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Impact of Globalization and Advanced Technologies on Online Business Models



Ree C. Ho, Alex Hou Hong Ng, and Mustafa Nourallah



Impact of Globalization and Advanced Technologies on Online Business Models

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Mustafa Nourallah, Centre for research on Economic Relations, Mid Sweden University, Sweden

Peter Öhman, Centre for research on Economic Relations, Mid Sweden University, Sweden

This chapter sheds light on two advanced technologies related to consumer finance and retail investment. The chapter discusses the importance of mobile bank applications and robo financial advisors as well as loyalty and initial trust among young bank customers and young retail investors, respectively. It also highlights some public statistics from Sweden and Malaysia, two countries representing FinTech hubs, to illustrate the development of FinTech solutions. The chapter emphasises proposals for a continued direction for research.

Chapter 2

Chatbot for Online Customer Service: Customer Engagement in the Era of Artificial Intelligence	16

Ree Chan Ho, Taylor's University, Malaysia

Chatbot has become popular in recent years due to the advancements in artificial intelligence and other underlying technologies. Likewise, increased internet interactivity and smarter mobile devices have specifically attracted more consumers to pursue superior and personalized customer service. The aim of this chapter was therefore to better understand the use of chatbots by online businesses to shed light on its effect on customer service satisfaction. The commitment trust theory served as the underlying theoretical foundation for the conceptual framework of this study. It explored the relationships among trust, commitment, service quality, and technology towards the use of chatbots. Subsequently, customer engagement gained has influenced the knowledge sharing and the referral to other customers. This chapter presented an integrative framework for predicting the use of chatbots to enhance customer bonding with firms. The main contribution was the list of antecedents needed to improve customer engagement in the implementation of chatbots.

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*Jamile Anwar Youssef, The European Center for Economic Studies of the Arab Orient,
Sweden*

The chapter aims to determine three research objectives: (1) ATM service quality in Lebanon measurement based on five dimensions, using the SERVQUAL model; (2) analyze and investigate customer satisfaction and loyalty of the ATM usage, during two different periods, before and after the following situations that Lebanon encountered: foreign currency shortage, commercial banks' informal capital control, and bankruptcy; and 3) assess the intention of the Lebanese to adopt Libra virtual currency. To achieve the objectives of the study, a questionnaire was distributed among bank clients in Lebanese. The results and analysis of the study have been done by comparing the means of SERVQUAL dimensions. The findings indicate that the Lebanese perspective of the banking system changed during the two different periods; however, their intention level to adopt a virtual currency is low.

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*Heléne Lundberg, Centre for research on Economic Relations, Mid Sweden University,
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This chapter describes and discusses the role of e-learning for small and medium-sized firms' (SME) business development and does so specifically in university-SME interaction related to sparsely populated regions. It is based on the idea that e-learning may provide a valuable means for developing knowledge creation and expansion beyond its educational connotation. A university-SME interaction focusing on business development of firms in remote geographical areas provides ideas on the benefits of e-learning not only for the interaction to be realized, but for the creation of flexibility, interactivity, and the bringing down of guards among the participants. The chapter contributes to previous research through tying together ideas on e-learning, university-SME interaction and business development, and by extending the e-learning concept. Practically, the case study may function as the inspiration for further initiatives.

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José G. Vargás-Hernández, University of Guadalajara, Mexico

The objective of this study is to analyze the strategies for entering the private urban transport services market managed by the multinational company Uber in the Guadalajara Metropolitan Area. The analysis included the growth conditions in coverage, its influence on urban mobility movements, and the decline due to competition, and finally to the 2020 pandemic. The entry of Uber to the local metropolitan area of Guadalajara market has experimented an impressive rise despite the conflicts with the traditional taxi systems of private transportation of passengers. However, the pandemic has suddenly turned down the increasing growth into a falling and decreasing phase. As a result, the analysis of this work shows the determining factors that have placed Uber as one of the leading companies within its area of influence and ends with some recommendations on the conflicts that the firm presents when entering a new market location.

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Petri Ahokangas, University of Oulu, Finland

Veikko Seppänen, University of Oulu, Finland

Philipp Sandner, Frankfurt School Blockchain Center, Germany

Typically, people have a misconception about blockchain as they associate this technology with cryptocurrency. This chapter does not focus, however, on bitcoin or cryptocurrencies that pertain to its intrinsic value. Rather, the authors focus on the disintermediation feature of blockchain technology by providing insights into how this technology could substitute for the functions and roles of the intermediary. The findings show that blockchain technology is not equipped with financing and physical distribution functions. The current research further demonstrates that most of the blockchain service providers that are listed in the Liechtenstein Blockchain Act are required to perform the traditional roles of an intermediary. Thus, blockchain technology is not found to support a full concept of disintermediation. This chapter is vital in order for existing intermediaries to gain a deeper understanding of how to analyze and optimize their existing functions and roles while adjusting their business model in the token-based economy.

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Internet-Enabled Business Models and Marketing Strategies 103

Chandra Sekhar Patro, Gayatri Vidya Parishad College of Engineering (Autonomous), India

The internet is continuously growing and evolving as a vital resource with which organizations can upgrade their capabilities and expand their business activities. The revolution of information technology has a major impact on internet-based business models. At the basic level, it is the shift from analog to digital technologies that are responsible for much new information technology (IT) capabilities. The IT-enabled business trends are profoundly altering the business landscape with the pace of technology change, innovation, and business adoption. Digital technologies have created innovative trends for organizations to create value propositions and perform value-added activities. The chapter articulates the various internet-based models, e-marketing business models, internet marketing strategies, and mix adopted by the organizations in leveraging the unique features of digital technology to create competitive advantages. Further, focuses on the emerging internet-based market structure and IT-enabled business marketing trends.

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Irina Dimitrova, Centre for research on Economic Relations, Mid Sweden University,

Sweden

Peter Öhman, Centre for research on Economic Relations, Mid Sweden University, Sweden

This chapter discusses bank customer perceptions of digital banking and the impersonalisation barrier. It compares the perceptions of various groups of customers based on empirical evidence from Sweden. In 2020, a pilot-tested online questionnaire was sent to young and old, urban and rural, and high- and low-income bank customer groups and the data were statistically analysed. Overall, it is argued that the impersonalisation barrier makes the ongoing transition from traditional to digital banking difficult. All

studied groups, old bank customers in particular, perceive the impersonalisation barrier as significant. This indicates that the risk of the financial exclusion of some bank customer groups must be considered in an increasingly digital environment. However, the relatively low impersonalisation concerns among young bank customers indicate that this group represents a promising market for ongoing digital banking development. This group also stands out regarding its intention to increase the use of digital banking.

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Hui Yan Yeong, Sunway University, Malaysia

Faisal Nawaz, COMSATS University, Islamabad, Pakistan

The chapter is a systematic literature review of fundamental theories about small and medium business (SME) success. The chapter examines how they specifically impact digital SMEs. The chapter examined six theories: dynamic capability view (DCV), composition-based view of firm growth (CBV), resource-based view (RBV), resource dependence theory (RDT), upper echelon theory (UET), strategic contingency theory (SCT). The results showed that RBV, DCV, and UET become relevant in articulating the value inherent to the internal resources in SMEs (which render their capabilities dynamic). In contrast, the SCT framework and the RDT model show more significance in relation to uncertainty and contingency. CBV was found to be a more pertinent framework to predict the success of SMEs. The results support CBV's hypothesis that SMEs (including digital SMEs) are able to be competitive without extensive resource advantage, too complicated technologies, or market power. The increased deployment of CBV can be advocated as a critical determinant of digital SME success.

Chapter 10

Internet of Things in Online Business: Towards a Conceptual Framework of Online Customer
Behavior 154

Ree Chan Ho, Taylor's University, Malaysia

Online business, just like other industries, has adopted advanced technology for business performance. Hence, the technology of internet of things (IoT) has been implemented in recent years. IoT acts as a business ecosystem by interconnecting all physical objects and systems to execute tasks efficiently. However, the extent to which customers understand and appreciated this emerging technology is understudied. The purpose of this chapter is therefore to understand the customer acceptance as well as the gratification gained and sought by them via the use of IoT technology. Based on the uses and gratification theory, this study focused on the antecedents in shaping the attitude of online consumers towards IoT applications. Furthermore, it also addresses the willingness of consumers in becoming more knowledgeable of product with the support of IoT technology.

Chapter 11

Exploratory Investigation Into Globalization and Linkages Among ICTs and Usages Within SMEs Environments in Cambodia 169

Teck Choon Teo, American University of Phnom Penh, Cambodia

This study examines the association between firm globalization; the embracing of ICT, more specifically the ICT tools; and the firm's performance. Globalization has a tremendous effect on people which leads them to a greater use of ICTs to enable users to navigate and communicate spontaneously to fulfill self-gratification. From the firm's perspective, globalization has differential effects on B2B and B2C e-commerce, though such global firms are more likely to do B2B but less likely to do B2C. The findings imply that ICTs espousal will augment international competitive advantages but not leveling the playing field for firms to compete with global firms in international markets.

Chapter 12

Impact of Information and Communication Readiness on the Tourism Industry: A Dynamic GMM Approach 186

Woon Leong Lin, Taylor's University, Malaysia

Bee Lian Song, Taylor's University, Malaysia

This study examines the impact of ICT readiness on the tourism industry and how it leads to growing competitiveness by deploying three-panel data analysis techniques (pooled OLS, fixed effects, dynamic GMM) with 177 nations for the period 2011 to 2019. ICT readiness is gauged using the World Economic Forum's Travel and Tourism Competitiveness Index, whereas tourism's contribution towards economic progress is gauged by overall international traveler arrival. The observations indicate that ICT readiness causes a statistically significant effect on tourism's role in economic progress. Tourism policy effects and guidelines for future works are discussed as well.

Chapter 13

Website Quality, Perceived Flow, Trust, and Commitment: Developing a Customer Relationship Management Model 202

Md Shamim Hossain, Hajee Mohammad Danesh Science and Technology University, Bangladesh

Mst Farjana Rahman, Hajee Mohammad Danesh Science and Technology University, Bangladesh

Website quality in online business is still exploratory, and despite growth in building a relationship with customer research, various challenges remain in developing a more customer-oriented website. This chapter tackles the dilemma of how to support website inclusivity in the building of a customer relationship, by investigating flow, commitment-trust, and stimulus-organism-response (SOR) theories. The authors applied the covariance-based SEM (structural equation modeling) to examine the structural model. Primary data for the study comes from 500 respondents through an online questionnaire. The study results reveal that website quality certainly influences users' perceived flow, which in turn positively influences customer trust and CRM. Again, collective trust influences customer commitment and CRM. Finally, collective customer commitment positively controls CRM. Based on the study findings, the theoretical implications, practical inferences, and directions for future study are highlighted.

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Customer Satisfaction on Social Media Marketing in Malaysian Hospitality Industry..... 228

Joanna Pei Yi Kong, INTI International University, Malaysia

Alex Hou Hong Ng, INTI International University, Malaysia

Customer satisfaction plays an important role in achieving the competitive advantage and ensures to bring success to the organizations. Nowadays, people tend to use technologies in boosting the revenue of their businesses as well as to promote the products and services. Therefore, this chapter is focusing on the factors that drive the satisfactions of the customers on the social media marketing in the hospitality industry in Malaysia. The research gaps have been identified on Malaysia's customer satisfaction on social media marketing in the hospitality industry. Hence, the objective of this research is to explore three factors that influence the satisfaction level of the customers on the technology in the social media, namely social technology approach, social media tools, and social media engagement. Last but not least, this study will also provide the researchers and managers with strategic plan in order to enhance the business efficiency.

Chapter 15

E-Loyalty Towards Mobile Applications in Online Food Ordering Business Model 264

Riska Fauzi Sanandra, Heriot-Watt University, UK

Praveen Balakrishnan Nair, Heriot-Watt University, UK

Within the mobile commerce space across the world, a major visible trend is the usage of mobile apps in food and beverage industry. Despite the rapid interest in mobile apps and their potential marketing effects, there is limited research on the usage of mobile apps as a convincing marketing channel for online food ordering. This study used the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as a theoretical foundation to explore the main factors influencing the customers' e-loyalty towards mobile food ordering applications in Indonesia. Quantitative methodology was used, and data from a total of 358 questionnaires were used for analysis. The findings showed that habit along with social influence, performance expectancy, and facilitating conditions has positively influenced customers' e-loyalty towards mobile food ordering apps.

Chapter 16

Factors Affecting Online Consumer Buying Behavior Towards Essential Oils in Penang 279

Jia Wen Goh, INTI International University, Malaysia

Alex Hou Hong Ng, INTI International University, Malaysia

The purpose of this chapter is to determine the factors influencing the online consumer buying behavior towards essential oils in Penang as there is dissonance between what the consumers want and what has been made available in the purchase of essential oils. There are four factors influencing the online consumer buying behavior that are being evaluated in this research which are brand image, price, quality, and online advertisement. Past literatures have been reviewed on the factors to understand consumers' preferences that leads to consumer buying decision. This study adopted the theory of reasoned action (TRA) as the grounded theory. Questionnaires will be used to collect consumers' response for further testing and analysis to test the relationship and strength of factor variables by using the outlined research methodology.

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<i>Mitsunori Hirogaki, Ehime University, Japan</i>	

In this chapter, the author investigated the characteristics of online consumer behavior regarding the grocery retail market and their impact on retailers' distribution channel strategies. It examined the impact of recent innovations and the globalization of online technology on retail strategy. To achieve these goals, this study analyzed case studies of online consumer behavior in the Japanese online grocery market. Not only has there been a dramatic increase in sales over the last decade, but there have also been significant changes in both online technology and distribution channel strategy in this market. Underlying this transformation is the influence of Japan's characteristic online consumer behavior. Based on an empirical analysis of Japanese consumers and several case studies, this chapter predicts the future features of the online grocery market.

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Foreword

Online business models have opened the gates for tremendous change in the world of enterprise. It is argued that globalization and advanced technology have contributed to and shaped this change. However, there is a lack of effort to investigate the effect of globalization and advanced technology on online business models.

The current book presents various universal examples of the impact of globalization and advanced technologies on online business models. Financial Technologies (FinTech) are among the examples where the book exhibits global contributions about mobile bank applications, Robo-financial advisers, and Blockchain. Other advanced technologies such as Artificial Intelligence, Chatbot, Internet of Things are also discussed. Moreover, the book highlights the impact of globalization and records this impact in diverse sectors including SMEs and the banking and hospitality industries.

This book is timely because the current world challenges witnesses and requires novel solutions. Taking the COVID-19 pandemic as an example of these challenges, globalization unifies global efforts to share knowledge universally. At the same time, advanced technologies warrant the chance to establish peerless solutions. This leads to improved online business models in financial management, business administration, higher education, and so forth.

The world of enterprise experiences an extensive use of advanced technologies in a global environment to develop modern online business models, which in turn provide customers, investors, brokers, and other corporate stakeholders with new opportunities. The book offers a valuable avenue and good examples of how globalization and advanced technologies allow individuals and companies to experience modern online business models. In this regard, the book subtly raises pertinent questions and discourses solutions on the impact of globalization and advanced technologies for the development of online business models.

Darush Yazdanfar

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Preface

OVERVIEW

The immense influence of globalization and technology are transforming day to day business operations to virtual transactions at an astounding rate. Online business has been growing progressively and has become one of the major transaction platform in the past two decades. Internet bulldozed the development of new business models and innovations that substantially change the way we run businesses today. Hence, businesses and customers are connected via the Internet and bargain hunting directly in the global marketplace.

This leads to the growing penetration of advanced technologies implemented in online businesses such as the Internet of Things, machine learning, blockchain, and robotic technology. It significantly influences the online business operation, financing options, shopping process, and consumer behavior. With higher Internet connectivity and exponential growth of mobile devices, people have collaborated socially as well as commercially. Consumers can gain useful information such as product information and even retailers' competitor information in the myriad of online channels. Hence, it is a small wonder that companies are investing resources in new technologies and business practices intending to align with the effect of globalization. The main contents of this book include the critique of the current issues and concepts in the online business environment. This consideration is critical since businesses, governments, and societies are connected on a global scale.

TRANSFORMATION OF ONLINE BUSINESS MODELS

Globalization itself is creating a transformative yet disruptive future for online entrepreneurs and customers alike. This impact not only on profound effect on businesses, but customers also subject to this change. Both customers and companies are on the verge of experiencing these new changes and learning to cope with them. Given the rapid technological advancement, both businesses and customers are presently experiencing an exponential upsurge in the implementation of new business processes and models. The trend of technology advancement has a massive impact and transformed the online business. Consumers are empowered by Internet communication and collaborate with online retailers easily for more convenient shopping. Hence, online business has now become an integral part of everyday life.

Global business providers are on the verge of deploying new and advanced technologies to serve the ever-changing customer need. Hence, new business models and processes are inevitably emerging under the rapid technology development. To understand what the future has in store, looking at present-

day impacts is necessary. The trend of the online shopping process involves multiple channels that have amplified the importance of using multiple channels to satisfy customers who own many mobile devices. Also, advanced technologies are integrated into new online business models relating to the man-machine relationship. For instance, the use of artificial intelligence components in the robotic financial advisor and the chatbot. Therefore, the deployment of the right technology could satisfy customer needs by providing them with a seamless enjoyable shopping experience.

The rise of advanced technologies permit closer interaction among online firms and also online customers globally. Consumers are becoming increasingly savvy and highly efficient in using technologies to their advantage while they are shopping online. With technologies evolves and making it easy access to information, consumers are having the convenience of searching for product information and purchase what they needed at their fingertips. Hence, both consumers and retailers are gearing into a more challenging and complex environment that disrupts the traditional retail business models.

ORGANIZATION OF THE BOOK

This book is organized into four sections with a total of 17 chapters. A brief description of each of the chapters follows:

Section 1: Online Finance and Services

Chapter 1 sheds light on two advanced technologies related to consumer finance and retail investment. The chapter discusses the importance of mobile bank applications and robot-financial advisors, as well as investigates loyalty and initial trust among young bank customers and young retail investors.

Chapter 2 offers a deeper understanding of how the use of chatbots in online customer service in the pursuit of enhancing customer engagement. It reviews the customer relationship management in the online business process and proposes effective strategies to match customer needs in the era of artificial intelligence.

Chapter 3 analyzes and investigates customer satisfaction and loyalty of the automated teller machine usage, during two different periods that Lebanon encountered: foreign currency shortage, commercial banks' informal capital control, and bankruptcy. This chapter also assesses the intention of the Lebanese to adopt Libra virtual currency.

Chapter 4 describes and discusses the role of e-learning for small and medium-sized firms' business development, and specifically in interaction related to sparsely populated regions. E-learning provides valuable means in developing knowledge creation and expansion beyond its educational connotation.

Section 2: Online Business Models and Strategies

Chapter 5 reviews the effect of globalization and technology advancement on the strategic planning of the urban transport industry supported by digital applications. A detailed analysis was conducted on Uber's operations in the metropolitan area of Guadalajara, Mexico. The findings provide the determining factors for market competitiveness and recommendations for firms operating on virtual platforms.

Chapter 6 reflects on the disintermediation of block-chain technologies by offering observations into how these technologies might replace the intermediary's functions and roles. The study is vital for

Preface

intermediaries to develop a better understanding of how to evaluate and optimize their current tasks and responsibilities while adapting their business model in a token-based economy.

Chapter 7 articulates the various internet-based models, e-marketing business models, internet marketing strategies, and mix adopted by the organizations in leveraging the unique features of digital technology to create competitive advantages. It focuses on the emerging internet-based market structure and IT-enabled business marketing trends.

Chapter 8 addresses the views of bank customers on digital banking and the impersonalization barrier. It contrasts the views of different classes of consumers based on observational data from Sweden and this barrier makes the continuing transition from conventional to digital banking challenging.

Section 3: Transformation of Online Business

Chapter 9 presents a systematic literature review of fundamental theories of small and medium digital business success. The chapter examines how these theories impact digital small and medium enterprises and provides value inherent to the internal resources.

Chapter 10 examines the implementation of the Internet of Things in online business and its impact on the attitude and perception of customers. It proposes that gratification sought from the usage of this highly connected technology in enhancing customer's learning on product knowledge, and subsequently attain the customer satisfaction.

Chapter 11 addresses the association among the firms' globalization, the embracing of information technology communication, and the firm's performance. The findings imply that information technology communication espousal by business firms would augment the competitive advantages and allow firms to compete in international markets.

Chapter 12 analyses the impact of Information technology and communication readiness on the tourism industry and how it leads to the growing competitiveness by deploying three-panel data analysis techniques. The findings indicate that the influence of technological innovations on the economic growth of the tourism industry on a global scale.

Chapter 13 discusses how to promote the inclusiveness of websites in developing consumer relationships, by exploring streams, confidence-building, and stimulus-organism-response theories. The findings of the study indicate that website efficiency affects the perceived flow of visitors, which in turn has a positive effect on consumer trust and customer relationship management.

Section 4: Online Consumer Behavior

Chapter 14 focuses on the factors that drive the satisfaction of the customers on social media marketing in the hospitality industry. This study explores three factors that influence the satisfaction level of the customers on the technologies in the social media, namely the social technology approach, social media tools, and social media engagement.

Chapter 15 explores the main factors influencing the consumer e-loyalty towards mobile food ordering applications in Indonesia. The study found that habit along with social influence, performance expectancy, and facilitating conditions has positively influenced customers' e-loyalty towards mobile food ordering applications.

Chapter 16 aims to determine the factors influencing the online consumer buying behavior towards essential oils where there is dissonance between what the consumers want and what has been made

available in the purchase of essential oils. Four factors influencing online consumer buying behavior were evaluated, i.e. brand image, price, quality, and online advertisement.

Chapter 17 empirically examines the evolving digital distribution systems and its impact on the online grocery business models. It focuses on the Japanese consumers' online behavior changes due to the market environment driven by the globalization effect and technological advancement.

THE SOLUTIONS

The key objective of this book is to unravel and provide business managers and scholars with new development in managing the ever-increasing global and advance technology change in influencing the running of online business. This book focuses on the importance of globalization and technology transformation in online business to align with the consumer and business needs. It intends to offer new insights and examining the issues and challenges that stem from the development of online business models in response to the effect of globalization and advanced technologies. With the rapid changes to the way of conducting business online, both the business firms and consumers are experiencing substantial changes.

Yet there is still confusion at the implementation and acceptance perspectives as to what constitutes online business to be successful in this era represented by increasing uncertainty and profound restructuring. In the light of this phenomenon, both consumers and retailers face a more challenging, complex environment affected by a complete disruption of the traditional online business models. Hence, there is a need for an edited collection of original research in this area.

This book provides an opportunity for academics and representatives of business to present the current issues and challenges in the online business triggered by the global and technology changes. The growing penetration of new technologies and business processes reinvented through the effects of advanced technologies and globalization. This book draws from a wide range of technologies used in today's digital marketplace as well as recent development and empirical researches on online consumer behavior as a result of globalization. As such, this book aims to contribute new dimensions in managing the new advancement in online business triggered by global and technological transformation.

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Last but not least, the editors wish to acknowledge the valuable contributions of the reviewers regarding the improvement of quality, coherence, and content presentation of chapters in this book.

Section 1

Online Finance and Services

Chapter 1

Impact of Advanced Technologies on Consumer Finance and Retail Investment: Mobile Bank Applications and Robo–Financial Advisors

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ABSTRACT

This chapter sheds light on two advanced technologies related to consumer finance and retail investment. The chapter discusses the importance of mobile bank applications and robo financial advisors as well as loyalty and initial trust among young bank customers and young retail investors, respectively. It also highlights some public statistics from Sweden and Malaysia, two countries representing FinTech hubs, to illustrate the development of FinTech solutions. The chapter emphasises proposals for a continued direction for research.

INTRODUCTION

The importance of individuals' behaviour in financial markets increased after the global financial crisis of 2008 and has attracted still more attention during the turmoil of the COVID-19 pandemic. Policymakers, scholars, media networks, and other parties frequently discuss issues such as the consequences of financial setbacks and being cash strapped. In this regard, the consumer finance and retail investment arenas seem particularly germane, not least since the COVID-19 pandemic has increased the need for

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knowledge of the behaviour of individuals in these two arenas (European Banking Federation, 2020). In the consumer finance arena, individuals use financial services in their daily lives, for example, to send money (Muñoz-Leiva et al., 2017). Most of these bank customers tend to be passive and have a limited patience. They also prefer to compare the transaction fees charged by different financial service providers (Hauff, 2014; Nourallah, 2020). In the retail investment arena, individuals invest their money and search for returns that correspond to their risk tolerance. Most of these retail investors tend to consult financial advisors due to their deficient financial knowledge (Fecht et al., 2018). Retail investors also prefer trustworthy investment portfolio advice and they seek financial advisers with whom they can have good relationships.

