, 372, 375, 378-379, 387, 389
- Entrepreneurial Behavior 1-2, 4, 6-8, 11, 29-30, 36, 62, 64, 66-69, 72, 85, 89, 91, 332-333
- entrepreneurial context 6, 172
- Entrepreneurial Education 8, 99, 120, 153, 156, 162
- Entrepreneurial Emergence 143-145, 147-149, 153, 155-156, 158, 162
- Entrepreneurial Intention 11, 34-36, 38-39, 41-42, 44-45, 47-48, 50-52, 54, 57-58, 181, 368, 388
- Entrepreneurial Mindset 12, 15, 29, 76, 86
- Entrepreneurial Orientation 26, 39, 41, 53-55, 58-59, 160-161, 207, 298, 306-307, 310, 314, 316-317, 319-320, 325, 327, 329-331, 369
- entrepreneurial processes 172-173, 178, 365
- Entrepreneurs 2-6, 9-11, 13-14, 16, 19-20, 22, 27-29, 31, 34-39, 41-43, 47-48, 50-57, 61-77, 80-83, 86, 88-91, 94-95, 99-100, 103, 108-110, 112, 117-118, 120, 122-125, 128-130, 132-133, 136, 139-141, 143-159, 162, 168, 171-173, 175, 177-188, 194-211, 213, 218, 223, 227-231, 233, 235, 237-238, 242-245, 250, 253-270, 273-274, 278, 281-284, 286-288, 298, 312, 317-320, 324-327, 329-330, 332, 350-356, 359-369, 373, 375-376, 378, 386-389
- Entrepreneurship 1-41, 43, 45, 47-58, 61-64, 66-95, 97, 99-112, 117-118, 120-126, 128-149, 152-176, 178-188, 194-210, 222-226, 236, 244, 246-250, 253-261, 265-275, 278-279, 281-296, 298-299, 304-320, 322, 324, 327, 329-334, 336, 338, 349-356, 359-376, 378-389
- Entrepreneurship Framework Conditions 92-93, 97, 99-102, 109, 112
- Entrepreneurship, Nascent Entrepreneurship 61
- Environment 2-3, 8, 11, 13-14, 16, 29, 41, 56, 61, 63-64, 67, 69-70, 73-74, 77, 87, 94-95, 97, 99, 104, 108, 122, 126-130, 132-134, 136-138, 140-142, 146, 148-149, 156, 167, 185, 195-196, 229, 238, 255, 271, 274, 280, 287, 293, 297, 299, 304, 308, 314, 318, 322-323, 335, 340, 345, 347-348, 354, 362, 366, 370, 375, 379, 389
- Epigenetic 69, 91
- ethnic entrepreneurship 351-356, 359, 361-365, 367, 370
- ## F
- Financial Instruments 282
- Financing 15, 99-100, 109, 125, 130, 181, 184, 208, 214, 221, 228, 246-247, 249, 251-252, 268, 274, 283-286, 288, 293, 320, 327, 360
- Firms 18-19, 22, 39, 50-51, 54, 62, 68, 72-77, 80, 82-83, 85, 89-90, 94, 100, 109, 112, 134-135, 138, 146, 156, 160, 164-171, 173, 196, 230, 270, 292, 298-299, 312, 318-319, 332, 345-346, 354, 368
- Fourth Sector 273, 280-282, 287-288, 291-293
- Framework 29, 73, 79, 86, 92-93, 95, 97-102, 108-109, 112, 117-118, 127, 129, 133, 136, 141-142, 158, 185, 187, 203, 205, 216, 238, 247-248, 255, 269, 274, 278, 282, 286, 288, 291, 293, 295-296, 304-306, 312, 315, 318, 363, 389
- ## G
- Gei 372, 374, 379-384
- Genetic Endowment 2, 5, 29
- Global Entrepreneurship Monitor (GEM) Spain Report 142
- Government support Programmes 253-254, 258-259, 261-267
- Growth 2, 4, 8, 18, 20, 25-26, 35-36, 48-49, 51, 57, 62-65, 71-72, 77-80, 84, 89, 91-93, 95, 110-112, 122, 126, 132, 134, 139-140, 143-145, 147, 149, 152-154, 156, 158, 161, 163, 165, 167-169, 171, 173, 175, 182, 194, 196-197, 199, 207, 209-210, 226, 229, 231, 253-254, 256-257, 270-271, 274-275, 278, 280, 283-285, 287-288, 290-291, 297-301, 307-309, 312, 314, 317-318, 320, 324, 329-332, 336, 338, 345, 349-350, 368, 386, 388
- ## H
- Happiness 13, 227, 372-374, 376-389
- ## I
- Indexes 62, 119, 372-374, 379-380, 382, 384
- IndieGoGo 228-229, 234, 238-239, 242, 244
- Innovation 2, 4, 14-16, 18, 20-21, 23, 27-29, 35-36, 41, 49-51, 54-55, 57-58, 62-64, 66, 70, 72, 75-76, 79-82, 84-85, 87, 90, 93-95, 97-98, 104, 107-108, 110-111, 128-130, 132, 134-135, 137-138,