Since the global financial crisis of 2008, several studies have focused on the role of consumer finance and retail investment in individuals' lives (e.g., Thomas, 2010), noting that advanced technologies have left their fingerprints on the financial sector and opened the door for a new era of digital financial services, or financial technology (FinTech) (Goldstein et al., 2019). In the consumer finance arena, notable FinTech solutions include mobile bank applications (MBAs), while robo financial advisors (RFAs) are of particular interest in the retail investment arena. MBAs and RFAs are important for individual bank customers and investors. MBAs enable individuals to conduct daily financial transactions, such as paying bills, and allow them to plan their digital financial transactions (Liébana-Cabanillas et al., 2017). RFAs facilitate individuals' financial investments and help them efficiently manage their portfolios (D'Acunto et al., 2019).

Consumer finance and retail investment are also important for financial institutions. For example, developing and implementing FinTech solutions that ensure "ease of use" and are "easy to understand" may help these institutions increase their long-term profitability (Lee & Shin, 2018). Moreover, society represents a third party that upholds consumer finance and retail investment through its regulation of financial institutions and markets, contributing to individuals' financial capability and financial well-being (Xiao, 2016).

As indicated, individuals appreciate FinTech solutions that help them conduct their daily financial transactions quickly and conveniently, and MBAs represent well-used FinTech solutions adopted by many bank customers (Gomber et al., 2017; Leon, 2018). Because many MBAs operate in an intensely competitive environment, the customer relationship is considered a key to the success of MBAs (Liébana-Cabanillas et al., 2017). It can be argued that a main challenge related to MBAs in the consumer finance arena is loyalty. At the same time, RFAs are FinTech solutions relying on interactive and intelligent user assistance features, offering automated advisory services at a reasonable cost (Jung et al., 2019). RFAs are innovations in the introduction phase, representing a promising opportunity for retail investors (D'Acunto et al., 2019). Since RFAs are emerging FinTech solutions, building trust in RFAs seems essential to developing relationships with retail investors and is a key to the success of RFAs (Bhatia et al., 2020; Jung et al., 2018). It could be argued that a main challenge related to RFAs in the retail investment arena is initial trust.

This chapter highlights the case of a certain category of bank customers, i.e., young bank customers (YBCs), and a certain category of investors, i.e., young retail investors (YRIs). The young generation, i.e., individuals aged 18–29 years, seems to display little loyalty to financial institutions (Nicoletti, 2017) and there is opacity about building trust in RFAs (Fulk et al., 2018). Moreover, these individuals represent a promising market for MBAs and RFAs, because they will replace the older workforce in the near future.

Brandl and Hornuf (2020) emphasised a need for a suitable educational and business environment to facilitate the establishment of FinTech solutions. Two countries with such a business environment are

Sweden and Malaysia, which can be seen as FinTech hubs (Shenglin et al., 2018). Taking RFAs as an example, numbers indicate that the volume of assets under RFA management increased more than three times in Sweden and more than five times in Malaysia from 2017 to 2019. These figures are expected to increase even faster, to around USD 1894 and 294 million in Sweden and Malaysia, respectively, by 2023 (Statista, 2019a, 2019b). The World Economic Forum (2017) ranked Sweden and Malaysia number 10 and 16 in the world, respectively, in terms of “financial market development”. Moreover, the “higher education and training” overall rankings were 18th for Sweden and 45th for Malaysia out of the 137 countries investigated. These two countries were also ranked 14th and 20th, respectively, in terms of “quality of the education system”. Based on public statistics, this chapter uses Sweden and Malaysia as illustrative examples of the ongoing development of FinTech solutions. Sweden and Malaysia are also of interest because of certain important differences between them. In Sweden, a large percentage of the workforce will retire and be replaced with younger workers in the near future. In Malaysia, the young generation represents a large percentage of the population. Moreover, the world values survey (2010–2014) found that 60.1% of respondents in Sweden agreed that most people could be trusted, while only 8.5% in Malaysia supported this statement.

This chapter aims to discuss consumer and investment behaviour in financial markets in terms of two FinTech solutions. The rest of the chapter is outlined as follows: first, the FinTech context is briefly presented; next, the consumer finance arena, MBAs, YBCs, and loyalty are described and discussed; then, the focus is on the retail investment arena, RFAs, YRIs, and initial trust. A concluding section, including a consideration of future research directions, ends the chapter.

FINTECH

Advanced technologies such as big data and smartphones have led to the development of new FinTech solutions, which in turn have dramatically changed the structure and nature of consumer finance and retail investment (Gomber et al., 2018). It is worth noting that before the evolution of FinTech, the consumer finance and retail investment arenas had already witnessed the advent and use of information communication technology (ICT), i.e., e-finance (Allen et al., 2002; Gomber et al., 2017). Another concept of interest is digital finance, which denotes the digitalisation of the financial industry in general (Gomber et al., 2017).

The FinTech concept refers to innovative financial services based on advanced technology that offer a user-friendly environment at an affordable cost (Goldstein et al., 2019; Mention, 2020). FinTech solutions enable bank customers and retail investors to conduct various financial transactions and investments without time or place constraints (Lee & Shin, 2018).

Gomber et al. (2017) have suggested that FinTech comprises six types of solutions: (1) digital financing, for example, crowdfunding; (2) digital investment, for example, mobile trading; (3) digital money, for example, cryptocurrency; (4) digital payment, for example, MBAs; (5) digital insurance, for example, peer-to-peer insurance platforms; and (6) digital financial advice, for example, RFAs. Some of these FinTech solutions are well established and others are not. As mentioned, MBAs are now widely used, while RFAs are seen as a modern solution still in its introduction phase (Liu et al., 2020).

Chen et al. (2019, p. 2067) have argued that seven types of advanced technologies underlie FinTech solutions: (1) cybersecurity, i.e., “hardware or software used to protect financial privacy or safeguard against electronic theft or fraud”; (2) mobile transaction technologies, i.e., “technologies that facilitate

payments via mobile wireless devices, such as smartphones, tablets, and wearables”; (3) data analytics, i.e., “technologies and algorithms that facilitate the analysis of transactions data or consumer financial data”; (4) blockchain technologies, i.e., “distributed ledger technologies with a primary application to financial services”; (5) peer-to-peer solutions, i.e., “software, systems, or platforms that facilitate consumer-to-consumer financial transactions”; (6) robo advising, i.e., “computer systems or programs that provide automated investment advice to customers or portfolio managers”; and (7) the Internet of things, i.e., “technologies relating to smart devices that gather data in real time and communicate via the Internet”. This chapter focuses on the second and sixth types of advanced technologies.

It should be emphasised that FinTech has two consequences: on one hand, FinTech offers modern financial architecture and catalyses behavioural change; on the other hand, FinTech developments entail society’s involvement in terms of financial regulation (Mention, 2020). New and additional regulations will have consequences for how financial institutions act and how bank customers and retail investors behave in future financial markets.

ISSUES IN THE CONSUMER FINANCE ARENA

Consumer Finance and Mobile Bank Applications

The role of consumer finance in lending money to individuals and the influence of this lending on the global economy gives consumer finance a special position in the banking industry (Thomas, 2010). Nowadays, consumer finance concerns not only typical lending issues but also various related issues such as the relationship between customers and their banks. This interest has enabled consumer finance to perform important functions in the modern economy (Xiao, 2016). According to Tufano (2009), these functions are moving funds (i.e., payment), managing risk (i.e., insurance), advancing funds from the future to today (i.e., borrowing and credit), and advancing funds from today until a later date (i.e., saving).

Advanced technologies have changed the consumer finance arena (Buchak et al., 2018; Nourallah et al., 2019) and supported the four above functions with various FinTech solutions that have vital roles in individuals’ lives (Ryan et al., 2011). One example is the use of mobile devices to initiate, authorise, and confirm exchanges of financial value associated with goods and services, i.e., mobile banking (Au & Kauffman, 2008). Mobile banking represents a technology that offers the ability to conduct financial transactions anywhere and any time (Tan & Leby Lau, 2016). Expectations indicate that by the end of 2021, around 2 billion customers worldwide will use mobile banking (Leon, 2018).

Mobile banking has developed gradually, passing through several versions. In 1999, Nordea – a bank operating in Sweden and the other Nordic countries – offered the first interactive wireless application protocol in the world (Laukkanen & Pasanen, 2008). Subsequently, short message service banking and multimedia messaging service banking offered new services to bank customers (Peevers et al., 2008; Riivari, 2005). This paved the way for sophisticated payment texting methods such as PayPal (www.paypal.com) (Au & Kauffman, 2008). Another important development in the consumer finance arena was the use of near-field communication, i.e., short-range communication that provides convenient and secure communication between various devices (Coskun et al., 2013). This enables contactless payment when a customer pays wirelessly at a point-of-sale via a mobile phone.

Recently, a contemporary version of mobile banking supported by app technology was developed to allow financial transactions to be conducted via smartphones, i.e., MBAs. This FinTech solution enables bank customers to quickly access financial services (Alavi & Ahuja, 2016). MBAs have become essential in daily banking transactions such as checking balances, paying bills, and transferring money (Muñoz-Leiva et al., 2017; Sampaio et al., 2017). Such financial services eliminate the need for physical branches since they enable bank customers to manage all their transactions via the Internet. Following this path, neobanks, i.e., mobile-only banks, are a recent innovation that offers financial services to customers connected to the Internet solely via mobile applications such as Monzo bank (<https://monzo.com>).

Internet banking and MBAs are widespread. In 2019, 91% of the Swedish population used Internet banking (Findahl, 2019), and the use of MBAs to pay bills increased significantly over the 2013–2016 period from 11 to 35% (Davidsson & Findahl, 2016). Moreover, young people in Sweden have higher expectations than do their older counterparts about using MBAs as the main tool to conduct financial transactions (Insight Intelligence, 2017). Information issued in February 2020 by the central bank of Malaysia, i.e., Bank Negara Malaysia, indicated that 54.7% of the Malaysian population subscribed to mobile banking (Bank Negara Malaysia, 2020). According to Tan and Leby Lau (2016), most individuals in Malaysia who use mobile banking belong to the young generation.

The Financial Access Survey (2019) stated that the number of mobile and Internet banking transactions in Sweden and Malaysia, respectively, increased from 827,000,000 and 2,052,526,811 in 2013 to 1,426,000,000 and 9,572,677,496 in 2018. Figure 1 (based on information from commercial banks only) indicates a slight increase in terms of the linear trendline of the number of mobile and Internet banking transactions in Sweden, and a significant increase in Malaysia.

Figure 1. Number of mobile and Internet banking transactions in Sweden and Malaysia (for commercial banks only) (The Financial Access Survey, 2019)

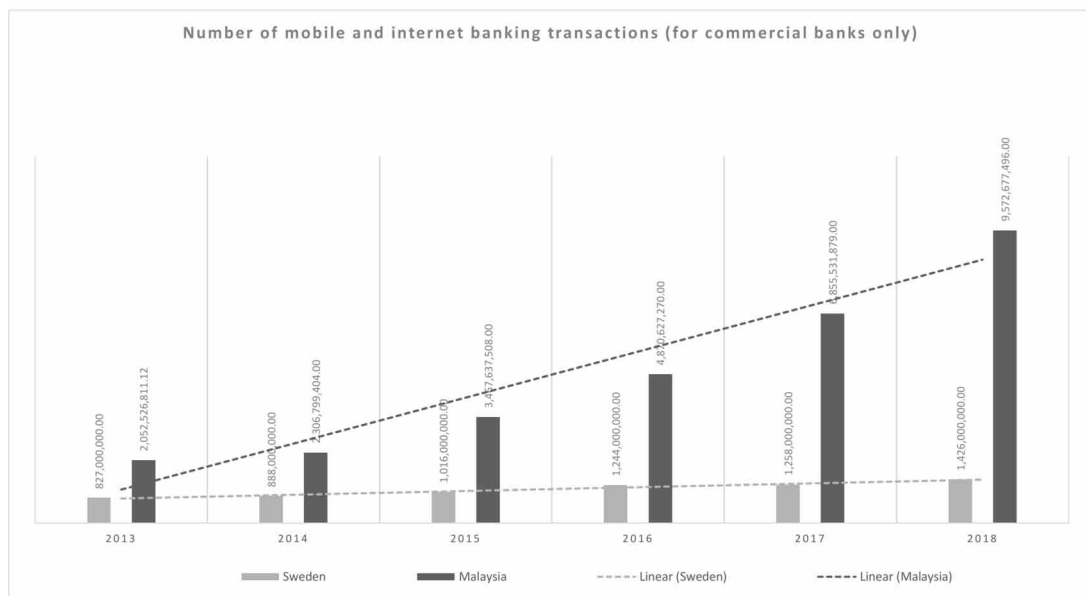
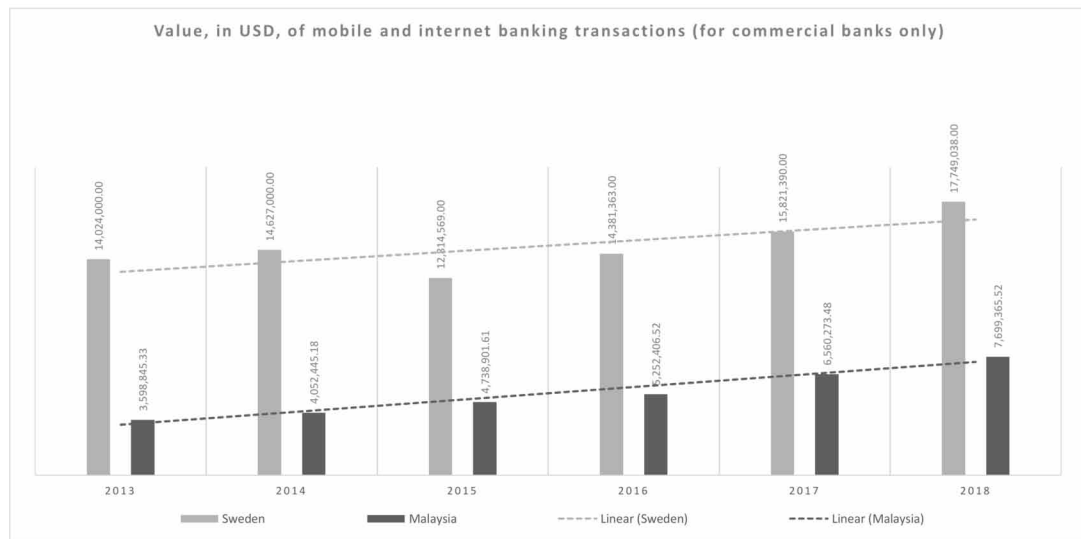


Figure 2 (based on information from commercial banks only and estimated in USD) shows that the value of mobile and Internet banking transactions in Sweden increased from USD 14,024,000 in 2013 to USD 17,749,038 in 2018. The corresponding numbers in Malaysia are USD 3,598,845 in 2013 and USD 7,699,365 in 2018. In this case, the increase is similar in both countries in relative terms, although the Swedish values are significantly higher in absolute terms.

Figure 2. Value of mobile and Internet banking transactions in Sweden and Malaysia (for commercial banks only) (The Financial Access Survey, 2019)



Young Bank Customers and Loyalty Issues

Because MBAs have become essential for daily financial transactions (Abubakar et al., 2015, Nourallah et al., 2019), banks are encouraged to develop practical and easy-to-use mobile applications to satisfy customers and ensure their loyalty (Nourallah, 2020). Among the various categories of bank customers, the young generation has unique characteristics. For example, they are said to consider technology their “third hand” and “second brain” (Bilgihan, 2016). As mentioned, this generation represents bank customers 18–29 years old. Previous studies have noted that YBCs adopt new technologies faster than do their older peers (Laukkanen & Cruz, 2011), and prefer to conduct financial transactions via MBAs (Mohammadi, 2015). In many countries, including Sweden and Malaysia, expectations are that YBCs will represent a promising future market for banks, so ensuring their loyalty is vital for all banks. However, this is not easy to do. YBCs are not particularly loyal to their banks (Nicoletti, 2017), tending to change banks more often than do members of older age groups (Accenture, 2015).

The attitude and behaviour of YBCs arguably represent the individual level of loyalty issues, i.e., YBCs themselves are not loyal to their banks. At the same time, there is another level of this issue related to the market. FinTech companies such as neobanks offer bank services only via mobile, and YBCs display a tendency to favour this technology (Bilgihan, 2016). Therefore, neobanks target this group of potential customers, developing tailored services that suit their lifestyles. In Sweden, three neobanks of-

fer a broad range of financial services, and at the time of writing these are Lunar Way (<https://lunar.app/se/>), N26 (<https://n26.com/en-eu>), and P.F.C. (<https://getpfc.com/>). The situation in Malaysia is similar. Bank Negara Malaysia developed a draft licensing framework for digital banks, and five neobanks could be licensed to offer a wide range of digital financial services starting in 2020 (Bank Negara Malaysia, 2019). The draft licensing framework for digital banks has led to strong competition between traditional banks and FinTech companies to attract YBCs and obtain their loyalty.

ISSUES IN THE RETAIL INVESTMENT ARENA

Retail Investment and Robo Financial Advisors

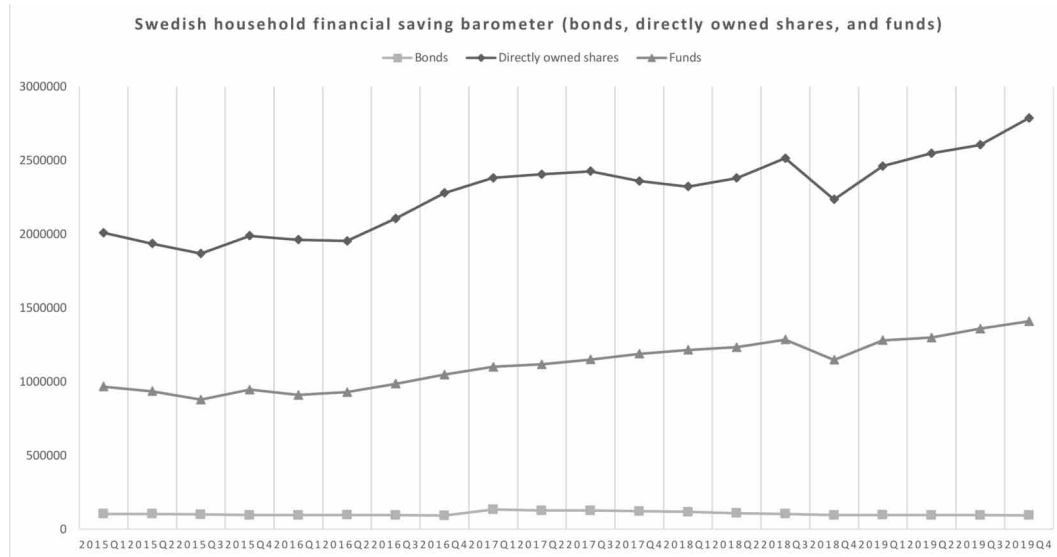
According to the *Cambridge Dictionary* (2020), retail investments are investments made by individuals, i.e., households. Retail investments comprise a broad range of categories, such as currencies and deposits, debt securities, investment funds, life insurance and annuity entitlements, pension entitlements, equities, financial derivatives, loans, non-life-insurance technical reserves and provisions, and monetary gold and special drawing rights (European Commission, 2018). Core retail investments are represented by the “packaged retail investment and insurance products” typically offered by banks to help their customers achieve specific financial aims such as insuring their life, securing retirement income, or purchasing a house (European Commission, 2018).

In the European Union, 43% of all households invest in financial products; this percentage increases to roughly 60% when considering Sweden only (European Commission, 2018). A closer look at Sweden reveals that two-thirds of retail investments target financial assets (62%), while the rest of these investments are in non-financial assets. In the first quarter of 2015, bonds, shares, and funds represented 0.9, 17.6, and 8.5%, respectively, of the financial assets held by households. Figure 3 illustrates that Swedish households’ share holdings slightly exceeded USD 200,000 million as of the first quarter of 2015 and increased to nearly USD 300,000 million by the fourth quarter of 2019 (Statistics Sweden, 2020). Over the same period, the amount of fund savings increased from less than USD 100,000 million to roughly USD 150,000 million. However, the amount of bond holdings was stable at around USD 10,000 million over the period under study [1].

Retail investments in the Asia-Pacific region totalled around USD 30,000 billion in 2014 (Market-Line, 2015). Although there is a lack of public data on retail investments in Malaysia (Jaiyeoba et al., 2019), such investments arguably represent a promising sector since 82% of individuals in Malaysia save money (The World Bank, 2017).

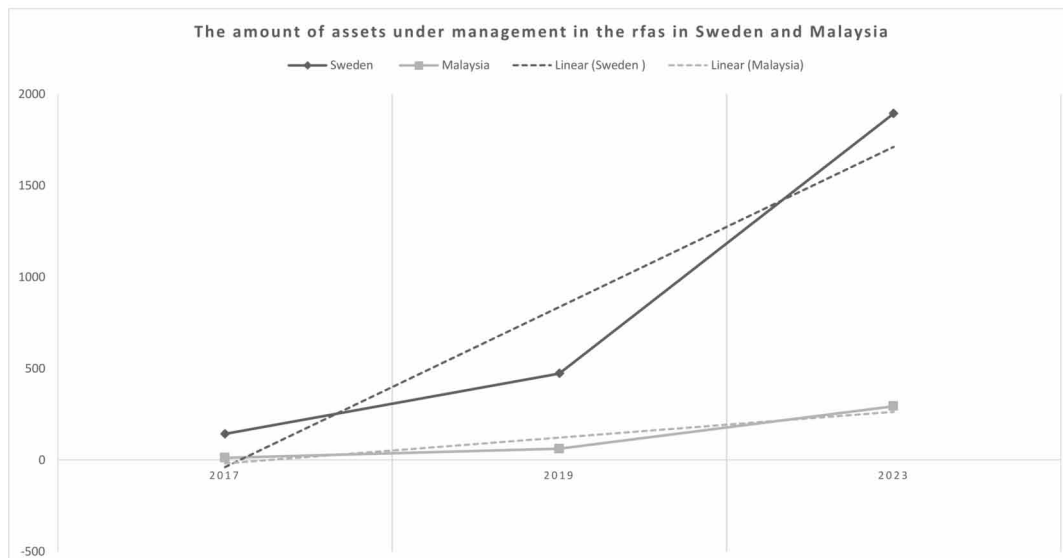
According to the European Commission (2018), engaging retail investors is a challenge for the development of stronger financial markets. Addressing this challenge requires building confidence among retail investors and increasing transparency to help them to make the right decisions. This could also be the case in countries such as Malaysia (Jaiyeoba et al., 2019). As many retail investors lack adequate information about financial assets and cannot allocate sufficient resources to conduct the required analysis to assess suitable securities (Fecht et al., 2018), they tend to consult human financial advisors (Agarwal & Chua, 2020). However, FinTech solutions have paved the way for RFAs to offer flexible financial advice at lower cost than that of human financial advisors (Jung et al., 2019). Another advantage of using RFAs is that they minimise the possibility of receiving biased financial advice from human advisors (Brenner & Meyll, 2020). Such advantages are increasing the popularity of RFAs.

Figure 3. Swedish household financial assets in terms of bonds, directly owned shares, and funds, USD millions (Statistics Sweden, 2020)



It should be emphasised that the total assets under RFA management have increased in both Sweden and Malaysia: from USD 143 and 12.1 million, respectively, in 2017 to USD 473 and 62 million in 2019. As shown in Figure 4, the total assets are expected to reach around USD 1894 million (in Sweden) and USD 294 million (in Malaysia) by 2023 (Statista, 2019a, 2019b). The dotted lines in the figure show the average trends in the two countries.

Figure 4. The total assets under RFA management in Sweden and Malaysia, USD millions (Statista, 2019a, 2019b)



YOUNG RETAIL INVESTORS AND THE INITIAL TRUST ISSUE

Retail investors represent a crucial category of investors in any economy (Fong et al., 2019). Their success in managing their investments likely has two positive consequences. At the micro-level, successful retail investors can establish better economic lives (Xiao, 2016), which in turn may lead to stable macro-indicators for the whole economy (Allen et al., 2015). Retail investors represent individuals who allocate capital on their own behalf rather than on behalf of a business (Nasdaq, 2018). As indicated, their modest financial knowledge compels them to search for financial advice, not least via RFAs (Fecht et al., 2018).

Trust in one's financial advisor is important if one is to make proper financial decisions. In the case of human financial advisors, previous studies have emphasised the importance of initiating and developing trust in the relationship between retail investors and advisors (Söderberg et al., 2014). Although the relationship with RFAs in managing portfolios is something different, trust between human investors and machine advisors is still important. Given that the relationship between YRIs and RFAs is in its infancy, it can be argued that initial trust is as important as it is in determining the future of any new relationship. If RFAs win the trust of YRIs, this technology could establish a good position in the market. YRIs will accumulate wealth, and RFAs, if they win trust in the eyes of the YRIs, will likely grow in the future.

It is important to take into account that the number of RFA users in Sweden and Malaysia is expected to reach 69,600 and 72,500, respectively, by 2023 (Statista, 2019a, 2019b). However, few studies have so far investigated how initial trust develops in the YRI–RFA relationship. Building such trust may be especially important in countries such as Sweden, where a remarkably high percentage of the workforce is older and will be replaced by younger workers (Nourallah, 2020), and in countries such as Malaysia, where around half of the population is under 30 years old (Population Quick Info, 2020).

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

Recent figures indicate that the short-term effects of the COVID-19 pandemic have been significant. In Sweden, the government has set aside large financial resources to get the country back on its feet (Government Offices in Sweden, 2020). In Malaysia, the real gross domestic product has decreased by 6.9% and individuals' losses have totalled USD 22 billion [2] (Malaysian Institute of Economic Research, 2020). Moreover, in severe macroeconomic conditions, as illustrated by the pandemic, individuals are advised to be aware of financial issues, plan their expenses carefully, and devise good investment strategies. In this regard, consumer finance and retail investment represent two important financial arenas for individuals, financial institutions, and society.

In the consumer finance arena, MBAs have become part of daily life, and many individuals use MBAs to send and receive money, pay bills, and check their bank balances (Liébana-Cabanillas et al., 2017). In the retail investment arena, RFAs represent a promising FinTech solution for retail investors (Bhatia et al., 2020). This technology gives individuals who cannot access fiduciaries the ability to obtain financial advice at a reasonable cost (Fulk et al., 2018).

The young generation is an important category of customers for these two FinTech solutions. Although this category might only be marginally profitable for MBAs compared with affluent customers, YBCs are important since they represent potential future profits (Foscht et al., 2009). It is therefore recommended that financial institutions continue developing advanced MBAs. However, when developing such FinTech solutions, financial institutions need to go beyond technological features such as speed

and design. Building YBC loyalty seems especially important in the intensely competitive bank service environment (Leon, 2018), where YBCs are not known for being particularly loyal. The case of retail investment is different since RFAs are still something new to many YRIs, and building initial trust in this technology is therefore of particular importance (Jung et al., 2018). Financial institutions would benefit from considering the future role of young customers and making strong efforts to build good relationships with them.

This chapter argues that there is a need for research on loyalty (cf. Liébana-Cabanillas et al., 2017) and trust (cf. Goldstein et al., 2019) in the FinTech context. Future studies investigating loyalty issues related to MBAs and YBCs would improve both researcher and practitioner knowledge. Among the issues that could be further investigated are the antecedents of YBC loyalty to MBAs. This encompasses both ICT-related antecedents, such as usability (Tam & Oliveira, 2017), and cognitive-related antecedents, such as confidence (Florendo & Estelami, 2019). Future studies investigating trust issues related to RFAs and YRIs would shed light on an unexplored research field. For example, the antecedents of YRIs' initial trust in RFAs requires more attention from the research community; similarly, the role of perceived risk (Bhatia et al., 2020) and technological features (Jung et al., 2019) is important in this respect.

In this chapter, examples and figures have been retrieved from Sweden and Malaysia, two hubs for FinTech solutions. In these two countries, the number of YBCs who use MBAs has increased dramatically in recent years and this trend is expected to continue. These countries have also witnessed the emergence of RFAs, which are expected to increasingly attract YRIs. Future attempts could be made to conduct comparative international studies because of extensive contextual differences around the world. In particular, future research could use data from countries not categorised as FinTech hubs. Differences in the level of interpersonal trust (illustrated by the fact that 60.1% of people in Sweden and 8.5% in Malaysia believe that most people can be trusted) are also of interest, in particular since few studies have investigated how initial trust develops between YRIs and RFAs. Society's role in ongoing FinTech development could also be considered. As indicated by Mention (2020), the impact of FinTech regulation on individual behaviour in financial markets merits future investigation.

REFERENCES

- Abubakar, H. I., Hashim, N., & Hussain, A. (2015). Verification process of usability evaluation model for m-banking application. In *Proceedings of the 7th International Conference on Mathematical and Computational Method in Science and Engineering* (pp. 325–334). Academic Press.
- Accenture. (2015). *2015 North America Consumer Digital Banking Survey: Banking shaped by the customer – intuitive, intelligent, individual*. Accenture. <https://www.accenture.com/us-en/~media/accenture/conversion-assets/microsites/documents17/accenture-2015-north-america-consumer-banking-survey.pdf>
- Agarwal, S., & Chua, Y. H. (2020). FinTech and household finance: A review of the empirical literature. *China Finance Review International*, 10(4), 361–376. doi:10.1108/CFRI-03-2020-0024
- Alavi, S., & Ahuja, V. (2016). An empirical segmentation of users of mobile banking apps. *Journal of Internet Commerce*, 15(4), 390–407. doi:10.1080/15332861.2016.1252653

- Allen, F., Carletti, E., & Xian, G. (2015). The roles of banks in financial systems. In A. N. Berger, P. Molyneux, & J. O. S. Wilson (Eds.), *The Oxford handbook of banking* (pp. 27–46). Oxford University Press., doi:10.1093/oxfordhb/9780199688500.013.0002
- Allen, F., Mcandrews, J., & Strahan, P. (2002). E-Finance: An introduction. *Journal of Financial Services Research*, 22(1/2), 5–27. doi:10.1023/A:1016007126394
- Au, Y. A., & Kauffman, R. J. (2008). The economics of mobile payments: Understanding stakeholder issues for an emerging financial technology application. *Electronic Commerce Research and Applications*, 7(2), 141–164. doi:10.1016/j.elerap.2006.12.004
- Bank Negara Malaysia. (2019). *Exposure draft on licensing framework for digital banks*. https://www.bnm.gov.my/index.php?ch=en_press&pg=en_press&ac=4970
- Bank Negara Malaysia. (2020). *Internet banking and mobile banking subscribers*. <https://www.bnm.gov.my/index.php?ch=34&pg=163&ac=4&bb=file>
- Bhatia, A., Chandani, A., & Chhateja, J. (2020). Robo advisory and its potential in addressing the behavioral biases of investors: A qualitative study in Indian context. *Journal of Behavioral and Experimental Finance*, 20, 1–9. doi:10.1016/j.jbef.2020.100281
- Bilgihan, A. (2016). Gen Y customer loyalty in online shopping: An integrated model of trust, user experience and branding. *Computers in Human Behavior*, 61, 103–113. doi:10.1016/j.chb.2016.03.014
- Brandl, B., & Hornuf, L. (2017). Where did FinTechs come from, and where do they go? The transformation of the financial industry in Germany after digitalization. *Frontiers in Artificial Intelligence*, 3(8), 1–12. doi:10.3389/frai.2020.00008
- Brenner, L., & Meyll, T. (2020). Robo-advisors: A substitute for human financial advice? *Journal of Behavioral and Experimental Finance*, 25, 1–8. doi:10.1016/j.jbef.2020.100275
- Buchak, G., Matvos, G., Piskorski, T., & Seru, A. (2018). Fintech, regulatory arbitrage, and the rise of shadow banks. *Journal of Financial Economics*, 130(3), 453–483. doi:10.1016/j.jfineco.2018.03.011
- Chen, M. A., Wu, Q., & Yang, B. (2019). How valuable is fintech innovation? *Review of Financial Studies*, 32(5), 2062–2106. doi:10.1093/rfs/hhy130
- Coskun, V., Ozdenizci, B., & Ok, K. (2013). A survey on near field communication (NFC) technology. *Wireless Personal Communications*, 71(3), 2259–2294. doi:10.1007/11277-012-0935-5
- D’Acunto, F., Prabhala, N., & Rossi, A. G. (2019). The promises and pitfalls of robo-advising. *Review of Financial Studies*, 32(5), 1983–2020. doi:10.1093/rfs/hhz014
- Davidsson, P., & Findahl, O. (2016). *Svenskarna och internet 2016: Undersökning om svenskarnas internetvanor* [Swedes and the internet 2016: Survey on Swedes’ Internet habits]. Internetstiftelsen i Sverige. https://www.iis.se/docs/Svenskarna_och_internet_2016.pdf
- Dictionary, C. (2020). *Retail investment*. Cambridge University Press. <https://dictionary.cambridge.org/dictionary/english/retail-investment>

European Banking Federation. (2020). *Building financial resilience in turbulent times: Financial literacy in the 2020s*. <https://www.ebf.eu/events/financialliteracy2020seminar/>

European Commission. (2018). *Distribution systems of retail investment products across the European Union*. https://ec.europa.eu/info/sites/info/files/180425-retail-investment-products-distribution-systems_en.pdf

Fecht, F., Hackethal, A., & Karabulut, Y. (2018). Is proprietary trading detrimental to retail investors? *The Journal of Finance*, 73(3), 1323–1361. doi:10.1111/jofi.12609

Findahl, O. (2019). *Svenskarna och internet 2019* [Swedes and the internet 2019]. Internetstiftelsen i Sverige. <https://svenskarnaochinternet.se/app/uploads/2019/10/svenskarna-och-internet-2019-a4.pdf>

Florendo, J., & Estelami, H. (2019). The role of cognitive style, gullibility, and demographics on the use of social media for financial decision making. *Journal of Financial Services Marketing*, 24(1/2), 1–10. doi:10.1057/1264-019-00064-7

Fong, K., Krug, J. D., Leung, H., & Westerholm, J. P. (2019). Determinants of household broker choices and their impacts on performance. *Journal of Banking & Finance*, 112, 1–14. doi:10.1016/j.jbankfin.2019.06.005

Foscht, T., Schloffer, J., Maloles, C. III, & Chia, S. L. (2009). Assessing the outcomes of generation-Y customers' loyalty. *International Journal of Bank Marketing*, 27(3), 218–241. doi:10.1108/02652320910950204

Fulk, M., Grable, J. E., Watkins, K., & Kruger, M. (2018). Who uses robo-advisory services, and who does not? *Financial Services Review*, 27, 173–188.

Goldstein, I., Jiang, W., & Karolyi, G. A. (2019). To FinTech and beyond. *Review of Financial Studies*, 32(5), 1647–1661. doi:10.1093/rfs/hhz025

Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220–265. doi:10.1080/07421222.2018.1440766

Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and fintech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537–580. doi:10.1007/11573-017-0852-x

Government Offices in Sweden. (2020). <https://www.government.se/articles/2020/09/the-budget-for-2021-in-five-minutes/>

Hauff, J. C. (2014). Trust and risk-taking in a pension investment setting. *International Journal of Bank Marketing*, 32(5), 408–428. doi:10.1108/IJBM-11-2013-0138

Intelligence, I. (2017). *Sverige Betalar 2017* [Sweden pays 2017]. Insight Intelligence AB. <https://internetstiftelsen.se/docs/sverige-betalar-2017.pdf>

Jaiyeoba, H. B., Abdullah, M. A., & Ibrahim, K. (2019). Institutional investors vs retail investors: Are psychological biases equally applicable to investor divides in Malaysia? *International Journal of Bank Marketing*, 38(3), 671–691. doi:10.1108/IJBM-07-2019-0242

- Jung, D., Dorner, V., Weinhardt, C., & Puzmaz, H. (2018). Designing a robo-advisor for risk-averse, low-budget consumers. *Electronic Markets*, 28(3), 367–380. doi:10.1007/12525-017-0279-9
- Jung, D., Glaser, F., & Köpplin, W. (2019). Robo-advisory: Opportunities and risks for the future of financial advisory. In V. Nissen (Ed.), *Advances in consulting research* (pp. 405–427). Springer. doi:10.1007/978-3-319-95999-3_20
- Laukkanen, T., & Cruz, P. (2012). Cultural, individual and device-specific antecedents on mobile banking adoption: A cross-national study. In *45th Hawaii international conference on system sciences* (pp. 3170–3179). IEEE. 10.1109/HICSS.2012.189
- Laukkanen, T., & Pasanen, M. (2008). Mobile banking innovators and early adopters: How they differ from other online users. *Journal of Financial Services Marketing*, 13(2), 86–94. doi:10.1057/palgrave.fsm.4760077
- Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35–46. doi:10.1016/j.bushor.2017.09.003
- Leon, S. (2018). Service mobile apps: A millennial generation perspective. *Industrial Management & Data Systems*, 118(9), 1837–1860. doi:10.1108/IMDS-10-2017-0479
- Liébana-Cabanillas, F., Alonso-Dos-Santos, M., Soto-Fuentes, Y., & Valderrama-Palma, V. A. (2017). Unobserved heterogeneity and the importance of customer loyalty in mobile banking. *Technology Analysis and Strategic Management*, 29(9), 1015–1032. doi:10.1080/09537325.2016.1262021
- Liu, J., Li, X., & Wang, S. (2020). What have we learnt from 10 years of fintech research? A scientometric analysis. *Technological Forecasting and Social Change*, 155(March), 1–12. doi:10.1016/j.techfore.2020.120022
- Malaysian Institute of Economic Research. (2020). *The economic impact of COVID-19*. <https://www.mier.org.my/the-economic-impacts-of-covid-19/>
- MarketLine. (2015). *Retail savings & investments in Asia-Pacific*. <https://store.marketline.com/report/ohec3958--retail-savings-investments-in-asia-pacific/#product-26302>
- Mention, A.-L. (2020). The age of FinTech: Implications for research, policy and practice. *The Journal of FinTech*, 1(1), 1–25. doi:10.1142/S2705109920500029
- Mohammadi, H. (2015). A study of mobile banking usage in Iran. *International Journal of Bank Marketing*, 33(6), 733–759. doi:10.1108/IJBM-08-2014-0114
- Muñoz-Leiva, F., Climent-Climent, S., & Liébana-Cabanillas, F. (2017). Determinants of intention to use the mobile banking apps: An extension of the classic TAM model. *Spanish Journal of Marketing*, 21(1), 25–38. doi:10.1016/j.sjme.2016.12.001
- Nasdaq. (2018). *Retail investors*. <https://www.nasdaq.com/glossary/r/retail-investors>
- Nicoletti, B. (2017). *The future of fintech*. Springer International Publishing. doi:10.1007/978-3-319-51415-4

- Nourallah, M. (2020). *A mobile bank application loyalty model: The young bank customer perspective* [Unpublished licentiate thesis]. Mid Sweden University. doi:10.13140/RG.2.2.35638.86089
- Nourallah, M., Strandberg, C., & Öhman, P. (2019). Understanding the Relationship between Trust and Satisfaction on Mobile Bank Application. In *Proceedings of the 2019 3rd International Conference on E-commerce, E-Business and E-Government* (pp. 58-61). 10.1145/3340017.3340033
- Peevers, G., Douglas, G., & Jack, M. A. (2008). A usability comparison of three alternative message formats for an SMS banking service. *International Journal of Human-Computer Studies*, 66(2), 113–123. doi:10.1016/j.ijhcs.2007.09.005
- Population Quick Info. (2020). *Population by states and age, Malaysia, 2019*. <http://pqj.stats.gov.my/result.php?token=ead145b6134eacd515fcbbb52b79fcd1>
- Riivari, J. (2005). Mobile banking: A powerful new marketing and CRM tool for financial services companies all over Europe. *Journal of Financial Services Marketing*, 10(1), 11–20. doi:10.1057/palgrave.fsm.4770170
- Ryan, A., Trumbull, G., & Tufano, P. (2011). A brief postwar history of US consumer finance. *Business History Review*, 85(3), 461–498. doi:10.1017/S0007680511000778
- Sampaio, C. H., Ladeira, W. J., & Santini, F. D. O. (2017). Apps for mobile banking and customer satisfaction: A cross-cultural study. *International Journal of Bank Marketing*, 35(7), 1131–1151. doi:10.1108/IJBM-09-2015-0146
- Shenglin, B., Jiamin, L., Xiaoxia, Q., Kang, H., Dan, L., Zeyu, X., & Peiwen, Z. (2018). *The future of finance is emerging: New hubs, new landscapes*. Cambridge Centre for Alternative Finance. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2018-ccaf-global-fintech-hub-report-eng.pdf
- Söderberg, I. L., Sallis, J. E., & Eriksson, K. (2014). The dark side of trust and the light side of working alliances in financial services. *International Journal of Bank Marketing*, 32(3), 245–263. doi:10.1108/IJBM-02-2013-0014
- Statista. (2019a). *Robo-advisors – Malaysia | statista market forecast*. <https://www.statista.com/outlook/337/122/robo-advisors/malaysia#market-arpu>
- Statista. (2019b). *Robo-advisors – Sweden | statista market forecast*. <https://www.statista.com/outlook/337/154/robo-advisors/sweden>
- Sweden, S. (2020). *Savings barometer by item, quarter 1996k1–2020k1*. http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__FM__FM0105/FM0105T01/
- Tam, C., & Oliveira, T. (2017). Literature review of mobile banking and individual performance. *International Journal of Bank Marketing*, 35(7), 1042–1065. doi:10.1108/IJBM-09-2015-0143
- Tan, E., & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18–31 doi/ doi:10.1108/YC-07-2015-0053

The Financial Access Survey. (2019). *Financial access survey*. <https://www.imf.org/en/News/Articles/2019/09/27/pr19359-imf-releases-the-2019-financial-access-survey-results>

The World Bank. (2017). *Financial inclusion in Malaysia: Distilling lessons for other countries*. <http://documents1.worldbank.org/curated/en/703901495196244578/pdf/115155-WP-PUBLIC-GFM08-68p-FIpaperwebversion.pdf>

Thomas, L. C. (2010). Consumer finance: Challenges for operational research. *The Journal of the Operational Research Society*, 61(1), 41–52. doi:10.1057/jors.2009.104

Tufano, P. (2009). Consumer finance. *Annual Review of Financial Economics*, 1(1), 227–247. doi:10.1146/annurev.financial.050808.114457

World Economic Forum. (2017). *The global competitiveness report 2017–2018*. <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

Xiao, J. J. (2016). Consumer financial capability and wellbeing. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 3–17). Springer International Publishing. doi:10.1007/978-3-319-28887-1_1

KEY TERMS AND DEFINITIONS

Consumer Finance: An arena that enables individuals to make daily financial transactions; it deals with several related issues such as the relationship between customers and their banks.

Mobile Bank Application: A FinTech solution that allows customers connected to the Internet to conduct various financial tasks, such as paying bills.

Retail Investment: An arena where investments are made by individuals, i.e., households.

Robo Financial Advisor: A FinTech solution that offers practical and low-cost automated services.

Young Bank Customers: Bank customers aged 18–29 years.

Young Retail Investors: Individual investors aged 18–29 years.

ENDNOTES

¹ The original amounts were in Swedish krona (SEK). To be consistent with other statistics provided in this chapter, these amounts were converted into US dollars (USD) according to the exchange rate of 27 September 2020 (based on FOREX Bank SEK 1 = USD 0.11).

² The original amounts were in Malaysian ringgit (RM). To be consistent with other statistics provided in this chapter, these amounts were converted into US dollars (USD) according to the exchange rate of 27 September 2020 (based on Google RM 1 = USD 0.24).

Chapter 2

Chatbot for Online Customer Service: Customer Engagement in the Era of Artificial Intelligence

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ABSTRACT

Chatbot has become popular in recent years due to the advancements in artificial intelligence and other underlying technologies. Likewise, increased internet interactivity and smarter mobile devices have specifically attracted more consumers to pursue superior and personalized customer service. The aim of this chapter was therefore to better understand the use of chatbots by online businesses to shed light on its effect on customer service satisfaction. The commitment trust theory served as the underlying theoretical foundation for the conceptual framework of this study. It explored the relationships among trust, commitment, service quality, and technology towards the use of chatbots. Subsequently, customer engagement gained has influenced the knowledge sharing and the referral to other customers. This chapter presented an integrative framework for predicting the use of chatbots to enhance customer bonding with firms. The main contribution was the list of antecedents needed to improve customer engagement in the implementation of chatbots.

INTRODUCTION

Chatbots have become popular in recent years due to the advancements in artificial intelligence and other underlying technologies, i.e. natural language processing and machine learning (Hill, Ford, & Farreras, 2015; D. Lee, Oh, & Choi, 2017; Thomas, 2016). Chatbot is an artificial intelligence software that manages the conversation with customers in natural language. Similarly, higher Internet interactivity and smarter mobile devices have directly attract more consumers to seek better and personalized customer service prepared by chatbots. Chatbots are smarter and more responsive as they ensure that

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customers are getting the instant services they demand (Følstad, Nordheim, & Bjørkli, 2018). It is more convenient for online customers and possible to ask about customer support, payment details, and other inquiries without having to wait in a long queue as experienced in human and telephone support. In the past, waiting a day or longer to receive responses as they would have from the human customer support staff. Hence, it is replacing traditional voice service with more deployment of chatbot as a new interface between firms and customers. This study aimed to further understand the use of chatbot by online business in shedding light on its influence on customer service satisfaction.

The usage of chatbot is expected to grow, hence it is obvious that artificial intelligence backed chatbot would have become more powerful. Chatbots are deployed at customer touchpoints available on several platforms, such as websites, social media apps, and mobile apps connected to various digital devices.

The conversational agent served as the backbone of the customer dialogue system (Araujo, 2018). Chatbot is getting attention from consumer behavior studies (Luo, Tong, Fang, & Qu, 2019; Zarouali, Van den Broeck, Walrave, & Poels, 2018). It is powered by natural language processing and communicates with the use of human language (Thomas, 2016). The advanced technology makes it a conversational agent that improve the customer perception over the customer service quality. Subsequently, this leads to a higher likelihood to increase the profit of the firm. Customers who are satisfied with the services received could be converted into a loyal customer (Van den Broeck, Zarouali, & Poels, 2019). Prospective customers who use chat is more likely to be turned into actual customers.

BACKGROUND

Growth of Chatbot

Customer service and support are referred to as communication channel facilitated by customer support staff in connecting both consumers and sellers (Brown & Maxwell, 2002). With the increased popularity of social media, companies are using social media such as Facebook, and LiveStream to support the customers. Hence, chatbots are incorporated into these social media aimed to generate potential customer lead (Quan et al., 2018). The highly interactive nature of Chatbot is making closer contact with customers and improving customer engagement (Chung, Ko, Joung, & Kim, 2018). The improved interactivity in chatbot make it popular to support customers better and tailored to customers' need, particularly in electronic commerce (Go & Sundar, 2019). This is due to a higher level of human-computer interaction are engineered by artificial intelligence. Chatbots provide another avenue to enable sellers and customers to connect more effectively and build customer relationships more easily.

Likewise, the interaction between them that takes place in chatbot also promotes knowledge sharing by allowing everyone the opportunity to create and co-produce content (Barreda et al., 2015). Product learning is enjoyable when it was conducted with the aid of technologies. This is due to the faster and complex computational power of the artificial agent embedded into the chatbot. A research study by Fryer et al. (2019) showed that the implementation of an empathy chatbot cultivated a sense of belonging for the customers and subsequently led to stronger bond ties to the sellers. Chatbot has been regarded as a suitable tool to take care of customer empathy. A list of the research in chatbot indicates that customer engagement is further improved when the sellers are putting the effort into meeting customer needs (Chung et al., 2018; Fryer et al., 2019; Xu, Liu, Guo, Sinha, & Akkiraju, 2017).

Hence, this amplified the commitment of the firm to roll out the implementation (Shum, He, & Li, 2018).

However, it is tested on the seller's side and did not delve into the customer's perspective. The customer acceptance was due to the technology implementation as the initiative by the firms. Business firms expect good customer service to cultivate customer engagement needed for improved customer relationships (Winer, 2001). Firms mindful of the significance of cordial customer relationships and support the customers better. Commitment is vital and catalyzing the of building customer relationships (Srinivasan & Moorman, 2005). The commitment as footed in the relationship management theory developed by (Morgan & Hunt, 1994).