140-141, 144-145, 147, 155-159, 162, 164-167, 170-171, 173, 178, 185, 187, 194, 206, 223, 238, 247, 249, 254, 269-270, 274, 280, 288, 290-291, 295-296, 298-300, 305-315, 318, 328, 331, 333, 335, 338-339, 345-350, 367, 369, 374-375

Innovativeness 9, 11, 39, 54, 59, 73, 84, 118, 140, 298, 349

Internal Locus of Control 4-5, 9-11, 35, 38-39, 41-42, 45, 47, 59

## K

knowledge 3-4, 7, 9, 12-13, 15, 17-18, 23, 26, 29, 32, 47, 53, 56, 63, 65-66, 70, 72-83, 85, 87-90, 94-95, 120-122, 129-132, 152, 156, 159, 162-171, 173-174, 178-182, 184, 196, 198, 203-204, 218, 229, 248-249, 254, 259, 265, 274, 284, 287-288, 294-301, 305-308, 310-312, 314, 316, 318, 325, 333, 363, 365, 373, 389

Knowledge Spillover Theory of Entrepreneurship 18, 78, 83, 156, 163-165, 168-171

Knowledge Spillovers 75, 79, 81, 83, 85, 163-171, 307, 333

## L

legitimacy 133, 135, 247, 291, 351-352, 354, 356, 361-370

Life Skills 2-3, 9, 12-13, 17, 20, 23-24, 26-29

Links 6, 16, 51, 76, 99, 178, 298, 306-307, 372

## M

management 1, 3, 9, 13, 18-19, 22-23, 26-27, 29, 50-58, 66, 77, 79-91, 109, 120-121, 126, 130, 132-141, 145, 147, 156-164, 168, 170-171, 174-175, 178-179, 183, 185, 187-188, 195, 205-211, 217, 222-225, 246-249, 251, 260, 267, 269-272, 276, 280, 282, 284-289, 291-293, 303, 306, 308-314, 319-320, 327, 331-334, 338, 347-350, 354, 366-367, 369-371, 385-387

Marketing 9, 25, 55, 58, 65, 74, 76, 125, 134, 138, 187, 223, 232, 242, 248, 298, 311, 328, 335, 338, 346, 348, 367, 387

Micro-Credit 211-212, 215, 218-219, 227

Microfinance 211-219, 221-227, 283, 289

Micro-Insurance 211-212, 215, 217-219, 221-222, 227

Micro-Saving 211, 215, 217-219, 227

micro-training 211-212, 215, 227

## N

Nascent Entrepreneur 26, 37, 42, 64, 93-94, 97, 144, 146-147, 155, 160, 178, 194, 202, 208, 210, 252, 354

Nascent Entrepreneurs 34, 36-38, 42-43, 47, 51, 55, 57, 61, 63-65, 68, 70, 72, 74-75, 77, 80, 82, 86, 90, 94-95, 103, 108-110, 112, 140, 144, 146-159, 162, 172-173, 175, 177-184, 186-187, 194-198, 201-204, 207-210, 228, 230-231, 245, 270, 350, 352-354, 360, 362, 366-367

Nascent Entrepreneurship 36-37, 49, 51, 54, 61, 63-64, 72-73, 77-79, 83-84, 86, 89, 91-95, 97, 99-112, 143, 146-148, 152-156, 158, 161, 164, 172-175, 178-187, 194-197, 200-206, 283, 336, 349-353, 361-362, 365, 369, 371

National Culture 20-21, 39-41, 50-51, 58, 81, 97, 104, 107-110, 112, 178

Necessity Entrepreneur 194, 210

Necessity-Driven Entrepreneurship 62, 64, 91, 195-201, 203-205

New Business 3, 6, 35, 37, 62, 91, 93-95, 97, 99-102, 107, 109, 112, 119-123, 125-126, 131-133, 141, 147, 153, 155, 177-181, 183, 201-202, 210, 229, 280, 283, 288, 298, 300, 315, 347, 375

New Venture Creation 6, 28, 36, 61, 63, 65, 68, 72-75, 77, 83, 86, 89, 110, 120, 158, 210-213, 215-219, 221, 227, 353

Non-Cognitive Skills 1, 3, 8-12, 14, 16-17, 20, 23, 29, 33

Non-profit 5, 15, 134, 275-277, 288, 292

## O

Opportunities 3, 7, 9, 29, 31, 35-37, 39, 43, 47, 58-59, 61-68, 70-75, 77-79, 81, 84, 88, 90-95, 100, 108-109, 117-120, 122, 128-129, 131-132, 145-147, 164-169, 171-174, 178-180, 182, 185, 195-196, 204-205, 207, 210-213, 215, 218, 229, 231, 237, 257-258, 262, 264-265, 267, 269, 280-281, 288, 295-296, 300-301, 304, 306-309, 311, 331, 336, 353, 356, 359, 362-365, 375, 379, 388