Also, customer engagement could allow the customer to learn about the product better. Hence, customers are more willing to share the product and brand information to others. The theoretical linkage between customer engagement and knowledge sharing is supported by a list of established studies

(Carlson, Rahman, Voola, & De Vries, 2018; Erat, Desouza, Schäfer-Jugel, & Kurzawa, 2006; Harmeling, Moffett, Arnold, & Carlson, 2017). The predictive power of customer engagement is the driver to enhance the learning process and the sharing of information gained.

Aims and Contributions

This study attempts to examine the role of chatbots in facilitating customer engagement and subsequently enhancing the brand image. An abundance of existing studies examined the causal relationship of customer engagement in the consumer behavior arena, i.e. brand loyalty (So, King, Sparks, & Wang, 2016), customer satisfaction (Sashi, 2012), and service quality (Prentice, Wang, & Loureiro, 2019).

However, not on the roles of commitment and trust as antecedent for customer engagement via the use of technological deployments. As a note, commitment and trust are crucial in cultivating good feelings toward customer service from the firms (Shemwell Jr & Cronin Jr, 1995).

This paper offers a good understanding of the use of chatbot as a customer service tool by investigating the theoretical aspect of the current advanced artificial intelligence in business scenario. The high adoption of chatbot was investigated by many researchers in the extant literature (Chung et al., 2018) (Luo et al., 2019) (Van den Broeck et al., 2019). However, it has rarely set foot on relationship marketing aspect view of customer engagement under the use of artificial intelligence. This study's theoretical contributions are two-fold. First, the significance of commitment and trust in cultivate positive customer engagement. Secondly, this study also relates the role of customer engagement in promoting the brand image and knowledge sharing. It contributes to the research on the consequences of chatbot as customer service by developing a novel model to explain the outcome of customer engagement. Hence, this study deduces the outcomes from the customer in the use of chatbot. This contribution is vital for the understanding of the ever-increasing use of artificial intelligence for supporting customers.

LITERATURE REVIEW

Overview

The use of chatbot increases the quality level of customer service (Chung et al., 2018; Følstad et al., 2018). Hwang et al. (2019) informed that customers were in favor of chatting live with companies as

they can have their queries handled promptly. Hence, many customers evaluated the chatbot customer support with a favorable rating as compared to other forms of customer service. Furthermore, the use of chatbot is found directly related to customer retention. The intelligence agent within the chatbot can analyze the speech pattern and other associated sentiments. With this kind of support feature, the chatbot can change the interaction styles and reduce the chances of any conflict with the customers.

Chatbots play a role in converting prospective customers into actual customers (Luo et al., 2019). It boosts the confidence of these prospects as they can find out more features and product information from the interaction via live chat. Chung et al. (2018) deduced the customer relationship can be bonded more easily with the use of chatbots. Artificial intelligence alters the customer service to accommodate customer needs swiftly and immediately. Hence, the bond between customers and companies are developed subsequently. The chat sessions are more personalized and saving time for customers. Previous chat sessions are often referred from the systems. Hence, this reduces the time needed to go through some of the previous information. On the other hand, the efficiency and effectiveness of the customer support function is further enhanced. Chatbots are programmed to handle a few customer queries simultaneously as compared to only one telephone inquiry. Customers would have higher customer satisfaction as their queries were answered quickly.

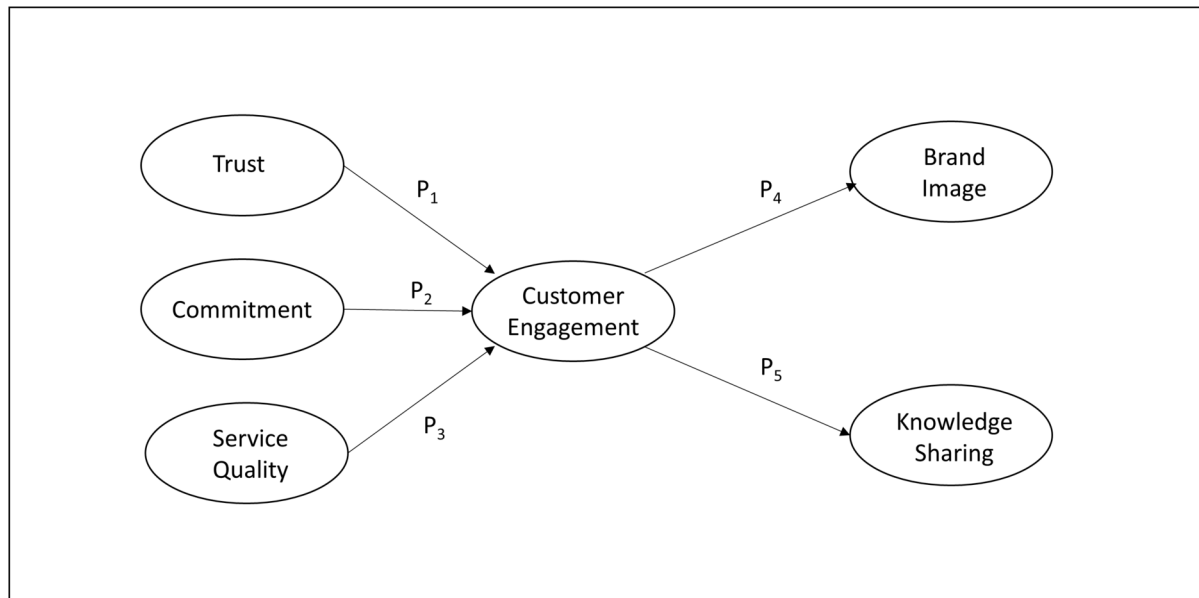
Chatbot is a way to enhance customer engagement in several customer service studies (Luo et al., 2019; Thomas, 2016; Van den Broeck et al., 2019). The rapport and interaction levels are increased because of the readiness of the chatbot. It is often frustrating to wait for human service personnel to take longer to respond and even waiting time is unavoidable when a customer is served by a human. A desirable customer engagement further leads to the customer's willingness to continue to purchase the products and services from the same vendors. The use of technology can improve brand knowledge, but the studies of chatbots have not related to the importance of customer engagement.

Trust-Commitment Theory

Trust commitment theory in the realm of relationship marketing theorized that trust and commitment are the two main tenets for the development of sustainable relationships (Morgan & Hunt, 1994). Both trust and commitment are required to build the customer rapport for long term benefits (Verhoef & Langerak, 2002). The relationship would be key in making the customers trust and committed to the companies in achieving customer satisfaction, which subsequently attained customer loyalty. This has been evident in the existing studies on customer service (Bagram & Khan, 2012; Berndt, Herbst, & Roux, 2005; Dewnarain, Ramkissoon, & Mavondo, 2019).

Trust and commitment have demonstrated their influence in the use of social media in supporting customer service for the past decade. In particular, trust and commitment were two determinants in solving customer problems for Internet retailers (Eastlick, Lotz, & Warrington, 2006; Thakur, 2018). Customers are inclined to bring their inquiries and problems in text-based communication platforms. Roberts-Lombard (2009) found that both customers and retailers need to have a high level of commitment in solving and attending to customers' inquiries. Besides, customers are more likely to share their feelings and sentiments relating to their problems when they trusted online retailers (Ho & Rajandram, 2016). Hence, trust and commitment are precursors to develop the customer relationship. The highly intelligent nature of Chatbot is enhancing the customer service experience. Buhalis and Yen (2020) showed that creative processes and contents embedded in chatbot enhance the satisfaction of the service. Figure 1 depicts the conceptual framework for this study.

Figure 1. The conceptual framework



Customer Engagement

Firms formulate customer relationship strategies to sustain the level of close engagement with their customers. Customer engagement refers to the interaction and collaboration between the customers and the businesses via any form of communication channels (Brodie, Hollebeek, Jurić, & Ilić, 2011). Furthermore, Vivek et al. (2012) regarded it as the affective response from customers to attach to the companies or brands. It has directly related to customer brand loyalty because the customer would buy more and return purchases if they have a strong sense of attachment to the brand. Moreover, service quality has a positive significant relationship with customer engagement.

It is worth noting that online customer involvement has demonstrated the urge to know about product knowledge as shown in the list of extant literature (Cui & Wu, 2016; Ho & Teo, 2020; Lin & Chen, 2006). The significant relationship of customer engagement with many business performance indicators, i.e. profit growth, cost reductions, customer referrals, and purchase intention. The customer would use many different external online platforms or platforms. They would not want to directly access the companies to gain the company and product information. However, the reliability and validity of the product information could be biased as many of these websites could be sponsored by firms (Xiao & Benbasat, 2018). On the contrary, customers were gratified when business could meet their expectations (Verhagen, Swen, Feldberg, & Merikivi, 2015).

The ever increasing popular social media for sharing information is on the rise. Social media user-generated content have been shown to influence the purchase decision of consumers (Ho & Vogel, 2014). However, the argument quality and the authentication of the source are both important in determining the likelihood of usage by the customers. When a chatbot is used, the customer engagement is envisaged to be higher as the argument quality is expected to be more human-related, with the use of natural language and artificial intelligence.

Customer engagement would influence the customer in sharing consumer-generated content that is virtually available. Chatbot users often seek services or advice from customer support touchpoints for the consumption of products. Having said that, the relationship quality is crucial (Ho & Cheng, 2020). Kim et al. (2012) pointed out that the re-purchase information was depended on the service rating by the customers. Customers enjoying the good quality service were more likely to share information on social media platforms. It increases other customers' access to product information. This kind of consumer-generated content was regarded as more credible and influential.

Trust

Trust is regarded as a set of specific beliefs that instills the confidence of customers in communicating with companies (McKnight, Choudhury, & Kacmar, 2002). Customer service connects and links both customers and companies in various customer touchpoints to develop customer relationship. Trust is critical in building relationships between customers and online service providers (Eastlick et al., 2006; Y. Kim & Peterson, 2017). In general, trust in customer relationship is regarded as critical in instilling the confidence of the customers in continuing purchase (Bulut & Karabulut, 2018).

This study followed Doney and Cannon (1997)'s description of trust that is categorized into two major dimensions: credibility and benevolence. Credibility refers to the guarantee of the businesses in providing their promises to the customers (Doney & Cannon, 1997; Pavlou, 2002). Benevolence is considered as the business product and service offering that is desired by the customers (Benbasat & Wang, 2005; Doney & Cannon, 1997).

Chatbot is available to provide the service which requires the trust of the customers in believing in the readiness of companies to support them. Hence, the customer service providers implemented the facility in building the trust to improve the customer service function. Kwon (2008) further investigated that the trust-building process between the trading partners is the key to successful collaboration. Based on the relationship marketing aspect, trust enhances customer engagement indicators, such as customer loyalty (Hollebeek, 2011).

In a study conducted for chatbot implementation, trust in merchants' credibility influences the customer's re-patronage intention. Furthermore, trust was the determinant in dealing with customers who are new or unfamiliar to the firms. Hence, trust developed from the chatbot interaction influences on attitude of the customers in learning more about the products and services of the firms. Hence, at least a prima facie case is provided to develop the following proposition:

Proposition 1:

Trust is an antecedent of customer engagement gained from the use of chatbot.

Commitment

Commitment refers to the confidence and efforts devoted by two parties to maintain their continuing relationship. The commitment level of online service providers has been regarded as critical in supporting the customers (Eastlick et al., 2006). This is consistent with a study conducted by Xu et al. (2017) that focuses on the use of social media as an alternative to attend to customer service. The use of chatbot as a customer service tool is somewhat similar to the use of social media. Both platforms are virtually conducted with minimal human intervention. Moreover, the customers who decided to log in to use the chatbots

provided by the firms have demonstrated their commitment to use this new platform. Many chatbot users have prior experience in using social media for online service (Mou & Xu, 2017). With such experience gained, they were more at ease in presenting their problems to chatbot. Commitment is required for the use of online customer service where the customers must have some level of competency in using new technologies. Moreover, commitment improves customer engagement parameters, i.e. customer-brand relationship and loyalty based on the relationship marketing perspective (Hollebeek, 2011).

The interactivity in virtual settings could smoothen the communication in facilitating the development of relationships. Kemp and Bui (2011) theorized brand commitment is critical to integrate with brand connection in formulating the customer support process in gaining healthy customer engagement. The role of commitment in a chatbot is different from other traditional forms of customer service, where customers have different interfaces and not directly deal with humans. Therefore, this study intends to investigate the following proposition:

Proposition 2:

Commitment is an antecedent of customer engagement gained from the use of chatbot.

Service Quality

The service quality is perceived by customers as the guide in rating the performance of online customer service. It has become one of the major branch of consumer behavior studies in deciding the customer satisfaction (Izogo & Ogba, 2015; Kasiri, Cheng, Sambasivan, & Sidin, 2017; Olorunniwo, Hsu, & Udo, 2006). It is defined as the assessment of the customer's expected service from the firms (G. Lee & Lin, 2005). Service quality is an indispensable dimension of customer perception towards the service provided by companies. Customers would appreciate a good impression towards support staff who are passionate and helpful in dealing with customers' concerns.

By engaging closely with customers, the good experiences gained could lead to higher customer satisfaction. A worthy and pleasant encounter during the customer support process could be converted into more future purchases. The customer relationship has been validated as the major outcome of using the chatbots' intelligence agents in understanding the empathy of customers better. Machine language embedded in chatbot attend to customer needs and provides the comprehensive solutions. Therefore, customer service is expected to improve significantly to manage the connected customers (Ho, 2020). A direct relationship exists between service quality and customers' willingness to post comments on social media applications (Mohtasham, Sarollahi, & Hamirazavi, 2017). Service quality has a positive impact on customer engagement parameters, such as word-of-mouth, and customer comradeship. By doing so, consumers with common interests are made to share and comment on related information required for purchase. Online customers expect a closer relationship by demonstrating customer helping other behavior. With a higher service quality level expected from chatbots, customer engagement behavior are to be demonstrated by customers. The following proposition is derived:

Proposition 3:

Service quality is an antecedent of customer engagement gained from the use of chatbot

Brand Image

Brand image is the customers' overall impression of a brand (Chen 2010). A considerable amount of literature has been published on the brand image in marketing aspects. In general, customers would have a higher likelihood to accept the products with favorable brand image (Arslan & Altuna 2010; Aghekyan-Simonian et al. 2012; Dirsehan & Kurtuluş 2012). This is evidence in the use of social media for marketing strategy purpose (Bilgin 2018). Furthermore, Ryu et al. (2019) asserted that customer satisfaction is directly linked to brand image with higher ratings for luxury products and services. This is aligned with Rahim et al. (2017) study that products associated with positive brand image could impact the urge of customer to learn more about the brand.

Brand image is increased when the customers expressed their interest in the products. The customer with higher product interest would have etched a good impression and this lead to a desirable brand image (Nagar, 2015). Evidence shows that brand image can be positive if the customer enjoyed the support from the company (Fiore, Jin, & Kim, 2005). Furthermore, customer engagement is found to have exerted influence on building the brand image.

De Vries and Carlson (2014) examined that the goodwill of the firm can be generated with closer customer relationships. By getting closer and more personal attention, customers are expected to learn about the products and other brand messages (Barreda, Bilgihan, Nusair, & Okumus, 2015). This is consistent with the role of better engagement between customers and firms under the online business environment (Thakur, 2018). With higher customer engagement envisaged and a variety of customer support provided by intelligent chat agents, it is expected to gain brand image. This kind of customer engagement supported by artificial intelligence help to promote the goodwill of companies to demonstrate empathy and caring for customers. Therefore, the following proposition was developed:

Proposition 4:

Customer engagement gained from the use of chatbot leads to brand image.

Knowledge Sharing

One of the main benefits of customer support for customers is to learn about product features through interaction with firms. It referred to the tendency of customers to share viewpoints, feedback, and other information they experienced from customer service. The ever-increasing popularity use of social media for customer support such as Facebook Fanpage as customer support media is on the verge. When products are learned from customer support platforms, customers would be referred to their peers in their virtual communities (Barreda et al., 2015).

Ho and Rajadurai (2020) established that online customers tend to share and search for good images and footage about the products they enjoyed. This leads to the conceptual understanding of interaction linkage to the sharing of information. The support of social media in solving many questions and doubts arose from the product (Roberts, Piller, & Lüttgens, 2016). Before the arrival of chatbots, firms used traditional customer support functions that operated by human. This is proven in the extant literature when customers are sharing their purchase experience and feedback via online reviews and word of mouth (Ho et al. 2020). However, it is not able to compare with chatbots which are highly responsive to customer demand.

Product knowledge has gained attention in consumer behavior research. It attracts discussion about its dimensions and determinants, as well as its influence on purchase outcomes in consumer behavior. The learning of product knowledge is critical for customers in enjoying the features of the products. It is a disadvantage for customers if they are unfamiliar with the product features. Adequate prior knowledge about the products would reduce the effort of customers in taking time to seek information from the companies. Larivière and Van den Poel (2004) observed that customer appreciation of the product features was important before the purchase. Customers re-purchase intentions were stronger when they acquired adequate product knowledge. Customer engagement smoothens the exchange, distribution, and obtain information concerning a product purchase. Closer and better communication is the pre-requisite for the learning and sharing of product information (Ho & Teo, 2020). Therefore, it is essential to examine the level of engagement among customers and form in facilitating the product knowledge sharing in the chatbot setting. Hence, the proposition below was developed:

Proposition 5:

Customer engagement gained from the use of chatbot leads to knowledge sharing.

CONCLUSION

The benefits of intelligent chatbot are enormous and it has drawn much attention for customer support function. Trust, commitment, and service quality are the precursors in making customer engagement for building sustainable customer relationships. The study unravels the customer engagement process leads to a higher brand image for the firm. Furthermore, intimidating customer engagement is regarded as a critical motivation for a customer to sharing information with other customers. Both of the outcomes proposed are a valuable contribution that rationalized this study. The study explores the consumer engagement purported from chatbots in preserving the brand image and encouraging the sharing of information among the customers. It reveals that trust, commitment, and service quality are critical in the use of chatbot, which was rarely investigated in the case of many other traditional customer service platforms.

The impact of chatbots used in customer service improves customer engagement for firms. The conceptual framework of this study provides the underlying theoretical consideration in the utilization of artificial intelligence to support customers using the chatbots. The implication of customer engagement under the trust and commitment dimension of relationship marketing are the pre-requisites for curating the customer engagement. This is consistent with the adoption of technology innovation of business applications (Cabiddu, De Carlo, & Piccoli, 2014; McLean & Wilson, 2019). Furthermore, service quality was proven to be crucial in making the customer engagement gained from the chatbots. The expected quality of service is key to meeting customer requirements and expectations as validated in consumer studies (Kasiri et al., 2017; G. Lee & Lin, 2005; Winer, 2001). On the other end, companies could also get a closer customer connection, and learn about customers' concerns and even insightful information from customer preference. However, businesses need to put all the necessary procedures in place and the database of the chat intelligence to support the customer.

Another contribution is the outcome of customer engagement on upholding the brand image and knowledge sharing. This infers that the favorable outcomes of using chatbot are exposed to further commercial usage. Furthermore, a higher likelihood of sharing information is demonstrated by customer who willing to exchange messages in their virtual communities (Ho & Rajandram, 2016). The benefits

of using chatbot further provide the values which have not been exposed in the extant literature. In the nutshell, a chatbot is a platform for companies to assist and support the customer while the customers are enjoying the kind of support they need on a real-time basis. This is further examined the role of trust, commitment, and service quality in enhancing customer engagement from the chatbot. The outcome of this customer engagement is the brand image obtained by the firms. Furthermore, live chat provides the avenue for satisfied customers to share information with their peers.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

While this study revolves around the development of customer engagement from chatbot in its relationship to brand image and knowledge sharing, it is vital to pay attention to the dynamic changes in an era where technology dominates. The introduction of new features of chatbot warrants further investigation. Furthermore, anomalies exist from implementation such as customer feedback, alternative solutions, and systems evaluation. It would be worthwhile to examine the change of attitude and behavior once customer engagement was attained. This study theorized that knowledge sharing is the outcome of customer engagement. This led to another vis-à-vis question: are customers sharing knowledge out from their wish or are they pressured by their peers? Hence, future researches can delve further to determine the distinction between customer behavior on sharing knowledge gained during their interaction with customer service chatbots.

REFERENCES

- Aghekyan-Simonian, M., Forsythe, S., Kwon, W. S., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services*, 19(3), 325–331. doi:10.1016/j.jretconser.2012.03.006
- Araujo, T. (2018). Living up to the chatbot hype: The influence of anthropomorphic design cues and communicative agency framing on conversational agent and company perceptions. *Computers in Human Behavior*, 85, 183–189. doi:10.1016/j.chb.2018.03.051
- Arslan, F. M., & Altuna, O. K. (2010). The effect of brand extensions on product brand image. *Journal of Product and Brand Management*, 19(3), 170–180. doi:10.1108/10610421011046157
- Bagram, M. M. M., & Khan, S. (2012). Attaining customer loyalty! The role of consumer attitude and consumer behavior. *International Review of Management and Business Research*, 1(1), 1–8.
- Barreda, A. A., Bilgihan, A., Nusair, K., & Okumus, F. (2015). Generating brand awareness in online social networks. *Computers in Human Behavior*, 50(September), 600–609. doi:10.1016/j.chb.2015.03.023
- Benbasat, I., & Wang, W. (2005). Trust in and adoption of online recommendation agents. *Journal of the Association for Information Systems*, 6(3), 72–121. doi:10.17705/1jais.00065
- Berndt, A., Herbst, F., & Roux, L. (2005). Implementing a customer relationship management programme in an emerging market. *Journal of Global Business and Technology*, 1(2), 81–89.

- Bilgin, Y. (2018). The effect of social media marketing activities on brand awareness, brand image and brand loyalty. *Business & Management Studies: An International Journal*, 6(1), 128–148. doi:10.15295/bmij.v6i1.229
- Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252–271. doi:10.1177/1094670511411703
- Brown, G., & Maxwell, G. (2002). Customer Service in UK call centres: Organisational perspectives and employee perceptions. *Journal of Retailing and Consumer Services*, 9(6), 309–316. doi:10.1016/S0969-6989(01)00040-6
- Buhalis, D., & Yen, E. C. S. (2020). Exploring the use of chatbots in hotels: technology providers' perspective. In *Information and Communication Technologies in Tourism 2020* (pp. 231–242). Springer. doi:10.1007/978-3-030-36737-4_19
- Bulut, Z. A., & Karabulut, A. N. (2018). Examining the role of two aspects of eWOM in online repurchase intention: An integrated trust–loyalty perspective. *Journal of Consumer Behaviour*, 17(4), 407–417. doi:10.1002/cb.1721
- Cabiddu, F., De Carlo, M., & Piccoli, G. (2014). Social media affordances: Enabling customer engagement. *Annals of Tourism Research*, 48, 175–192. doi:10.1016/j.annals.2014.06.003
- Carlson, J., Rahman, M., Voola, R., & De Vries, N. (2018). Customer engagement behaviours in social media: Capturing innovation opportunities. *Journal of Services Marketing*, 32(1), 83–94. doi:10.1108/JSM-02-2017-0059
- Chen, Y. S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307–319. doi:10.1007/10551-009-0223-9
- Chung, M., Ko, E., Joung, H., & Kim, S. J. (2018, September). Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*, 117, 587–595. doi:10.1016/j.jbusres.2018.10.004
- Cui, A. S., & Wu, F. (2016). Utilizing customer knowledge in innovation: Antecedents and impact of customer involvement on new product performance. *Journal of the Academy of Marketing Science*, 44(4), 516–538. doi:10.1007/11747-015-0433-x
- De Vries, N. J., & Carlson, J. (2014). Examining the drivers and brand performance implications of customer engagement with brands in the social media environment. *Journal of Brand Management*, 21(6), 495–515. doi:10.1057/bm.2014.18
- Dewnarain, S., Ramkissoon, H., & Mavondo, F. (2019). Social customer relationship management: An integrated conceptual framework. *Journal of Hospitality Marketing & Management*, 28(2), 172–188. doi:10.1080/19368623.2018.1516588
- Dirsehan, T., & Kurtuluş, S. (2018). Measuring brand image using a cognitive approach: Representing brands as a network in the Turkish airline industry. *Journal of Air Transport Management*, 67(March), 85–93. doi:10.1016/j.jairtraman.2017.11.010

- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer–seller relationships. *Journal of Marketing*, 61(2), 35–51.
- Eastlick, M. A., Lotz, S. L., & Warrington, P. (2006). Understanding online B-to-C relationships: An integrated model of privacy concerns, trust, and commitment. *Journal of Business Research*, 59(8), 877–886. doi:10.1016/j.jbusres.2006.02.006
- Erat, P., Desouza, K. C., Schäfer-Jugel, A., & Kurzawa, M. (2006). Business customer communities and knowledge sharing: Exploratory study of critical issues. *European Journal of Information Systems*, 15(5), 511–524. doi:10.1057/palgrave.ejis.3000643
- Fiore, A. M., Jin, H., & Kim, J. (2005). For fun and profit: Hedonic value from image interactivity and responses toward an online store. *Psychology and Marketing*, 22(8), 669–694. doi:10.1002/mar.20079
- Følstad, A., Nordheim, C. B., & Bjørkli, C. A. (2018). What makes users trust a chatbot for customer service? An exploratory interview study. In *International Conference on Internet Science*, (pp. 194–208). Springer. 10.1007/978-3-030-01437-7_16
- Fryer, L. K., Nakao, K., & Thompson, A. (2019). Chatbot learning partners: Connecting learning experiences, interest and competence. *Computers in Human Behavior*, 93, 279–289. doi:10.1016/j.chb.2018.12.023
- Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humanness perceptions. *Computers in Human Behavior*, 97, 304–316. doi:10.1016/j.chb.2019.01.020
- Harmeling, C. M., Moffett, J. W., Arnold, M. J., & Carlson, B. D. (2017). Toward a theory of customer engagement marketing. *Journal of the Academy of Marketing Science*, 45(3), 312–335. doi:10.1007/11747-016-0509-2
- Hill, J., Ford, W. R., & Farreras, I. G. (2015). Real conversations with artificial intelligence: A comparison between human–human online conversations and human–chatbot conversations. *Computers in Human Behavior*, 49, 245–250. doi:10.1016/j.chb.2015.02.026
- Ho, R. C. (2020). *Strategies and Tools for Managing Connected Consumers*. IGI Global. doi:10.4018/978-1-5225-9697-4
- Ho, R. C., & Cheng, R. (2020). The impact of relationship quality and social support on social media users' selling intention. *International Journal of Internet Marketing and Advertising*, 14(4), 433–453. doi:10.1504/IJIMA.2020.111051
- Ho, R. C., & Rajadurai, K. G. (2020). Live streaming meets online shopping in the connected world: interactive social video in online marketplace. In *Strategies and tools for managing connected consumers* (pp. 130–142). IGI Global. doi:10.4018/978-1-5225-9697-4.ch008
- Ho, R. C., & Rajandram, K. V. (2016). The Influence of Social Media Data on Online Purchase: A Study on Relative Advantage of Social Commerce. In *Encyclopedia of E-Commerce Development* (pp. 2039–2050). Implementation, and Management. doi:10.4018/978-1-4666-9787-4.ch145

- Ho, R. C., & Teo, T. C. (2020). Consumer Socialization Process for the Highly Connected Customers: The Use of Instagram to Gain Product Knowledge. In *Strategies and Tools for Managing Connected Consumers* (pp. 1–19). doi:10.4018/978-1-5225-9697-4.ch001
- Ho, R. C., & Vogel, D. (2014). The impact of social networking functionalities on online shopping: An examination of the web's relative advantage. *International Journal of Business Information Systems*, 16(1), 25–41. doi:10.1504/IJBIS.2014.060834
- Ho, R. C., Withanage, M. S., & Khong, K. W. (2020). Sentiment drivers of hotel customers: A hybrid approach using unstructured data from online reviews. *Asia-Pacific Journal of Business Administration*, 12(3/4), 237–250. doi:10.1108/APJBA-09-2019-0192
- Hollebeek, L. D. (2011). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, 27(7–8), 785–807. doi:10.1080/0267257X.2010.500132
- Hwang, S., Kim, B., & Lee, K. (2019). A data-driven design framework for customer service chatbot. *International Conference on Human-Computer Interaction*, 222–236. 10.1007/978-3-030-23570-3_17
- Izogo, E. E., & Ogba, I.-E. (2015). Service quality, customer satisfaction and loyalty in automobile repair services sector. *International Journal of Quality & Reliability Management*, 32(3), 250–269. doi:10.1108/IJQRM-05-2013-0075
- Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2017). Integration of standardization and customization: Impact on service quality, customer satisfaction, and loyalty. *Journal of Retailing and Consumer Services*, 35, 91–97. doi:10.1016/j.jretconser.2016.11.007
- Kim, C., Galliers, R. D., Shin, N., Ryoo, J.-H., & Kim, J. (2012). Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, 11(4), 374–387. doi:10.1016/j.elerap.2012.04.002
- Kim, Y., & Peterson, R. A. (2017). A Meta-analysis of Online Trust Relationships in E-commerce. *Journal of Interactive Marketing*, 38, 44–54. doi:10.1016/j.intmar.2017.01.001
- Kwon, Y.-C. (2008). Antecedents and consequences of international joint venture partnerships: A social exchange perspective. *International Business Review*, 17(5), 559–573. doi:10.1016/j.ibusrev.2008.07.002
- Larivière, B., & Van den Poel, D. (2004). Investigating the role of product features in preventing customer churn, by using survival analysis and choice modeling: The case of financial services. *Expert Systems with Applications*, 27(2), 277–285. doi:10.1016/j.eswa.2004.02.002
- Lee, D., Oh, K.-J., & Choi, H.-J. (2017). The chatbot feels you-a counseling service using emotional response generation. *2017 IEEE International Conference on Big Data and Smart Computing (Big-Comp)*, 437–440.
- Lee, G., & Lin, H. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161–176. doi:10.1108/09590550510581485
- Lin, L., & Chen, C. (2006). The influence of the country-of-origin image, product knowledge and product involvement on consumer purchase decisions: An empirical study of insurance and catering services in Taiwan. *Journal of Consumer Marketing*, 23(5), 248–265. doi:10.1108/07363760610681655

- Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science*, 38(6), 937–947. doi:10.1287/mksc.2019.1192
- McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334–359. doi:10.1287/isre.13.3.334.81
- McLean, G., & Wilson, A. (2019). Shopping in the digital world: Examining customer engagement through augmented reality mobile applications. *Computers in Human Behavior*, 101, 210–224. doi:10.1016/j.chb.2019.07.002
- Mohtasham, S. S., Sarollahi, S. K., & Hamirazavi, D. (2017). The effect of service quality and innovation on word of mouth marketing success. *Eurasian Business Review*, 7(2), 229–245. doi:10.1007/40821-017-0080-x
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38. doi:10.1177/002224299405800302
- Mou, Y., & Xu, K. (2017). The media inequality: Comparing the initial human-human and human-AI social interactions. *Computers in Human Behavior*, 72, 432–440. doi:10.1016/j.chb.2017.02.067
- Nagar, K. (2015). Modeling the effects of Green advertising on brand image: Investigating the moderating effects of product involvement using structural equation. *Journal of Global Marketing*, 28(3–5), 152–171. doi:10.1080/08911762.2015.1114692
- Olorunniwo, F., Hsu, M. K., & Udo, G. J. (2006). Service quality, customer satisfaction, and behavioral intentions in the service factory. *Journal of Services Marketing*, 20(1), 59–72. doi:10.1108/08876040610646581
- Pavlou, P. A. (2002). Institution-based trust in interorganizational exchange relationships: The role of online B2B marketplaces on trust formation. *The Journal of Strategic Information Systems*, 11(3–4), 215–243. doi:10.1016/S0963-8687(02)00017-3
- Prentice, C., Wang, X., & Loureiro, S. M. C. (2019). The influence of brand experience and service quality on customer engagement. *Journal of Retailing and Consumer Services*, 50, 50–59. doi:10.1016/j.jretconser.2019.04.020
- Quan, T., Trinh, T., Ngo, D., Pham, H., Hoang, L., Hoang, H., . . . Mai, T. (2018). Lead engagement by automated real estate chatbot. In *2018 5th NAFOSTED Conference on Information and Computer Science (NICS)*, (pp. 357–359). IEEE.
- Rahmi, D. Y., Rozalia, Y., Chan, D. N., Anira, Q., & Lita, R. P. (2017). Green brand image relation model, green awareness, green advertisement, and ecological knowledge as competitive advantage in improving green purchase intention and green purchase behavior on creative industry products, *Journal of Economics, Business, & Accountancy Ventura*, 20(2), 177–186. doi:10.14414/jebav.v20i2.1126
- Roberts, D. L., Piller, F. T., & Lüttgens, D. (2016). Mapping the impact of social media for innovation: The role of social media in explaining innovation performance in the PDMA comparative performance assessment study. *Journal of Product Innovation Management*, 33, 117–135. doi:10.1111/jpim.12341

- Roberts-Lombard, M. (2009). Customer relationships in the retail travel trade-what is the opinion of management? *Journal of Contemporary Management*, 6(1), 409–429.
- Ryu, K., Lehto, X. Y., Gordon, S. E., & Fu, X. (2019). Effect of a brand story structure on narrative transportation and perceived brand image of luxury hotels. *Tourism Management*, 71(April), 348–363. doi:10.1016/j.tourman.2018.10.021
- Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management Decision*, 50(2), 253–272. doi:10.1108/00251741211203551
- Shemwell, D. J. Jr, & Cronin, J. J. Jr. (1995). Trust and commitment in customer/service-provider relationships: An analysis of differences across service types and between sexes. *Journal of Customer Service in Marketing & Management*, 1(2), 65–75. doi:10.1300/J127v01n02_07
- Shum, H.-Y., He, X., & Li, D. (2018). From Eliza to XiaoIce: Challenges and opportunities with social chatbots. *Frontiers of Information Technology & Electronic Engineering*, 19(1), 10–26. doi:10.1631/FITEE.1700826
- So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016). The role of customer engagement in building consumer loyalty to tourism brands. *Journal of Travel Research*, 55(1), 64–78. doi:10.1177/0047287514541008
- Srinivasan, R., & Moorman, C. (2005). Strategic firm commitments and rewards for customer relationship management in online retailing. *Journal of Marketing*, 69(4), 193–200. doi:10.1509/jmkg.2005.69.4.193
- Thakur, R. (2018). Customer engagement and online reviews. *Journal of Retailing and Consumer Services*, 41, 48–59. doi:10.1016/j.jretconser.2017.11.002
- Thomas, N. T. (2016). An e-business chatbot using AIML and LSA. In *2016 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, (pp. 2740–2742). IEEE. 10.1109/ICACCI.2016.7732476
- Van den Broeck, E., Zarouali, B., & Poels, K. (2019). Chatbot advertising effectiveness: When does the message get through? *Computers in Human Behavior*, 98, 150–157. doi:10.1016/j.chb.2019.04.009
- Verhagen, T., Swen, E., Feldberg, F., & Merikivi, J. (2015). Benefitting from virtual customer environments: An empirical study of customer engagement. *Computers in Human Behavior*, 48, 340–357. doi:10.1016/j.chb.2015.01.061
- Verhoef, P. C., & Langerak, F. (2002). Eleven misconceptions about customer relationship management. *Business Strategy Review*, 13(4), 70–76. doi:10.1111/1467-8616.00235
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 122–146. doi:10.2753/MTP1069-6679200201
- Winer, R. S. (2001). A framework for customer relationship management. *California Management Review*, 43(4), 89–105. doi:10.2307/41166102

Xiao, B., & Benbasat, I. (2018). An empirical examination of the influence of biased personalized product recommendations on consumers' decision making outcomes. *Decision Support Systems, 110*, 46–57. doi:10.1016/j.dss.2018.03.005

Xu, A., Liu, Z., Guo, Y., Sinha, V., & Akkiraju, R. (2017). A new chatbot for customer service on social media. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, 3506–3510. 10.1145/3025453.3025496

Zarouali, B., Van den Broeck, E., Walrave, M., & Poels, K. (2018). Predicting consumer responses to a chatbot on Facebook. *Cyberpsychology, Behavior, and Social Networking, 21*(8), 491–497. doi:10.1089/cyber.2017.0518 PMID:30036074

KEY TERMS AND DEFINITIONS

Brand Image: The customers' overall impression of a brand.

Chatbot: An artificial intelligence software that manages the conversation with customers in natural language.

Commitment: The confidence and efforts devoted by two parties to maintain their continuing relationship.

Customer Engagement: The interaction and collaboration between the customers and the businesses via any form of communication channels.

Customer Service: It connects and links both customers and companies in various customer touchpoints to develop customer relationship.

Knowledge Sharing: The tendency of customers to share viewpoints, feedback, and other information they experienced from customer service.

Relationship Management: A business strategy of an organization aims to sustain the level of close engagement with its customers.

Service Quality: The assessment of the customer's expected service from the business firms.

Trust: A set of specific beliefs that instills the confidence of customers in communicating with companies.

Chapter 3

Investigating Consumer Finance in Lebanon: An Empirical Study of ATM and Virtual Currency

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ABSTRACT

The chapter aims to determine three research objectives: (1) ATM service quality in Lebanon measurement based on five dimensions, using the SERVQUAL model; (2) analyze and investigate customer satisfaction and loyalty of the ATM usage, during two different periods, before and after the following situations that Lebanon encountered: foreign currency shortage, commercial banks' informal capital control, and bankruptcy; and 3) assess the intention of the Lebanese to adopt Libra virtual currency. To achieve the objectives of the study, a questionnaire was distributed among bank clients in Lebanese. The results and analysis of the study have been done by comparing the means of SERVQUAL dimensions. The findings indicate that the Lebanese perspective of the banking system changed during the two different periods; however, their intention level to adopt a virtual currency is low.

BACKGROUND

The Lebanese Case

Lebanon an Arab small country located in the Middle East region with a 10,450 km² area. Lebanon borders Syria in the north and west, Palestine territories in the south and the Mediterranean Sea to the west. The total number of populations reached 6,848,925; this number includes 1.5 million Syrian refugees, 200,000 Palestinian refugees and 18,000 refugees from Iraq and other origins (Societe Generale, 2020; World Bank, 2020; UNHCR, 2020). Lebanon had had a fixed exchange rate at 1507.5 Lebanese Pound (LBP) for one United States Dollar since December 1997 (Banque Du Liban, 2020). In 2019,

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Lebanon total Gross Domestic Product (GDP) had reached \$53.367 billion with a negative real GDP annual growth at 5.637%, this percentage is expected to contract by 11% in 2020 (World Bank, 2019).

Lebanon is classified as a developing and service-oriented economy. In 2019, the services sector generated 75.9% of Lebanon's GDP (World Bank, 2020). One of the major services sectors in the country is tourism, it played a crucial role in the growth of the overall economy and contributed to 19.1% of the total GDP in 2018 (IDAL, 2019). Nonetheless, goods and raw materials import had reached \$22,387 billion while export stand at \$11,561 billion in 2019. Lebanon is considered to be a dollarized country and is highly dependent on import from abroad (World Banks, 2019 and 2020).

Lebanon has been distressed due to many difficult situations, such as the 1975-1990 civil war, internal conflicts, public figures assassination and several Israel invasions that destroyed the public services and the infrastructure in the country. From the year 1980 till 1983, infrastructure damage was estimated to be around \$1.6 billion (Nizameddin, 2006). By the end of the civil war, in 1990, Lebanon had lost its revenues, the national production was cut by half and it experienced fiscal deficit and public debt that reached 99.8% of its total GDP. Lebanon also faced outboard flight of local and foreign investments amounted to be approximately \$2.5 billion. Moreover, Lebanon encountered a loss of human capital triggered by death and migration of 500,000 skilled Lebanese. From the year 1992 till the end of the year 2000, Lebanese government expenditure reached \$5.7 billion which was directed to public infrastructure that includes telecommunication, electricity, roads, public transport, water source, airports and ports, to cover the damage of the wars (Nizameddin, 2006; Harvie and Saleh, 2008).

Throughout the years, tourism sector and remittances from diaspora communities supported stabilization of the Lebanese exchange rate for decades. Fresh inflows of euros and U.S. dollars was received in the form of bank deposits by commercial banks which kept foreign reserves high (Azhari, 2020; Rickards, 2020). In the end of 2019, the foreign currency reserve decreased to \$31.5 billion after it was around \$40 billion in 2018 and it is currently projected to decline to around \$20 billion by 2023 (IMF, 2019; Strohecker et al., 2020). Flow of remittances to Lebanon has through the 'non-resident deposits' in the Lebanese banking system reflects the trust and confidence Lebanese abroad had in this local sector. Diaspora inflows facilitated the work of the banking sector, widened the Lebanese banks' capacity to lend the government in both local and foreign currencies and helped boost the Lebanese economy (Awdeh, 2012; Jani and El Knoury, 2013).

On the other hand, the Lebanese government had lacked capital investment and job creation which strained unemployment in the labor market (Nahas, 2009). In August 2019, the Minister of Labor, Mohammad Kabara, declared that the overall unemployment rate had reached 25% and was as high as 37% among the youth (Hamadi, 2019). Up until this date, unemployment is estimated to be much higher. Furthermore, in December 2018 Lebanon was ranked as the third largest country in the world with debt-to-GDP ratio; a comparison between nation output and the overall debt it holds, with a rate of 151% (Trading Economics, 2018). Today, the public debt in Lebanon had approximately reached \$90 billion (Chaker, 2020). In August 2020, Riad Salameh, Banque Du Liban (BDL) Governor, stated that for the last 5 years the Lebanese budget was at deficit of \$25 trillion. Half of the government revenue was directed towards payment of interest, restoring foreign exchange rate and refinancing the governmental public debt (Takieddine, 2020).

The Financial System in Lebanon

The Lebanese financial system and banking sector were able to set free from the country's economic situation and political debates. The Lebanese Central Bank (BDL) was always prepared for the worst-case scenario, it followed a conservative approach and imposed strict policies and regulations to protect the system, clients' deposits and the Lebanese purchasing power. The banking sector became one of the most vibrant sectors in the country (Haslem, 2003). The Lebanese banks were known for their safety, high systemic liquidity and their overall trust and confidence within the local and regional geographic extent (Saidi, 1986; Corm, 1995). Due to that, on March 13, 1973, Beirut was chosen to be the head-quarter location of The Union of Arab Banks (Union of Arab Banks, 2020). The number of banks' branches in Lebanon reached 142 and consumer finance continued to become more popular. At the end of 2019; 2,003 ATMs were found and the total number of outstanding payment cards was three million (BLOMINVEST Bank, 2019). Additionally, Lebanese banks succeeded in spreading throughout more than 31 different countries across the five continents (Awdeh, 2012).

Afterwards, the fortunes of the finance and banking sector turned, with limited source of growth. The economy started to slowdown, the number of tourists declined, and the government was forced to rely on local borrowing and capital bond issues in foreign currency. BDL had exchanged these issued bonds with commercial banks which helped them generate capital gains. A large part of the governmental debt is held by the Lebanese commercial banks supported by high interest rate to attract new dollar deposits. This financial engineering trapped dollars in the bank systems, reduced liquidity of foreign currency cash and caused loss for the BDL (Elia, 2020). Lebanon's situation and crisis have pushed the international community to interfere. In April 2018, an international conference called CEDRE (Conférence économique pour le développement, par les réformes et avec les entreprises; Conference for Economic Development and Reform through Enterprise) was held in Paris, France. The purpose of the conference is to support reform and development in Lebanon. Participants are from forty-eight different countries. CEDRE is willing to pledge \$11 billion in loans and grants in condition of implementing reforms and fighting corruption beforehand. However, Lebanese government did not proceed with any required improvement hence, till date the program is still not launched (Govt. France, 2018; Irish and Pennetier, 2018; Ouzzani, 2019).

Afterwards, as of February 2019, Lebanese banks limited dollar withdrawals average to as low as \$200 bi-weekly to avoid a bank run (Cornish, 2020). Following that, during mid-November, the capital intelligence ratings, S&P Global Ratings and Fitch Ratings downgraded long-term foreign currency rating (FCR) of the top banks in Lebanon from 'B-' to 'C+' and short term FCR from 'B' to 'C' (Byblos Bank, 2019; Abdellatif, 2019). Depositor's withdrawal reached \$6 billion and the exchange rate was pressured upward in the black market (Knecht, 2019). In March 2020, banks halt completely any foreign currency withdrawal and international transfers (Cornish, 2020). Altogether stemmed fear and uncertainty among Lebanese bank clients and weakened the value of the Lebanese lira and customer-bank relationship.

As a summary, the country is facing a strained public finances and economic crisis characterized with corruption, debt, hard currency shortage and untethering of Lebanese lira to dollar exchange rate in the black market different from the official rate. The Lebanese pound lost more than 430% of its value against the dollar in the parallel market. Major businesses had to lay off employees, cutoff salary and some had even shut down. This initiated unemployment, poverty, widened income inequality, wiped out about half the Lebanese currency and triggered price inflation (Domat, 2020). According to the Central Administration of Statistics (2020), prices increased by 120% within one year, from August

2019 till August 2020. The situation in Lebanon remain blur with no transparency of the real monetary and financial situation, no common behavior taken among banks, consecutively wrong governmental decisions and continuous corruption. Each bank imposes different measurements and restrictions on foreign currency withdrawal and international transfers from dollar accounts that acted as an informal capital control (Cornish, 2020).

To face depositors' trust issues, banks proceeded with immediate actions such as increasing bank capitals and raising required reserve ratio from a range of 15-25 to 75%. But still the central bank and commercial banks remained the main target of protests, press, politics, economists, financial analysts and the social media. The banking and finance sector were held responsible for the imbalance the country was facing. The Lebanese believed that the bank's only mission was to finance government debt and trade deficit by attracting deposits through high interest rates. Several analysts speak of a Ponzi scheme (Frederick, 2002). Security sources stated 101 incidents (e.g. scuffles, sit-ins and violent assaults) at banks from November 1, 2019 to January 13, 2020 and correspondingly continuous late-night destruction of ATMs and bank branches (Knecht, 2019).

In the beginning of March 2020, Lebanon went bankrupt for the first time. The Prime Minister, Hassan Diab, announced that it will default to pay the country Eurobonds that are equivalent to \$1.2 billion due date on March 2020, followed by \$700 million in April and \$600 million in June 2020. The government also announced that foreign currency reserve did reach a dangerous and critical level, however, no published statistics is found to support this claim (Risk, 2019; Chaker, 2020; Khraiche, 2020).

During the same period, with the emerge of a new exchange rate of 6,200 LBP to one USD in the parallel market and a complete ban of foreign currency withdrawals from banks, BDL issued a series of circulars as an attempt to ease the situation. The first was on April 3, 2020, the Basic Circular 148 allowed deposit holders of less than \$3,000 (LBP 5 million) to exceptionally withdraw cash from their foreign currency accounts in LBP at an exchange rate of 3,000 LBP per one USD. Following that, Basic Circular 151 which permitted bank clients with more than \$3,000 to settle cash withdrawal and transaction from their foreign account at an equivalent amount in Lebanese pound at 3800- 3900 LBP for one USD (BDL, 2020).

Banking Technology in Lebanon and the Middle East

Regarding the technological aspect, similar to other Middle East countries in early-2000, Lebanon adopted communication technology rapidly to communicate with relatives and friends abroad and to read local and international news online (Howard and Hussain, 2011). Investors and companies in the region, also chose to shift their focus towards internet and online media that became a primary medium of communication and business information (Al-Hayale, 2010).

In early 2011, Middle East highlighted the visible role and effect of social media networks and information-communication technology's (ICT) on developing nations. The 'Arab Spring' or what is so called 'Facebook Revolution' was facilitated by social media networks in different Arab countries such as in Tunisia, Libya, Egypt, Yemen, Syria and most recently Lebanon. Social media served as a functional tool of communication, mobilization, coordination of protests and a tool to reach demonstrators' voices and demands at an international level. Some governments attempted to block internet access and utilization to cease demonstrations, but it only proved that this strategy does not work in today's life. The country's economy and reputation cost are much higher than the benefit of controlling demonstrations. Arab Spring became a major catalyst and it wouldn't be possible if technology, internet access, social

communication and smart phone affordability were not available by a notable number of the population (Stepanova, 2011).

From the other side, technology and structural aspects had significantly changed the business, banking and financial environment. Technology embracement has given banks an advantage in the market. Today, technology is also considered a principal determinant of the bank service quality (BSQ) evaluation and it acts as a prime advent in the field of finance. Researchers distinguish bank and technology into three different categories: telephone banking, internet banking and Automated Teller Machine (ATM) (Hasan et al., 2013; Kadir, 2011). Furthermore, the bank and finance trends have evolved from cash economy into plastic card economy, which reduce cost, provide 24 hours of banking, remove barriers and create new competitive advantage. The introduced benefits represent the origin of the ATM function. Furthermore, ATM is easy, reliable and secure to use, it allows customers to check and access their bank accounts and to transfer, deposit and withdraw cash without the need to enter the bank branch (Aslam, 2019; Hasan et al., 2013; Hsieh et al., 2012; Rao et al., 2013; Kadir, 2011).