Opportunity Development 65, 77-78, 91

Opportunity Entrepreneur 194, 210

Opportunity-Driven Entrepreneurship 62, 64, 91, 196-197, 379

## P

Pillars of Competitiveness 93, 96, 99, 103-105, 107, 109, 112

Policy 12, 18, 20, 23, 49, 56, 79-82, 84, 90, 95, 109,

## Index

111, 118, 132, 134-135, 137, 140, 146, 156, 169, 173-174, 176, 178, 181, 186-187, 206, 209, 217, 246, 251, 255, 263, 268-269, 296-297, 302, 304, 307, 312, 315-317, 330-331, 333-334, 336, 350, 356, 362, 366-367, 369-370, 385, 389  
Positive Social Change 273, 281, 286-287, 293  
Poverty 30, 194-200, 206-207, 209-210, 212-216, 223-226, 254, 256-257, 265, 267, 269-270, 272, 385  
Proactiveness 38-39, 43, 47, 55, 59, 298  
Psychological Characteristics 34, 39, 58  
psychological drives 61  
Push Factors 196, 210, 257

## R

Relationship 6, 9-11, 14, 25-26, 28-29, 36, 49, 54, 58, 67-68, 87, 89-90, 93-95, 99-100, 103, 108-109, 149-150, 152-156, 162-163, 168, 178-180, 184, 186, 202, 207, 211, 213, 215-216, 219, 221, 233, 273-274, 283, 287, 308, 312, 319, 329-330, 335-336, 352, 356, 372, 374, 376, 378-380, 384-385  
Responsible 2, 13, 31, 39, 127-128, 142, 235, 262, 280, 283, 286-288, 291, 312  
Reward-Based CF 229, 232, 236, 238, 245, 252  
Reward-based crowdfunding 228, 230, 234, 246-250, 285  
Risk-Taking 6, 39, 41, 43, 47, 55-56, 59, 66, 68, 89, 91, 145, 210, 252

## S

second-generation ethnic entrepreneurs 351-353, 355-356, 359-365, 367  
Self-confidence 4, 16, 43, 47-48, 70, 194-195, 201, 204, 206-207, 336  
Self-Efficacy 9, 11, 28, 30, 38-39, 42-43, 47-50, 54, 57, 59, 80, 94, 110, 177-178, 180, 183-184, 354, 366, 378  
Skill Formation 8, 20, 26, 30  
Social Economy 273-274, 276-278, 280, 282, 287-288, 290-294  
Social Enterprise 135-136, 139, 273-274, 281-282, 286-291, 293-294  
Social Enterprises 130, 136, 170, 186, 274, 280-283, 285, 288, 290-293, 350  
Social Welfare 35, 372  
Solidarity 209, 275, 277-278, 285, 288-289, 292-294  
Solidarity Economy 209, 277, 288, 293-294

South Africa 93, 100, 147, 187, 253-261, 264-269, 271-272, 313  
Stakeholders 4, 13, 65, 95, 126-133, 142, 153, 280, 290, 336-337, 345, 354  
Startup 94, 160, 178, 180-182, 221, 250, 254, 258, 265, 268, 272, 298, 335-336, 338-339, 346, 350  
Strategic Entrepreneurship 18, 49, 74, 78-79, 81-83, 85, 90, 163-166, 168-171, 248, 331  
Sustainability 50, 53, 57-58, 89, 95, 128-130, 137, 140-141, 149, 160, 179, 207-208, 225-226, 253, 256, 259, 278, 289, 291-292, 296-297, 302, 308-314, 319, 331, 335-339, 346-347, 350  
Sustainable Development 35, 128-129, 132, 134, 137, 141-142, 144, 160, 222, 289, 295-297, 299, 304-306, 309, 311-312, 315, 347-349, 373, 388-389  
Sustainable lifestyle 335, 347

## T

Theory of Cultural Values 34, 39-40  
Third Sector 273-276, 280-281, 287-288, 290, 292-293  
Training 1, 7, 9, 12-17, 19, 22-25, 30, 50-51, 56, 65, 84, 95, 97, 99, 104, 108, 134, 137, 146, 150, 153, 185, 212, 215, 218-219, 221-224, 226-227, 255-256, 263, 265, 272, 274, 282, 287-288, 302, 307  
Triple Bottom Line perspective 142

## U

Unemployment 35, 57, 194-200, 205, 207-210, 254, 256, 269, 272, 317, 319, 329, 331-332, 376, 379, 386  
Universities 17, 56, 82, 146, 159, 164-165, 167, 169, 299, 309, 316-320, 322, 324, 329-332  
University of Tasmania 143

## W

Whr 372-374, 379-384  
Women entrepreneurship 205, 253-259, 261, 265-269, 369  
Work experience 37, 43, 47-48

## Z

Zimbabwe 194, 197-200, 203, 205-209, 268