Online banking is an easy and simple service that requires computers and smartphones, it had gained more popularity in developed countries, but it was also considered remarkable in developing countries. The ATM has become an alternative channel for the bank services, and it plays a substantial role in customer satisfaction toward the banking system. Even though traditional banking in the Middle East is still favored, banks succeeded in providing online banking, for instance, call centers and ATMs (Migdadi et al., 2017). In the Arab region the number of ATMs per 100,000 adults has increased from 19.6 in 2010 to 30.4 in 2019, compared to 40.1 ATMs per 100,000 adults in the world (World Bank, 2020). Migdadi (2011) study deduces that adopting e-banking in Jordan, a middle east country, was still limited and in a primary stage. The traditional banking system dominated the financial market and the number of financial consumers that are not willing to adopt to the usage of mobile banking services is significant (Laukkanen and Kiviniemi, 2010).

Lebanon had witnessed growth in the internet and mobile e-banking services. Furthermore, banks operating in the country and using e-banking played an important role in enhancing the quality of services, reducing cost and be a part in the banking business evolution and competition (Hammoud et al., 2018; Hilal, 2015). The existence of ATMs across the country had increased by 75% from 2009 till 2019 (BDL, 2020) and even through e-banking is employed by all the banks, its habit is still narrow to mobile and internet only. This is due to the weak infrastructure and the slow development of information technology inside the country (Hammoud et al., 2018). Also, the Koksai (2016) study confirm that bank customers in the Lebanese financial market are not extremely confident in acquiring mobile banking; however, innovation, trialability, credibility and a better understanding of the service might increase their willingness and acceptance level to embrace mobile banking services.

All of the mentioned events gained our interest to investigate if the political, economic, financial drawbacks and the loss of local and international trust in the Lebanese government, banking sector and local currency will shape Lebanese vision of the quality of service offered by the banks and their willing to shift to contain an advanced technology as an alternative to the employment of the traditional consumer finance such as the ATM?

In this context this chapter evolves as follows: Section 2 describes SERVQUAL model and Automated Teller Machine (ATM) usage evaluation. Section 3 elaborates the questionnaire items and analyzes responses of the Lebanese perspective and loyalty regarding the ATM operation and determine their position concerning other digital alternative for the banking system. Section 4 provides the conclusion and recommendations for the target issue. Finally, section 5 recommends further suggestions for future researches.

FRAME OF REFERENCE

There has been various number of studies investigating the service quality across different fields. In particular, the term ‘service’ has gained a crucial and competitive role in the banking sector and played an essential requirement to sustain previous relations and create new ones with customers. The quality of the service provided is essential for customer satisfaction and relation (Aslan et al., 2019; Hsieh et al., 2012; Naik, 2010). The quality of service can be observed from different approaches and perspectives (Tadic et al., 2018). There are two main schools that acquired the Quality of Banking Service (QBS), the Nordic School and the North American School. The Nordic school is based on Grönroos’s (1984) study, it focuses on both technical and functional qualities. On the other hand, the North American School is in reference to Parasuram et al. (1988), this school currently emphasizes on five service dimensions to evaluate the quality of the service. The dimensions are assurance, empathy, reliability, responsiveness and tangibility. (Nourallah, 2015; Karatepe et al., 2005).

At first, Parasuraman et al. (1988) studied QBS according to ten measurements: access, credibility, communication, competence, courtesy, reliability, responsiveness, security, tangibility and understanding customers. However, these areas were found to be strongly correlated, hereafter, the North American School disclosed the study of service quality into the five previously cited dimensions. Tangibility channels the service presented by the physical display, equipment and facilities of the bank. Reliability is related to the accuracy and precise performance of the service performed. Employees’ behavior, knowledge and customer service are linked to assurance. Employees willingness to help is related to responsiveness. Finally, empathy reflects the attention customer receives, and their overall apprehension of the service obtained. The North American school uses the SERVQUAL model, a universal multi-dimensional tool to capture and evaluate customer perception of the service quality. A vast number of research methodology uses the SERVQUAL instrument as an endeavor in measuring service quality, customer satisfaction, perceptions and expectations (Naik, 2010; Kraniyas and Bourlessa, 2001; Parasuraman et al., 1985).

The SERVQUAL scale consists of two main components, customer anticipation that considers what the customer expects the service to be and the second component is customer insight: customer opinion and view of the service performed (Naik, 2010). Nevertheless, customer satisfaction is a key performance indicator, it depends on buyer’s expectation of the service. If the function level matches expectation, the customer will be satisfied and the inverse is correct (Kotler and Armstrong, 2005). A positive linear correlation exists between service quality and customer satisfaction, and both are considered prime assets that impact customer relationship with the organization and the business profit (Nourallah, 2020a; Boateng, 2019; Sivesan 2012; Naik, 2010). Gitomer (1998) concludes in his study that 91% of customers will not return to the store if they had a poor service experience. Satisfied customers with the quality of service become loyal customers and are less likely to switch to another competitor and vice versa. In the financial domain, customers want to feel confident and certain that they have chosen the right financial institute for their money’s safety, storage and financial transactions. Hereafter, service quality will impact customer satisfaction, which influences customer loyalty (Aslam et al., 2019; Tadic et al., 2018).

The bank and financial market are growing to be more competitive. Service quality became vital and pleasing customers is a must. As mentioned, high service quality results in customer trustfulness and fulfilment; therefore, all sectors rely on consumer and client’s evaluation and perception of the quality of the service offered (Karatepe et al., 2005). For the banking industry to survive, it must differentiate itself from competitors and other financial alternatives through high quality service and happy customers (Elifneh et al., 2020). Several factors influence service quality, customer satisfaction, preference

and retention, such as, confidence in the gross financial sector, transparency and access to information, economic status, technology and business environment changes (Sujud and Hachem, 2019; Tadic et al., 2018). Moreover, Furrer et al., (2000) and Engel and Blackwell (1982) argue that culture dimensions and social lifestyle, impact finance adaptation and consumer's point of view of the service.

It is vital to take into consideration cultural implications while investigating the quality of the banking service. Hundreds of papers target this interrelation and focus on evaluating customers' perception of the banking quality service within the same environment and culture. For instance, reviewing service quality of banks within the same country or across different Arab nations that reflect a homogenous culture (Nourallah, 2015). Behavior and perception may vary across different periods of time and from one customer to another even if the targeted segment belongs to the same location and culture (Sangeetha and Mahalingam 2011; Bhaskaran and Sukumaran, 2007; Angur et al. 1999). Several researchers assume the SERVQUAL scale in different domain sittings; specifically, across different cultural and geographical situations (Naik, 2010). Along with distinctive culture, economic development, political ideology and technology may have an effect on customer perception of the quality of the service received from the bank branch (Schmidt, 2019; Munusamy et al., 2010).

A wide number of literature focuses on the determinant of service quality and BSQ using the SERVQUAL model to deduce the strong and significant correlation between customer perception, behavior, satisfaction and service commitment (Jamal and Anastasiadou, 2009; Lewis and Soureli, 2006; Beerli et al., 2004; Yavas et al., 2004; Gounaris et al., 2003; Caruana, 2002; Harrison-Walker, 2001; Cronin et al., 2000; Zeithaml, 1996). Furthermore, SERVQUAL is an easy model to proceed with, it allows researchers and analysts to track customer perception of the quality of the service offered and data analysis can be clearly presented and simply discussed. On the other hand, some academics focus on SERVQUAL tool limitations, and they choose to adjust the method to fit the environment of their study. Likewise, they try to design and follow a new scale of the model to drive their methodology and analysis (Nourallah, 2015). The main criticism made of the North American School and SERVQUAL is by Cronin and Taylor (1992), their critic is based on the fact that the mentioned model is not feasible to use in all service domains and sectors.

Furthermore, 'change' affects our daily life aspects and has a serious influence on the financial area and the formality of traditional methods. Globalization and environmental changes drive the development of the banking system and new financial concepts, opportunities, threats and competition. However, transformation can come in technological, economic, political, social and many other forms (Elifneh et al., 2020). Technology succeeded in facilitating several aspects in the financial sector and it has also become a main element in improving the quality of service and the financial institute share in an international level (Nourallah et al., 2019; Joseph and Stone, 2003).

A wide number of researchers investigate customer perception, satisfaction and loyalty to the banking service in reference to the client's usage of the ATM facility (Aslam et al., 2019; Kumbhar, 2011; Uppal and Chawla, 2009). Automatic Teller Machines (ATM) are one of the main Information Technology (IT) investments and e-banking mechanisms in most banks worldwide. The ATM provides various banking ability functions, which allows the study to consider the assessment of the service quality of the ATM as the general evaluation of the customer perception towards consumer finance (Hassan et al. 2013; Migdadi et al., 2017).

In addition to e-banking and the implementation of technology in the banking sector, cryptocurrency and blockchain technology have been growing geometrically and attracting investors, bankers, consumers, government and researchers' attention (Nourallah, 2020). In spite of that, the awareness and knowledge

extent in this field is still at an infant stage depending on the region and demographic factors such as age, level of education and locale. An average person is still considered unaware of the virtual currency existence (Ku-Mahamud, 2020). In June of 2019, Facebook announced that it will launch in 2020 a new global, digital currency and payment system known to as the 'Libra' virtual currency. Libra is appraised for its security, easy access, stability, cross-border payment affordability and regulatory aspects of digital currencies (Groß, 2019; Grothoff and Pentland, 2019).

The Libra Association targets developing nations and unbanked populations as a potential market. In reference to the World Bank Global Findex 2017, around 1.7 billion adults worldwide are considered to have no relation with any financial institution, more specifically they have no banking accounts. The 1.7 billion represents 31% of adults in the world. Mainly unbanked adults live in developing countries such as China, India, Pakistan and middle east countries. To have access to the Libra network the only two tools needed are mobile phones and internet availability. After all, owning smartphones has grown rapidly around the world and mobile payment has become one of the favored methods used in different areas (Farell, 2015; Hobbs, 2020). Targeting developing economy might be challenging because of the way cryptocurrency functions, and it is still widely unknown by the general public. Nonetheless, the new Facebook virtual currency supports development through reducing the transaction cost of remittance transfers and encourages foreign capital inflow (Groß, 2019; Hobbs, 2020). From a macroeconomic perspective, remittance and foreign capital inflows generate and promote growth especially in developing states along with an increase in inhabitant's consumption and investment (Resilience, 2011). According to the World Bank, 2019 inflow of remittance to the least developing countries has grown from \$6 billion in year 2000 to \$49 billion in 2018. Personal remittance is considered an important component of the nation GDP especially in developing economies. For instance, in 2018, remittances from Lebanese abroad contributed to 12.3% of its GDP (World Bank, 2018).

Farther to investigating Lebanon's evaluation of the banking service quality, the study seeks to asses Lebanese awareness and adoption level intention of the Libra currency. Libra acts as a sold store of value, saves costs in cross-border payments and minimizes exchange rate risk. The revealed advantages reflect the solutions for the challenges Lebanon is presently facing. Thus, will the Lebanese opt for moving their cash and transactions into Libra wallet as a means of payment, unit of account and store of value? Or will virtual currency and technological revolution still be a concern and a challenge for users in Lebanon and other developing nations?

To determine if Lebanese reliability and viewpoint of the banking service quality changed during the difficult encounters and to identify their intention of embracing virtual currency, a questionnaire has been distributed. The questionnaire consists of customer behavior evaluation before and after the collapse of the banking system. The start date of the Lebanese revolution, October 17 is taken as the base date, in this chapter. Results are reviewed according to consumer finance evaluation and satisfaction focusing mainly on the ATM usage during the two separate periods. To conclude a significant insight of the development and acceptance of Libra and virtual currency in the challenging economy, the distributed form elaborates respondents' commitment to the banking system, and regulates their awareness and acceptance of the Facebook digital currency.

METHOD

Issues, Controversies, Problems

Globally, several studies have investigated the relationship between the ATM service quality and customer perspective and satisfaction, but none of these studies have been conducted in Lebanon. The present chapter aims to investigate banking service quality in Lebanon and the Lebanese perspective of the financial market by using SERVQUAL model, a wide and commonly used scale for measuring and evaluating Banking Service Quality (BSQ). A summary definition of SERVQUAL five dimensions is presented in table 1.

Table 1. Summary of SERVQUAL items

Dimension	Item	Definition
Tangibility	4	The bank, equipment and facility physical appearance.
Reliability	4	The ability to perform the service accurate and dependently.
Responsiveness	4	Working staff willingness to help the customers.
Assurance	3	Employees' behavior, knowledge and ability to inspire trust.
Empathy	4	The individualized attention the customer receives.

To gather data, a structured questionnaire was distributed among the banking customer community to identify their perception of the Bank ATM amenity in Lebanon. The response of the questionnaire reached a reasonable sample size of 96 responses.

The distributed survey is divided into four parts, the first part initiates with a brief introduction of the purpose of the study and includes descriptive questions of participant's profile in terms of gender, age, education and location. In the second and third parts the five-dimensional scale of SERVQUAL model consisting of tangibility, reliability, responsiveness, empathy, and assurance was followed to measure the bank service quality and compare customers' perception of the ATM service in two different time periods, before and after a financial turnover. (Parasuraman et al., 1985). Each dimension includes 3 to 4 different questions.

The second part of the form targets Lebanese attitude of the banking service and the ATM acceptance before the financial collapse, in other words before October 17, 2019. The third part of the questionnaire includes the same questions, but it focusses on respondents' point of view after the mentioned reference date. The purpose of these two parts is to inspect if the financial situation of the country triggered respondents' perspective.

The determined date of reference, October 17, 2019 has a crucial role in Lebanon's modern history and the Lebanese approach towards the banking sector. The October Revolution highlighted the economic and financial situation of the country. The revolution has partaken a strong negative impact on the Lebanese banking segment in terms of trust, satisfaction and confidence. On October 17, the Lebanese revolution began, thousands of Lebanese flooded the streets protesting against bad governance, corruption, low standard of living, poor infrastructure, and the overall political system. From the mentioned date, the country was paralyzed, banks were forced to close for 2 consecutive weeks, such an act did

not occur since 1966. Furthermore, the bank had set an informal capital control to avoid insolvent. The country started to face shortage of foreign currency liquidity and for the first time Lebanon went bankrupt (Noueihed and Khriache, 2019; Elia, 2020).

The fourth and last part in the distributed questionnaire consists of seven items to measure customer loyalty and their ‘intention’ level to choose an alternative for the banking service. The following statements were asked to evaluate customer commitment and loyalty: “I intend to remain a user of the bank’s ATM I have chosen, I am committed to the bank ATM service, I am very likely to continue my relationship with the bank’s ATM the next months, I would encourage friends and relatives to use the bank ATM machine.” A description and explanation of Facebook virtual currency, ‘Libra’ was handed before the four last questions that tend to measure respondent’s adoption level. The items of the survey in the last three parts are presented in the Likert five-point scale format “1= strongly disagree, 2= disagree, 3= neutral, 4= agree and 5= strongly agree”.

The demographic description of the respondents is collected from the first part of the questionnaire and presented in Table 2. It shows that the majority of respondents are females (55.2%), approximately half are aged between 26 to 35 years old (49%) and most of them hold a university degree (undergraduate 47.9% and postgraduate 46.9%). It also indicates that 41.1% of respondents visits his or her bank branch when necessary only, followed by every 2 weeks (31.6%), and then 1 to 3 times per week (18.9%) and the lowest frequency is for visiting the bank once per month (8.4%).

Table 2. Demographic description of the respondents

Category		Percentage
Gender	Male	44.8%
	Female	55.2%
Age	18-25	33.4%
	26-35	49%
	36 and above	17.6%
Education	High School	5.2%
	Undergraduate	47.9%
	Postgraduate	46.9%
Frequency of Bank Visit	1-3 times a week	18.9%
	Every 2 weeks	31.6%
	Once a month	8.4%
	When necessary	41.1%

Source: Based on Questionnaire Data (2019)

To analyze the results of the second and third parts of the survey, this chapter compares the means of SERVQUAL dimensions covering all the enquired items in the distributed form. The mean scores of customer perception in terms of the five service quality dimensions is demonstrated in Table 3, it was found that in respect to the overall quality of the ATM service the scale values vary according to the two mentioned periods. For the period prior to the Lebanese revolution (before October 17, 2019) the highest dimension mean score was reliability (3.72) with an average standard deviation (AVG SD) 1.058,

followed by tangibility (Mean= 3.36; AVG SD= 1.145), empathy (Mean= 3.30; AVG SD= 1.090), assurance (Mean= 3.20; AVG SD= 1.012) and responsiveness (Mean= 3; AVG SD=1.115). The stated result indicates a general likely of the quality of service of the bank ATM in Lebanon as the mean scores of all of the five dimensions are above 3.

Conversely, in table 3, post October 17, the mean score of each service quality dimensions had declined but the order of the dimension satisfaction remains the same. Likewise, from the five studied quality dimensions, only reliability and tangibility scored slightly above 3 indicating approval of the service (Reliability: Mean= 3.14; AVG SD=1.101 and Tangibility: Mean= 3.10; AVG SD=1.130). Regarding the three other dimensions the scores were less than 3, presenting customer dissatisfaction (Empathy: Mean=2.66; AVG SD=1.285, responsiveness: Mean=2.52; AVG SD=1.186 and assurance: Mean= 2.45; AVG SD=1.168). This study may conclude that the Lebanese perspective of the banking service quality changed after the unfortunate situations the country went through. However, despite that, Lebanese still believe that bank facility, technology and their ability to perform the desired service remains adequate.

Table 3. Dimensional mean and standard deviation pre-post October 17

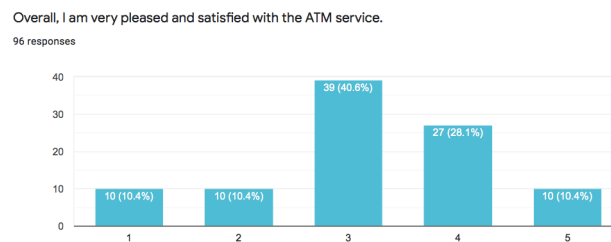
Service Quality Dimensions	Before October 17, 2019		Post October 17, 2019	
	Mean	Average Standard Deviation	Mean	Average Standard Deviation
Tangibility	3.36	1.145	3.10	1.130
Reliability	3.57	1.058	3.14	1.101
Responsiveness	3.03	1.115	2.45	1.285
Assurance	3.20	1.012	2.52	1.186
Empathy	3.30	1.090	2.66	1.168

Source: Based on Questionnaire Data (2019)

In order to determine the strength of customer satisfaction with the bank's ATM in Lebanon, the study determine the perception intensity of the respondents for the two different period with a statement "Overall, I am very pleased and satisfied with the ATM service" using the five-point scale answers. Responses before October 17, 2019 is summarized in figure 1 and post October 17, 2019 is presented in figure 2.

Figure 1. Customer satisfaction statistics pre-October 17

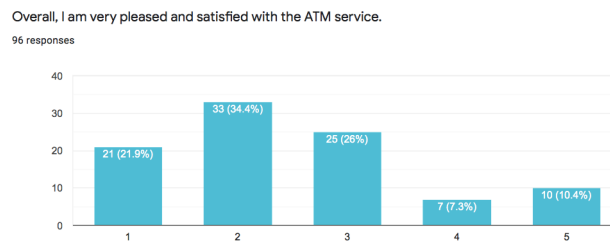
Source: Based on Questionnaire Data (2019)



From figure 1, before the economic and financial collapse out of the 96 respondents, 39 or 40.6% are indifferent, only 20.4% (10.4 + 10.4%) are not satisfied with the ATM service of the bank and 37 respondents or 38.5% (28.1 + 10.4%) of the study sample are satisfied. In figure 2, post October 17, statistics have shown an extreme change as only 26% are indifferent, not satisfied individuals increased from 20 to 54 or equivalence to 56.3% and only 17.7% of respondents remain satisfied with the ATM service.

Table 4 identifies the percentage and frequency response to customer commitment and loyalty items. It is found that all the mean scores of the mentioned items is below three which represents a dissatisfaction and disloyalty. This response can be explained in the light of the bank withdrawal limitation for both LBP and foreign currency accounts, cashless ATM, no access to USD accounts and country bankruptcy.

Figure 2. Customer satisfaction statistics post October 17
Source: Based on Questionnaire Data (2019)



To investigate and assess Lebanese awareness, acceptance and adopting intent level of Libra virtual currency as an alternative to the usage of traditional consumer finance. A description and explanation of Libra was presented beforehand, and the statements were evaluated using the five-point scale ranging from one (strongly disagree) to five (strongly agree).

1. If a social media site (Facebook) offers payment services in Lebanon, I will use them.
2. If a social media site (Facebook) offers banking services in Lebanon, I will use them instead of my current bank.
3. I think Facebook is the future of banking.

The results are summarized in table 5.

It can be concluded from the analysis that most Lebanese still prefer not to choose a new digital alternative for the banking service. The disagree and strongly disagree responses for the three enquired questions regarding 'Libra' as an alternative for the ATM and bank service ranged from 40 to 45%. Only 20 to 26% of the studied sample stated agree and strongly agree for the four enquired questions and the remaining are indifference 29 to 37%.

This result can be explained due to the challenges Lebanese are facing and the loss of trust and confidence in the banking, government and financial systems. Lebanon infrastructure is considered to be poor, which might act as a threat to the demand of virtual currency. According to the World Economic Forum Report 2017 - 2018, Lebanon is at the bottom of the world ranking for quality of electricity supply. It stands as the 134th out of 137 countries, and fixed broadband internet speed download is only 17.71Mbps in contrast to the global average that stands at 78.26 Mbps (Speedtest Global Index, 2020).

Furthermore, the electronic banking was late to emerge in the Lebanese market (Executive Staff, 2013) and the Lebanese knowledge of Cryptocurrency and Libra Association is still low.

CONCLUSION AND RECOMMENDATIONS

The main purpose of this study is to assess customers' perception and satisfaction of the ATM service in Lebanon according to SERVQUAL model five dimensions. The study followed the quantitative approach using a survey that was distributed among bank clients in Lebanon. It also addresses the objectives to determine correspondence between the change of customer attitude of the ATM and the banking service quality in two different periods. Additionally, the chapter targets the intensity of customer relationship with the bank and their intention in shifting toward a new digital and virtual alternative.

Table 4. ATM service commitment and loyalty

Customer Commitment and Loyalty Items	Mean	Std. Deviation	Percentage and Frequency				
			Strongly Disagree	Disagree	Indifference	Agree	Strongly Agree
I intend to remain a user of the bank's ATM I have chosen	2.875	1.126	10	26	37	12	11
			10.4%	27.1%	38.5%	12.5%	11.5%
I am committed to the bank ATM service	2.802	1.043	9	29	37	14	7
			9.4%	30.2%	38.5%	14.6%	7.35
I am very likely to continue my relationship with this bank's ATM the next months	2.813	1.190	14	27	27	19	9
			14.6%	28.1%	28.1%	19.8%	9.4%
I would encourage friends and relatives to use the bank ATM machine	2.542	1.213	20	33	23	11	9
			20.8%	34.4%	24%	11.5%	9.4%

Source: Based on Questionnaire Data (2019)

Table 5. Customer commitment statistics summary

Items	Strongly Disagree	Disagree	Indifference	Agree	Strongly Agree
If social media site (Facebook) offer payment services in Lebanon, I will use it.	21	18	33	18	6
	21.9%	18.8%	34.4%	18.8%	6.3%
If social media site (Facebook) offers banking services in Lebanon, I will use it instead of my current bank.	21	19	35	17	4
	21.9%	19.8%	36.5%	17.7%	4.2%
I think Facebook is the future of banking.	19	24	28	15	10
	19.8%	25%	29.2%	15.6%	10.4%

Source Based on Questionnaire Data (2019)

The presented study assesses a positive relation between the financial and economic change occurring in Lebanon- especially in terms of bank, dollar shortage- and customer's loyalty and perception of the financial sector. Customer satisfaction of the bank service quality evaluation changed in terms of empathy, responsiveness and assurance in reference to the change in the environment and financial situations (before and after October 17, 2019). Based on the findings and analysis, it can be concluded that the level of commitment to the ATM usage is low. However, Lebanese still find it difficult to acquire Libra, the new digital currency as an alternative to the bank facilities practice.

This is considered to be an important step in determining measures to be taken by the Facebook and Libra Association before the introduction of 'Libra' virtual currency in developing countries. Cryptocurrency and e-banking services are still considered new in Lebanon and other developing economies and below full integration and development. In addition to that, similar to other developing nations, Lebanon has a poor infrastructure in terms of electricity, telecommunication and internet connection.

Regarding banks in Lebanon, it is suggested that commercial banks regain attention to high level of customer satisfaction and commitment. Based on the study, Lebanese still believe that banks are able to perform the required service and their equipment and facilities are adequate. However, the financial institutions should update their staff of the bank current status, provide staff training to improve their performance and take necessary initiatives to assure clients they understand their concerns.

FUTURE RESEARCH DIRECTIONS

These results can hardly be considered conclusive. Certainly, more studies are needed to further validate the five-factor service quality dimensions derived in this study and the Lebanese customer satisfaction, loyalty and approval to virtual currencies. Having in mind that the main constraint of the study is the small number of sample. Furthermore, in this chapter there is no examination of the demographic impact of the responses on the dimensional factor, trustworthiness and desire in adopting level of Libra. It is recommended to conduct further future researches in the mentioned areas.

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REFERENCES

- Abdellatif, R. (2019). Lebanon's Banking Association Sets \$1,000 Weekly Withdrawal Limit. *Alarabiya*. <https://english.alarabiya.net/en/business/economy/2019/11/18/Lebanon-s-banking-association-sets-1-000-weekly-withdrawal-limit>
- Al-Hayale, T. (2010). Financial reporting on the internet in the Middle East: The case of Jordanian industrial companies. *International Journal of Accounting and Finance*, 2(2), 171–191. doi:10.1504/IJAF.2010.032087
- Angur, Natarajan, & Jahera. (1999). Service Quality in The Banking Industry: An Assessment in A Developing Economy. *International Journal of Bank Marketing*, 17(3), 116–25.
- Aslam, W., Tariq, A., & Arif, I. (2019). The Effect of ATM Service Quality on Customer Satisfaction and Customer Loyalty: An Empirical Analysis. *Global Business Review*, 20(5), 1155–1178. doi:10.1177/0972150919846965
- Awdeh, A. (2012). *Remittances to Lebanon: Economic Impact and the Role of the Banks*. United Nations Social and Economic Commission for Western Asia.
- Azhari, T. (2020). 'Not Legal' but Necessary. Lebanon's Banks Tighten Restrictions. *Aljazeera*. <https://www.aljazeera.com/ajimpact/legal-lebanon-banks-tighten-restrictions-200203163004785.html>
- Banque Du Liban. (2019). *Geographical Distribution of ATMs*. <https://www.bdl.gov.lb/statistics/search.php>
- Banque Du Liban. (n.d.). *Quick Numbers*. <https://www.bdl.gov.lb>
- Beerli, A., Martín, J., & Quintana, A. (2004). A Model of Customer Loyalty in The Retail Banking Market. *European Journal of Marketing*, 38(1/2), 253–275. doi:10.1108/03090560410511221
- Bhaskaran, S., & And, N. (2007). National Culture, Business Culture and Management Practices: Consequential Relationships? *Cross Cultural Management*, 14(1), 54–67. doi:10.1108/13527600710718831
- BLOMINVEST Bank. (2019a). *Brite indicators and trends. Outstanding Payment Cards*. Author.
- BLOMINVEST Bank. (2019b). *Brite indicators and trends. Number of ATMs*. Author.
- Boateng, S. L. (2019). Online Relationship Marketing and Customer Loyalty: A Signaling Theory Perspective. *International Journal of Bank Marketing*, 37(1), 226–240. doi:10.1108/IJBM-01-2018-0009
- Byblos Banks Economic Research & Analysis Department. (2019). Lebanon. *ThisWeek (Lagos, Nigeria)*, (599), 9–14.
- Caruana, A. (2002). Service Loyalty: The Effects of Service Quality and The Mediating Role of Customer Satisfaction. *European Journal of Marketing*, 36(7/8), 811–828. doi:10.1108/03090560210430818
- Central Administration of Statistics. (2019-2020). *Consumer Price Index*. CPI 2007-2020.
- Chaker, J. (2008). The Lebanese Economic Crisis 101 (Part 1). *Jadaliyya*. <https://www.jadaliyya.com/Details/40855>

- Corm, G. (1995). Reconstruction and Development Issues in Lebanon. In Economic Research Forum and World Bank workshop on strategic visions for the Middle East and North Africa, Tunis, Tunisia.
- Cronin, J. Jr, Brady, M., & Hult, T. (2000). Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments. *Journal of Retailing*, 76(2), 193–218. doi:10.1016/S0022-4359(00)00028-2
- Cronin, J. J. Jr, & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56(3), 55–68. doi:10.1177/002224299205600304
- Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. The World Bank.
- Domat, C. (2020). Lebanon's New Deal. *Global Finance Magazine*. <https://www.gfmag.com/magazine/april-2020/lebanons-new-deal?fbclid=IwAR1gnR3CS977v8-EexVtclzZKl4uKPTOU62Xw470L-6cjbyMKVNGXIFcY-4Q>
- Elia, J. Y. (2020). *Lebanese banks: a factor of the current Lebanese financial crisis (2019–2020)*. Academic Press.
- Elifneh, Y. W., Brahma, D., Jagadish, G., & Girma, Y. (2020). Customers' Satisfaction in ATM Service-Empirical Evidence from The Leading Bank in Ethiopia. *International Journal of Engineering and Management Research*, 10.
- Engel & Blackwell. (1982). *Consumer Behavior* (4th ed.). Chicago: Dryden.
- Fakhoury, R., & Aubert, B. (2015). Citizenship, Trust, and Behavioral Intentions to Use Public E-Services: The Case of Lebanon. *International Journal of Information Management*, 35(3), 346–351. doi:10.1016/j.ijinfomgt.2015.02.002
- Farell, R. (2015). *An analysis of the cryptocurrency industry*. Academic Press.
- Frederick, A. (2002). *The Lebanese Banking System*. New York Press House.
- Furrer, O., Liu, B. S. C., & Sudharshan, D. (2000). The Relationships Between Culture and Service Quality Perceptions: Basis for Cross-Cultural Market Segmentation and Resource Allocation. *Journal of Service Research*, 2(4), 355–371. doi:10.1177/109467050024004
- Generale, S. (2020). Lebanon: Presentation. *Societe Generale*. <https://import-export.societegenerale.fr/en/country/lebanon/presentation-trade>
- Gitomer, J. (1998). *Customer Satisfaction Is Worthless, Customer Loyalty Is Priceless: How to Make Customers Love You, Keep Them Coming Back, And Tell Everyone They Know*. Bard Press.
- Gounaris, S., Stathakopoulos, V., & Athanassopoulos, A. (2003). Antecedents to Perceived Service Quality: An Exploratory Study in The Banking Industry. *International Journal of Bank Marketing*, 21(4), 168–190. doi:10.1108/02652320310479178
- Govt. France. (2018). CEDRE (Conférence économique pour le développement, par les réformes et avec les entreprises) Joint Statement. *Relief Web*. <https://reliefweb.int/report/lebanon/cedre-conf-rence-economique-pour-le-d-veloppement-par-les-r-formes-et-avec-les>

- Groß, J., Herz, B., & Schiller, J. (2019). *Libra-Concept and Policy Implications* (No. 02-19). Wirtschaftswissenschaftliche Diskussionspapiere.
- Grothoff, C., & Pentland, A. (2019). *Digital cash and privacy: What are the alternatives to Libra?* Academic Press.
- Hamadi, G. (2019). Unemployment: The paralysis of Lebanese Youth. *Annahar*. <https://en.annahar.com/article/1004952-unemployment-the-paralysis-of-lebanese-youth>
- Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The Impact Of E-Banking Service Quality on Customer Satisfaction: Evidence from The Lebanese Banking Sector. *SAGE Open*, 8(3), 2158244018790633. doi:10.1177/2158244018790633
- Harrison-Walker, J. (2001). The Measurement of Word-Of-Mouth Communication and An Investigation of Service Quality and Customer Commitment as Potential Antecedents. *Journal of Service Research*, 4(1), 60–75. doi:10.1177/109467050141006
- Harvie, C., & Saleh, A. S. (2008). Lebanon's economic reconstruction after the war: A bridge too far? *Journal of Policy Modeling*, 30(5), 857–872. doi:10.1016/j.jpolmod.2007.04.004
- Hasan, A., Arif, M. I., & Khan, N. (2013). ATM Service Quality and Its Effect on Customer Retention: A Case from Pakistani Banks. *Information Management and Business Review*, 5(6), 300–305. doi:10.22610/imbr.v5i6.1055
- Haslem, A. J. (2003). A Statistical Analysis of Member Bank Profitability Differences. *Banking Journal*.
- Hilal, M. (2015). Technological transition of banks for development: New information and communication technology and its impact on the banking sector in Lebanon. *International Journal of Economics and Finance*, 7(5), 186–200. doi:10.5539/ijef.v7n5p186
- Hobbs, L. R. (2020). Facebook's Libra: The Social Media Giant's Pursuit of Global Financial Inclusion. *North Carolina Banking Institute*, 24(1), 331.
- Howard, P. N., & Hussain, M. M. (2011). The upheavals in Egypt and Tunisia: The role of digital media. *Journal of Democracy*, 22(3), 35–48. doi:10.1353/jod.2011.0041
- Hsieh, Y. C., Roan, J., Pant, A., Hsieh, J. K., Chen, W. Y., Lee, M., & Chiu, H. C. (2012). All for one but does one strategy work for all? Building consumer loyalty in multi-channel distribution. *Managing Service Quality*, 22(3), 310–335. doi:10.1108/09604521211231003
- İncekara, A., & Eğri, C. Ö. (2018). Lebanon. In *Handbook of Research on Sociopolitical Factors Impacting Economic Growth in Islamic Nations* (pp. 161–181). IGI Global.
- International Monetary Fund (IMF). (2019). *Lebanon. 2019 Article Iv Consultation—Press Release; Staff Report; Informational Annex; And Statement by The Executive Director For Lebanon*. IMF.
- Investment Development Authority of Lebanon (IDAL). (2019). *Tourism Sector in Lebanon 2019 Factbook*. IDAL.

- Irish, J., & Pennetier, M. (2018). Lebanon Wins Pledges Exceeding \$11 Billion in Paris. *Reuters*. <https://www.reuters.com/article/us-lebanon-economy-france/lebanon-wins-pledges-exceeding-11-billion-in-paris-idUSKCN1HD0UU>
- Jamal, A., & Anastasiadou, K. (2009). Investigating the Effects of Service Quality Dimensions and Expertise on Loyalty. *European Journal of Marketing*, 43(3/4), 398–420. doi:10.1108/03090560910935497
- Joseph, M., & Stone, G. (2003). An Empirical Evaluation of US Bank Customer Perceptions of The Impact of Technology on Service Delivery in The Banking Sector. *International Journal of Retail & Distribution Management*, 31(4), 190–202. doi:10.1108/09590550310469185
- Kadir, H. A., Rahmani, N., & Masinaei, R. (2011). Impacts of Service Quality on Customer Satisfaction: Study of Online Banking and ATM Services in Malaysia. *International Journal of Trade, Economics and Finance*, 2(1), 1.
- Kanj, O., & El Khoury, R. (2013). Determinants of non-resident deposits in commercial banks: Empirical evidence from Lebanon. *International Journal of Economics and Finance*, 5(12), 135–150. doi:10.5539/ijef.v5n12p135
- Karatepe, O. M., Yavas, U., & Babakus, E. (2005). Measuring Service Quality of Banks: Scale Development and Validation. *Journal of Retailing and Consumer Services*, 12(5), 373–383. doi:10.1016/j.jretconser.2005.01.001
- Khraiche, D. (2020). Lebanon to Default on \$1.2 Billion Payment, Seek Restructuring. *Bloomberg*. <https://www.bloomberg.com/news/articles/2020-03-07/lebanon-won-t-repay-maturing-eurobonds-with-economy-in-turmoil>
- Knecht, E. (2019). As Lebanese Banks Tighten Control, Depositor Concern Grows. *Reuters*. <https://www.reuters.com/article/us-lebanon-protests-banks/as-lebanese-banks-tighten-controls-depositor-concern-grows-idUSKBN1Y027S>
- Koksal, M. H. (2016). The Intentions of Lebanese Consumers to Adopt Mobile Banking. *International Journal of Bank Marketing*, 34(3), 327–346. doi:10.1108/IJBM-03-2015-0025
- Kotler, P., & Armstrong, G. (2005). *Principles of Marketing* (11th ed.). Prentice Hall.
- Kranias, A., & Bourlessa, M. (2013). Investigating the Relationship Between Service Quality and Loyalty in Greek Banking Sector. *Procedia Economics and Finance*, 5, 453–458. doi:10.1016/S2212-5671(13)00053-1
- Ku-Mahamud, K. R., Omar, M., Bakar, N. A. A., & Muraina, I. D. (n.d.). *Awareness, Trust, and Adoption of Blockchain Technology and Cryptocurrency among Blockchain Communities in Malaysia*. Academic Press.
- Kumbhar Vijay, M. (2011). Customer Satisfaction in ATM Service: An Empirical Evidences from Public and Private Sector Banks in India. *Management Research Practice*, 3(2), 24-35.
- Laukkanen, T., & And Kiviniemi, V. (2010). The Role of Information in Mobile Banking Resistance. *International Journal of Bank Marketing*, 28(5), 372–388. doi:10.1108/02652321011064890

- Lewis, B., & Soureli, M. (2006). The Antecedents of Consumer Loyalty in Retail Banking. *Journal of Consumer Behaviour*, 5(1), 15–31. doi:10.1002/cb.46
- Migdadi, Y. K. A. A. (2011). The Impact of Adopting E-Banking on Branches Operations Strategy in Developing Economies: The Case of Jordan. *Information & Communication Systems*, 208.
- Migdadi, Y. K. A. A., & Omary, O. M. A. (2017). The Impact of Banks Adoption of Multi-Channels Mix on The Internet Banking Service Encounter Quality: The Case of Arab Middle East Region. *International Journal of Services and Standards*, 12(1), 47–63. doi:10.1504/IJSS.2017.088187
- Munusamy, & Chelliah, & Mun. (2010). Service Quality Delivery and Its Impact on Customer Satisfaction in The Banking Sector in Malaysia. *International Journal of Innovation, Management and Technology*, 1(4), 398–404.
- Nahas, C. (2009, April). Financing and political economy of higher education in Lebanon. *In Economic Research Forum*, 41(1), 69–95.
- Naik, C. K., Gantasala, S. B., & Prabhakar, G. V. (2010). Service Quality (SERVQUAL) And Its Effect on Customer Satisfaction in Retailing. *European Journal of Soil Science*, 16(2), 231–243.
- Nizameddin, T. (2006). The political economy of Lebanon under Rafiq Hariri: An interpretation. *The Middle East Journal*, 60(1), 95–114. doi:10.3751/60.1.15
- Noueihed, L., & Khriache, D. (2019). Lebanon Leader Threatens to Abandon Ship During Largest Protests in Years. *Bloomberg*. <https://www.bloomberg.com/news/articles/2019-10-18/lebanon-s-hariri-gives-his-government-three-day-reform-ultimatum>
- Nourallah, M. (2020a). *A Mobile Bank Application Loyalty Model: The Young Bank Customer Perspective* [Unpublished licentiate thesis]. Mid Sweden University.
- Nourallah, M., Strandberg, C., & Öhman, P. (2019, June). Understanding the Relationship between Trust and Satisfaction on Mobile Bank Application. In *Proceedings of the 2019 3rd International Conference on E-commerce, E-Business and E-Government* (pp. 58-61). 10.1145/3340017.3340033
- Nourallah, M. W. (2015). Do the Arabian Customers Who Belong to Similar Markets Differ in The Evaluation of Banking Service Quality? *International Journal of Euro-Mediterranean Studies*, 8(1), 25–41.
- Nourallah, (2020b). *Understanding Young Individuals' Initial Trust in Non-Sovereign Digital Currency*. The 2th Arab Graduate Student Conference 9-20 August (online), (Doha institute for graduate studies-Arab center for research & policy studies), Doha, Qatar.
- Ouazzani, K. (2019). CEDRE: One Year Later, where are We? *L'orient Le Jour*. <https://www.lorientle-jour.com/article/1165541/cedre-one-year-later-where-are-we-.html>
- Parasuraman, Zeithaml, & Berry. (1988). SERVQUAL: A Multiple Item Scale for Measuring Customer Perceptions of Service Quality. *Journal of Retailing*, 64, 12-40.
- Parasuraman, A., Zeithaml, V. A., & Leonard, L. B. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(Fall), 41–50. doi:10.1177/002224298504900403

- Rao, P. S., Rajasekhar, D., & Ratnam, N. V. (2013). An Empirical Study of Customers' Satisfaction in ATM Services. *International Journal of Management Research and Business Strategy*, 2(4), 135–142.
- Resilience, T. H. (2011). *Sustaining MDG Progress in an Age of Economic Uncertainty*. United Nations Development Programme.
- Risk, M. S. (2019). Government of Lebanon. *GEN*, 35, 40.
- Saidi, N. H. (1986). *Economic Consequences of the War in Lebanon*. Centre for Lebanese Studies.
- Sangeetha, J., & Mahalingam, S. (2011). Service Quality Models in Banking: A Review. *International Journal of Islamic and Middle Eastern Finance and Management*, 4(1), 83–103. doi:10.1108/17538391111122221
- Schmidt, A. P. (2019). The Impact of Cognitive Style, Consumer Demographics and Cultural Values on the Acceptance of Islamic Insurance Products Among American Consumers. *International Journal of Bank Marketing*.
- Sivesan, S. (2012). Service Quality and Customer Satisfaction: A Case Study – Banking Sectors in Jaffna District, Sri Lank. *International Journal of Marketing. Financial Services and Management Research*, 1(10), 1–9.
- Speed Test Global Index. (n.d.). Global Speeds June 2020. *Speed Test*. <https://www.speedtest.net/global-index>
- Staff, E. (2013). Bank of the Future. *Executive Magazine*. <https://www.executive-magazine.com/business-finance/finance/ebanking-lebanon>
- Stepanova, E. (2011). The role of information communication technologies in the “Arab Spring”. *Ponars Eurasia*, 15(1), 1–6.
- Strokechet, K., Arnold, T., & Perry, T. (2020). Lebanon's new government may have little reserves left to stabilize economy. *Reuters*. <https://uk.reuters.com/article/us-lebanon-crisis-reserves-analysis/lebanons-new-government-may-have-little-reserves-left-to-stabilize-economy-idUKKBN1ZL2Q4>
- Sujud, H., & Hachem, B. (2019). Effect of The Quality of The Accounting Information System Outputs on Customer Satisfaction in Lebanese Commercial Banks. *International Research Journal of Finance and Economics*, 176.
- Tadic, D., Aleksic, A., Mimovic, P., Puskaric, H., & Misita, M. (2018). A Model for Evaluation of Customer Satisfaction with Banking Service Quality in An Uncertain Environment. *Total Quality Management & Business Excellence*, 29(11-12), 1342–1361. doi:10.1080/14783363.2016.1257905
- Takieddine, R. (2020). Riad Salameh: In Lebanon, depositors' money is still available. *Arab News*. <https://www.arabnews.com/node/1724476/business-economy>
- Trading Economics. Lebanon Government Debt to GDP. (2000-2018). *Union of Arab Banks. About*. <https://uabonline.org>
- Uppal & Chawlai. (2009). E-Delivery Channels. *The ICFAI Journal of Management Research*, 8(7), 8-9.

World Bank Lebanon's Economic Update. (2020). *World Bank Group*. <https://www.worldbank.org/en/country/lebanon/publication/economic-update-april-2020>

World Economic Forum Report. (2017-2018). Quality of Electricity Supply. *We Forum*. [http://reports.weforum.org/pdf/gci-2017-2018 scorecard/WEF_GCI_2017_2018_Scorecard_EOSQ064.pdf](http://reports.weforum.org/pdf/gci-2017-2018%20scorecard/WEF_GCI_2017_2018_Scorecard_EOSQ064.pdf)

Yavas, U., Benkenstein, M., & Stuhldreier, U. (2004). Relationships Between Service Quality and Behavioral Outcomes: A Study of Private Bank Customers in Germany. *International Journal of Bank Marketing*, 22, 144–157.

Zeithaml, V., Berry, L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing*, 60, 31–46.

ADDITIONAL READING

Al Shehhi, A., Oudah, M., & Aung, Z. (2014, December). Investigating Factors Behind Choosing A Cryptocurrency. In 2014 *IEEE International Conference on Industrial Engineering and Engineering Management* (Pp. 1443-1447). IEEE

Ali, S., Wang, G., White, B., & Fatima, K. (2019, November). Libra Critique Towards Global Decentralized Financial System. In *International Conference on Smart City and Informatization* (Pp. 661-672). Springer, Singapore.

Azar, S. A., Bolbol, A., & Mouradian, A. (2016). Profitability of Banks in Lebanon: Some Theoretical and Empirical Results. *International Journal of Economics and Finance*, 8(7), 233–243.

Brühl, V. (2020). Libra—A Differentiated View on Facebook's Virtual Currency Project. *Inter Economics*, 55(1), 54–61.

Button, S. (2018). Cryptocurrency and Blockchains In Emerging Economies. *Software Quality Professional*, 20(3).

Djoundourian, S., & Raad, E. A. (2008). Efficiency of Commercial Banks in Lebanon. *International Journal of Financial Services Management*, 3(2), 105–123.

Gaspard, T. (2003). *A Political Economy of Lebanon, 1948-2002: The Limits of Laissez-Faire*. Brill.

Hashem, B., & Sujud, H. (2019). Financial Performance of Banks in Lebanon: Conventional Vs Islamic. *International Business Research*, 12(2), 40–51.

Iwashita, N. (2020). Facebook's Libra Is Far from Broad Acceptance as A World Currency. *Evolutionary and Institutional Economics Review*, 1-5.

Kshetri, N., & Voas, J. (2018). Blockchain In Developing Countries. *IT Professional*, 20(2), 11–14.

Neitz, M. B. (2019). The Influencers: Facebook's Libra, Public Blockchains, And the Ethical Considerations of Centralization. *Ncjl & Tech*, 21, 41.

- Pandya, S., Mittapalli, M., Gulla, S. V. T., & Landau, O. (2019). Cryptocurrency: Adoption Efforts and Security Challenges in Different Countries. *Holistica—Journal of Business and Public Administration*, 10(2), 167–186.
- Peters, D. W., Raad, E., & Sinkey, J. F. (2004). The Performance of Banks in Post-War Lebanon. *International Journal of Business*, 9(3).
- Rickards, J. (2020). Crisis in Lebanon. *Foundation for Defense of Democracies (FDD)*. <https://www.fdd.org/analysis/2020/08/04/crisis-in-lebanon/>
- Scott, B. (2016). How Can Cryptocurrency and Blockchain Technology Play A Role in Building Social and Solidarity Finance? (No. 2016-1). *UNRISD Working Paper*.
- Shour, M. (2020). Media Uses During Lebanon's October 17 Revolution. *An-Nahar*. <https://En.Annahar.Com/Article/1135706-Media-Uses-During-Lebanons-October-17-Revolution>
- Sujud, H., & Hashem, B. (2017). Effect of Bank Innovations on Profitability and Return on Assets (ROA) Of Commercial Banks in Lebanon. *International Journal of Economics and Finance*, 9(4), 35–50.
- Sullivan, H. (2019). The Making of Lebanon's October Revolution. *The New Yorker*. <https://www.newyorker.com/news/dispatch/the-making-of-lebanons-october-revolution>
- Taskinsoy, J. (2019). Facebook's Project Libra: Will Libra Sputter Out or Spur Central Banks to Introduce Their Own Unique Cryptocurrency Projects? Available at SSRN 3423453.
- Zreika, M., & Elkanj, N. (2011). Banking Efficiency in Lebanon: An Empirical Investigation. *Journal of Social Sciences*, 7(2), 199–208.

KEY TERMS AND DEFINITIONS

Blockchain: A digital system to maintain a permanent record of information and transactions data. It is unfeasible to hack or edit. From its origin, block is an individual record and chain is the link of these blocks together.

Capital Control: Measurement to limit an economy financial inflow and outflow of foreign capital. Central bank and government can authorize capital control.

Cryptocurrency: A digital (or virtual) and electronic based medium of exchange used to generate financial transaction, operating independently from the central bank.

Currency Peg: A policy authorized by the government or the central bank. It stabilizes the local currency at a specific exchange rate usually against the U.S. dollar. Central bank must maintain lots of dollars to protect the fixed exchange rate.

Eurobond: An international debt instrument issued outside the home country and valued and repayable in the currency of the issued market. The main purpose of Eurobond is to push capital up.

Financial Engineering: Is the application of mathematics, economics, and computer science techniques to solve financial hitches and it is used to drive new financial innovation.

Foreign Currency Rating (FCR): Refers to the willingness and ability of an institute to meet its financial obligations denominated in foreign currency. FCR takes into account the country economic and financial risk.

Public Debt: (Referred to as government debt as well) how much a government borrowed to meet its budget deficit. Public debt can be elevated both internally and externally.

Chapter 4

Digital University–SME Interaction for Business Development

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ABSTRACT

This chapter describes and discusses the role of e-learning for small and medium-sized firms' (SME) business development and does so specifically in university-SME interaction related to sparsely populated regions. It is based on the idea that e-learning may provide a valuable means for developing knowledge creation and expansion beyond its educational connotation. A university-SME interaction focusing on business development of firms in remote geographical areas provides ideas on the benefits of e-learning not only for the interaction to be realized, but for the creation of flexibility, interactivity, and the bringing down of guards among the participants. The chapter contributes to previous research through tying together ideas on e-learning, university-SME interaction and business development, and by extending the e-learning concept. Practically, the case study may function as the inspiration for further initiatives.

INTRODUCTION

A business model describes the business logic of a firm by reflecting on how it creates, delivers and captures value. A clear and competitive business model is thus the foundation for firm management and performance, specifying knowledge about customer needs and wishes, as well as how value can be proposed, delivered and captured. Developing a business model, however, is not a “once and for all” affair. No business model would last forever. Firms are under constant pressure to develop their business models in order to stay ahead - or at least keep abreast of - present and potential competition on the market (Saebi, Lien, & Foss, 2016). This implies that firms need to broaden or deepen their area of

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expertise, or at least keep their knowledge and skills up to date, to be able to make necessary improvements to processes, products and services (Day, 1994; Gould, 2009). In other words, firms have to keep business model building blocks like competencies and value propositions updated and competitive. A business model can be regarded as innovated when a single or several of its building blocks have been substantially changed (Amit & Zott, 2012; Koen, Bertels, & Elsum, 2011), and technological innovation is known as a key driver for business model innovation (Baden-Fuller & Haefliger, 2013).

Small and medium-sized firms (SMEs) require business models and business model innovations that meet their specific challenges of scale and resource limitations, the “liability of smallness”, but research has mainly focused on large enterprises (Amit & Zott, 2012; Bruderl & Schussler, 1990; Müller, Buliga, & Voigt, 2018). The business model innovation practices of SMEs thereby remain much of a black box (Foss & Saebi, 2016). As SMEs are critical to the economy of most nations (OECD, 2017), we need to learn more about, and find ways for, how SMEs can achieve technological innovation and work with subsequent business model innovation. With “SMEs for life” often being followers rather than developers, and SMEs increasingly needing external support due to the increasing complexity of new technologies (Bougrain & Haudeville, 2002), the often-needed support for them to innovate is usually provided in various forms by public business support agencies. Yet, such development support may not be effective in working with the SMEs on a one-to-one basis, and SME owners and management often feel that they have limited time to engage with issues other than operational tasks. Inspired by how a number of SMEs joined forces and worked with a university using e-learning to expand their abilities for technological and business model innovation, this chapter looks closer into how e-learning can be used for SMEs’ technological and business model innovation.

As part of online learning, e-learning refers to educational efforts for knowledge development using digital media as a pedagogical tool (Chang, 2016). E-learning initially focused on management, leadership, customer service, quality management, communication and human resource skills (Skillsoft, 2001 in Derouin et al., 2005). Nevertheless, it can be used for many different purposes and, not the least, facilitate lifelong learning. The case study presented in this chapter illustrates how a number of manufacturing SMEs from various lines of business, distributed over a seemingly vast Swedish region, found a way to cooperate that included joint e-learning arranged by a university, and which allowed the SMEs to develop skills related to structured, strategic and proactive R&D processes. This chapter specifically focuses on how the cooperation between a university and SMEs may adopt e-learning for business model processes. The purpose of the chapter is to describe and discuss the role of e-learning for SME business development. For the SME definition, we apply the limit of the European Union, that is, less than 250 employees. There is a tendency to treat SMEs as a group, as if they were all alike (Huggins et al., 2012). The here reported study, however, focuses on the lower half of this continuum, that is, firms with less than 125 employees.

The chapter ties together different areas of research through its focus: e-learning, business development, and SME-university cooperation. Particularly, it contributes to previous research by discussing e-learning related to business development and specifically in cooperation efforts. Most e-learning literature is focused on educational tasks on academic and executive levels. Recent developments in society, including the pandemic crisis of 2020, has, however, put communication tools for meetings and education to the front even further, while social media has drawn a trend of socializing and market communication over the internet (Correa, Hinsley, & De Zúñiga, 2010; Kaplan & Haenlein, 2010). The broader scope of digitalization has created new opportunities for new business models (Belk, 2014), and online communities and crowds have helped in the creation of innovations (Ebner, Leimeister, &

Krcmar, 2009), including the open-source software development as a pioneer in the area (Dahlander & Magnusson, 2005; Rosenfall, 2012). But while the focus is extensive on digitalization on the one hand for educational purposes and on the other for innovation creation, the combination of the two is rarely explored: how e-learning can be used to change the innovation processes of firms. For SMEs, e-learning with universities may prove to be of high practical adaptability, not the least based on the limited resources individual SMEs would have for R&D projects and since it allows their reach for fundamental R&D process thinking. The described ways to change this state of affairs are worth further attention among SMEs and universities, but also in the broader community, including policy-makers and funding providers.

After this introduction, the idea of e-learning for business development is further elaborated. This is then given a theoretical contextualized framing by introducing the specific circumstance under which the e-learning takes place: in the cooperation between a university and a number of SMEs with the purpose to develop the SMEs' businesses and innovate their business models. Thereafter, the methods for data collection and analysis for this particular chapter are described. This is followed by the presentation of the data. The chapter ends with a concluding discussion and some ideas for further research.

E-LEARNING FOR BUSINESS DEVELOPMENT

E-learning as the use of digital media as a pedagogical tool (Chang, 2016) targets how the teaching is conducted in a virtual classroom and over the internet, for instance. As such, it is thereby part of distance learning, meaning that students and teachers do not meet face to face in a classroom (Moore, Dickson-Deane, & Galyen, 2011). Research on e-learning (and online learning) focuses extensively on its success factors and – from the students' side – the likelihood to continue adopting e-learning (Lee, 2010; Roca, Chiu, & Martinez, 2006). The focus on the school as the context is prominent.

Sun, Tsai, Finger, Chen and Yeh (2008) summarize the critical factors for e-learning as digital anxiety, instructor attitude, flexibility, course quality, perceived usefulness and easiness to use and diversity in assessments (see also Selim, 2007). Technology acceptance among students suggests being a central factor not only for their initial use but also for their likelihood to continue to adapt to the online teaching (Lee, 2010; Park, 2009; Roca et al., 2006). Other factors include resistance to change, lack of time, or criticism towards the content of the e-learning initiative (Klemp & Nilssen, 2017). Restauri et al. (2001), focusing more on the resources for e-learning, point at the need for sufficient infrastructure and computer skills, cost efficiency and time effectiveness and flexibility. These characteristics imply a less stressful learning environment as the participants can choose their own convenient time for taking part, their own preferred tempo and a location that suits them.

The literature on e-learning (and online learning), and while often focusing on various subjects being taught, generally implies a quite traditional teacher-student interaction built on the task division of teaching and learning, respectively. More recent literature, and not the least publications related to the Corona pandemic, points at the need for variations in teaching, two-way communications and the flipped classroom model of teaching and learning (e.g., Short & Graham, 2020). The opportunity to interact with teachers and fellow students provided in special sessions is put forth as crucial for the students' learning engagement (Cabrera et al., 2002) also helping shy or less verbally articulate individuals to take part (Clark, 2003). The two-way communication, importantly entailing teachers and students to see each other's faces, is described to create a sense of belonging and togetherness that will increase engagement and knowledge exchange (Bulger et al., 2015; Coleman, 1988; Zhao et al., 2012). This again relates to the

outcome of the e-learning: whether it is as effective from a learning output point of view as the classroom teaching (Zhang, Zhao, Zhou, & Nunamaker, 2004). Researchers have here focused on the actual outcome and the students' perceived learning (Somyurek, Brusilovsky, Cebi, Akhuseyinoglu, & Guyer, 2020) while concluding how the more varied and interactive the teaching is, the better its perceived outcome (Lu et al., 2013), where the socializing among peers should not be underestimated for such perception.

To summarize, the research on e-learning focuses extensively on what makes it successful or not, both in terms of its advantages and disadvantages vis-à-vis the classroom teaching and in terms of the knowledge building of students (Tavangarian, Leypold, Nölting, Röser, & Voigt, 2004; Triacca, Bolchini, Botturi, & Inversini, 2004). More recent studies emphasize the variation, flipped classroom pedagogy and need to create face-to-face online interaction, items enabled through technological advancements. The focus on the school as the context for e-learning suppresses other types of contexts, including the business life. Meanwhile, the digital meeting has foremost been treated as a parallel phenomenon much less problematized than e-learning and much synonymous with the business context, and more based on information and communicative exchanges and less so on knowledge exchanges and developments. The digital meeting would be sales calls taken over Skype, Zoom or other tools, and often represents an alternative to the telephone call or a physical visit. E-learning, as knowledge exchanges, creations and developments with the help of electronic/digital devices (Chang, 2016) in the context of a firm, may prove to have other capacities than those outlined related to the educational context, but this is thus not extensively explored in previous research. This chapter attempts to create such a link by discussing e-learning in the SME business context.

University-SME Interaction for Business Development

Most textbooks used at universities present proactive, rational, clearly structured and elaborate processes for innovation processes. However, this is mainly a description of the situation in large firms. In SMEs with limited resources and often few employees with university degrees who have learnt the elaborate processes, the innovation work is often reactive and ad hoc (Patel & Pavitt, 1994), lacking formal structure (Terziovski, 2010). Some SME managers may prefer stability and see innovation as too risky, turning to innovation only when under the pressure of their environment (OCDE, 1993 in Bougrain & Haudeville, 2002). The development work is then carried out in response to complaints or customer demands on operational levels or on the basis of some sort of "hunch" about what might be successful in the marketplace. There is rarely the time, nor the resources, available for long-term business development activities and structured customer or market studies, let alone technological innovation for the sake of being a proactive forerunner in the market. The dependability of large firms as customers has also created a reactive way of innovating, rather than the strategy-driven mode characterizing these large firms. However, by using digital technology, firms can now improve their processes through innovation with markedly fewer employees (Brynjolfsson & Saunders, 2010).

Although universities are a source of specialized knowledge, SMEs rarely access university support in their development work (Lundberg & Öberg, 2021) if they did not start as a spin-off from university research or have other specific relationships with university researchers (Cantù et al., 2015). It is often hard for a single SME to access university researchers and likely even more so if they are located far apart, as is often the case for firms in sparsely populated areas. There is a lack of time for initiating contacts and a lack of funding for joint research or knowledge transfer interaction (Bjerregaard, 2009). The lack of funding further implies that SMEs may not be regarded as attractive partners unless they

develop exciting new technologies. And, which is often the case, there may be psychological barriers and conflicting logics between the university and the SME (e.g., Bruneel et al., 2010). Distances are thereby both factual and based on divergent understanding, where the latter often relates to misconceptions about the other party. University researchers normally look for financial support for their research and are more likely to turn to a large firm than to a small one in such matters. As a consequence of these limitations, SMEs tend to carry out a significant part of their innovation work on their own, which can be very challenging for firms, not the least for SMEs acting on global markets and facing international competition, and thus often means that the focus is reactive and operational.

One way of getting around the problems of smallness and lack of attractiveness to universities as single entities may be to enter into some sort of cooperation with other firms. Especially in regions characterized by lower rates of development than more prosperous ones, this type of initiative may be supported by the regional administrations and given some financial support that can cover the administrative costs of gathering a group of firms and arranging events and arenas for interaction. Such funding is facilitated by a certain degree of formalization (Guercini & Tunisini, 2017), and it is, therefore, usually related to a specific administrative region (Lundberg, 2008). The aim of these initiatives, called regional strategic networks, is to stimulate networking and interaction in search for the advantages of inter-firm interaction and cooperation reported from clusters and network contexts in various parts of the world (e.g., Boschma & Ter Wal, 2007; Håkansson et al., 1999; Håkansson & Waluszewski, 2007; Saxenian, 1996). The setting may be homogeneous in terms of size of firms and lines of business, but it is often, by necessity, heterogeneous in sparsely populated regions due to the limited number of firms in such regions. In either case, as a group, the firms may find themselves better equipped to develop relationships with university researchers.

Adding e-learning to the idea of SMEs in sparsely populated regions and their joint interaction with a university introduces specific circumstances related to e-learning in a business context, yet also provides a situation where e-learning can be explored at its fullest capacity or create opportunities that would otherwise be out of reach for the SMEs and for the university-SME interaction to actually be enabled. This chapter describes and discusses the role of e-learning for SME business development and does so specifically in university-SME interaction related to sparsely populated regions.

Method

With the purpose to describe and discuss the role of e-learning for SME business development, a qualitative case study method was chosen. A case study enables one to reach an in-depth understanding of a specific topic in question (Borghini et al., 2010) while relating a specific topic to its context and thereby grasp structures, patterns and complexities of phenomena and their contextual interdependence. It is a method often applied for analyzing behaviors of groups and individuals (Halinen & Törnroos, 2005) “focusing on describing, understanding and/or controlling the individual (i.e. process, animal, person, household, organization, group, industry, culture or nationality)” (Woodside & Wilson, 2003:493).

As indicated in the introduction, this chapter is inspired by how a number of SMEs joined forces and worked with a university using e-learning to expand their abilities for technological and business model innovation. This observation constructs the empirical part of the chapter. During a study of regional cooperation among SMEs, one of the researchers learnt about an R&D project undertaken by a group of firms that are part of a regional strategic network (Lundberg & Johanson, 2011). One firm (F1) had previously been doing R&D in cooperation with university representatives, but that had been on invita-

tion from the university, and therefore mainly on the university researchers' terms. Now, they wanted to develop their products and processes on their own terms; they came up with the idea to form a joint R&D project with other members of the regional strategic network and invite a suitable university to participate. By undertaking this knowledge development in cooperation with other firms, under the overarching umbrella of the regional strategic network, the formalization criteria of public support were met (Guercini & Tunisini, 2017), and some public funding could be obtained.

As is common in case studies, interview data was the primary data source for the empirical part of this chapter. It was so since it allows for the collection of rich empirical data on concrete managerial problems (Eisenhardt & Graebner, 2007). Representatives of the nine SMEs that participate in the focused R&D project, as well as university representatives (two professors from the university, a university of technology and engineering) and the two project leaders, were interviewed (see Table 1). The use of single key informants from the SMEs is, of course, a limitation, though it follows from the small size of the firms and how vital information in such firms usually is not widely distributed but kept on the executive level of one or a few managers (e.g., Carson & Gilmore, 2000). Furthermore, adhering to the advice of Huber and Power (1985), the leading managers in regard to the R&D project, mainly CEOs or R&D managers, were chosen. And, findings are replicated among the studied SMEs, meaning that verification of findings is captured across firms.

Table 1. Informants

	Informant	Duration (minutes)	Organization	Number of employees
Project leader (PL)	Project leader R&D	50	R&D project coordinator	-
Regional strategic network coordinator & assistant project leader R&D (RSNC)	Regional strategic network coordinator & assistant project leader R&D	20 + 20	Regional strategic network coordinator	-
Firm 1 (F 1)	R&D manager	45	Solar collectors	21
Firm 2 (F 2)	CEO	40	Micropumps	12
Firm 3 (F 3)	CEO		Lifters	24
Firm 4 (F 4)	R&D manager	30	Contact press systems	155
Firm 5 (F 5)	Site manager & CFO	40	Tools	30
Firm 6 (F 6)	Site manager	40	Manufacturer of aluminum boats	49
Firm 7 (F 7)	Site manager	55	Floor heating	19
Firm 8 (F 8)	CEO	45	Sawmills and cutting tools	35
Firm 9 (F 9)	CEO	20	Software for the automotive industry	8
Professor 1 (P 1)	Professor	20 + 20	University representative	-
Professor 2 (P 2)	Professor	25	University representative	-

The interviews were conducted on the basis of a semi-structured interview guide, a method that allowed for an informal conversation, including follow-up questions and reflections on the SMEs' present ways of working. An informal and relaxed conversation was furthermore facilitated by confidentiality agreements. For that reason, the names of firms and informants are excluded. The interviews typically lasted about 40-45 minutes. Questions included how the SMEs, in a past and present sense, worked with business model innovation and technological innovation; how the managers perceived the e-learning and descriptions of its content; and details on the SMEs' operations, history and future plans.

The interviews were all transcribed and coded based on theoretical concepts as well as emerging themes and patterns. The coding process was initiated directly after the first interview and was characterized by iterative moves back and forth between the interview data and the emerging structure of theoretical argument, including analysis within as well as between the different interviews' data in the search for both similarities and differences. In doing so, Miles and Huberman's (1994) recommended structure for data analysis was applied, that is, (1) data reduction, (2) data display and (3) constructing and verifying conclusions. Codes hence focused on how e-learning was described and contextualized, with individual codes concerning tasks produced. These were then linked to their meaning through moving back and forth between descriptions of the e-learning and its consequences for the SMEs, the regional network and the university. Of particular focus was how processes of technological and business model innovations changed for the SMEs from before entering into the e-learning "classroom" to after practices taught were put in action by the SMEs. Based on how one of the authors conducted the interviews, coding being pursued by both authors and iterated between them allowed for tests of confirmability (Guba & Lincoln, 1989).

FINDINGS: A CASE OF SME COOPERATION AND E-LEARNING FOR BUSINESS DEVELOPMENT

The SME-University R&D Cooperation

The setting of the empirical study is a group of firms from different industries that are active in international markets, thereby facing international competition. All but one of the firms have less than 50 employees, indicating how the SMEs all had limited resources for R&D. The informants were very open about the need for further R&D. F1, for instance, said that "we need to gain new knowledge ... it's a lot about developing new technologies", F2 that "we could not have done this ourselves", F5 that "the competence level was very low" and F7 that "we need to strengthen our innovative abilities".

They are all part of a regional strategic network initiative aiming to support firms by providing a platform for interaction and joint initiatives (cf. Lundberg & Johanson, 2011). By acting together as a group, the firms could access public funding for R&D development work that allowed them to employ a project leader and develop an R&D project. This R&D step was driven by a need to stay competitive in international markets. Several of the SMEs faced a need to develop their business models and improve their value propositions. Many were increasing automation, digitalization and interconnection between machines, products and users and needed advice on how to proceed. For instance, F1 needed to learn how to make rather advanced simulations to understand how their product would function under varying conditions at customer sites; F2 wanted to learn more about customer needs to be able to develop adapted value propositions; F5 felt a need to keep up with technological changes among their

major customers, but also wanted to more proactively develop new products rather than just react to customer requests; F6 was aiming to add further services to their value propositions; and F7 knew that their customers increasingly would demand optimization in real-time on-site through digital solutions. Therefore, they needed to develop tools and services for such optimization offerings, as exemplified by F5: “Our customers will demand smart-home solutions and intelligence built into our systems. This is a consequence of digitalization in society. [...] Our part of the project is divided into two parts: the optimization of solutions as such, and the digitalization for further services and applications.”

Since the firms are active in very different industries, they saw no fear of competition. On the contrary, a trusting atmosphere soon developed: “I feel that we have all been very open, both weaknesses and problems have been openly shared.” (F1) Furthermore, and different from many other SME cooperation initiatives undertaken in the form of regional strategic networks, this one came to introduce cooperation with a university.

E-Learning

Based on how the SMEs were distributed over a vast, sparsely populated region, digital technology was used to bridge the geographical distances between the firms and in relation to the chosen university. The university was not the closest one in terms of geographical presence, but this was not seen as a problem as the interaction was carried out on a digital basis that still allowed for face-to-face communication with the faces projected on computer screens. A number of e-learning techniques were used for the interaction. The university researchers, who at the university acted both as researchers and teachers, were used to the role of teaching and assisted the firms in questioning and developing their current ways of working by presenting adapted recommendations in web-based lectures, followed by question and answer sessions. The first lecture series was run in the spring of 2019, addressing business model development, including the topics of how to perform structured R&D processes, market analysis detecting customer needs and values, how and when to include the customer perspective in the development process in order to end up with offers likely to be welcomed on the market and value capture alternatives. There have also been lectures and workshops on gender equality and environmental issues.

The lectures, which were recorded, lecture from around 1.5-2 hours and seemed to have been smoothly conducted without any significant technical difficulties. The necessary infrastructure and appropriate computer skills were thus in place in all firms as well as at the university, which, of course, was a very important condition (Restauri et al., 2001). Since the participants were familiar with this type of technology, the e-context did not prove a barrier to participation. The lectures were followed by approximately half to two-thirds of the participants in real time, but they were also recorded and uploaded on a platform to allow for later viewing. This meant that participants could share the content of the lectures at their own pace. A sudden interruption, like a telephone call or a visitor, did not mean that they lost the option to hear the rest of the lecture; they could easily pause the presentation and return to it at a later time. If certain parts were hard to understand, they could simply go back and listen to that part again, directly, or at a later point in time. This was, for instance, appreciated by F5, who stated, “I have just taken part in the first two lectures, but I will look at the rest later”. A further advantage was that the lectures could also be accessed from anywhere, for example, at home or while travelling. In addition, due to the possibility of accessing the digitally recorded and uploaded sessions later, other employees than those who were available at the specific time when the lecture took place could share the content of that session.

As a result, the interviewees noticed that more employees could share the content of these sessions than if digital tools had not been used.

For those present, the lectures were interactive. By including the opportunity to interactively discuss questions that arose, the lecture part of this interaction did not remain a one-way communication; it also included the possibility to interact and discuss. A collaborative learning environment, thus, could be maintained. Furthermore, it has been argued that online discussions are more democratic than face-to-face situations, as shy or less verbally articulate individuals have a better chance to make themselves heard (Clark, 2003). It also meant that although digital interaction at a distance can be perceived as impersonal, to the participants, there was still a sense of belonging to a group, as they shared the same experience and were able to participate in the questions and answers initiated by other participants.

In addition to the lectures, Skype calls were frequently used for R&D-oriented talks and demonstrating simulation tools, also using the firm's input data. Complementary information was then sent to the participants by mail. This has taken place about every second week, and there have also been telephone calls between university representatives and those from the firm. "We cannot solve all their problems, but if they want to learn more, we can teach them how to use the programs" (P2). The interaction was not only digital; there were also two meetings a year in person for joint planning of the next steps within the project. Every participant then took the time to participate. Meeting in person a limited number of times in this way was seen as advantageous as the travel distances were reasonable.

A Note on Outcome

At the time of writing, the project is still ongoing, but the results so far are very promising. The firms have come to question their previous ways of conducting R&D, have become more aware of the importance of including customer needs and requests as starting points and input for R&D work and business model innovation and are now considering other value capture alternatives. For instance, F2 reported, "We've learnt how to perform market analysis and more cost-efficient product development processes. We used to develop products that we believed in and then test them on the market, now we take a much broader perspective that includes investigating alternative uses of our products." In other words, the value to customers, rather than technical functionality per se, is now focused on when value propositions are developed. Likewise, F4 has changed its mindset and aims to more proactively develop their value propositions, stating, "We usually make changes reactively, in response to customer demands; now we aim to be more proactive." F6 said, "We've developed new thoughts about adding services, how to sell time instead of just products, the university has shown such examples, there are several firms in the project that have become interested in that."

Specifically, regarding digitalization, it can be noted that the firms, in addition to the development work related to their products and processes, also have learnt how to interact using digital tools. Several have observed that they could also use this communication method with their customers and suppliers. Thus, the project has also indirectly developed their knowledge of and trust in digital forms of communication. This knowledge might prove valuable in their future interactions with customers and suppliers in the global marketplace, not the least under the influence of pandemics, such as COVID-19, which limits the opportunities to travel and meet face to face.

By using digital tools for interaction, the SMEs had to sacrifice the "full" face-to-face personal interaction experience, but instead, they saved travelling time and costs and most likely accommodation costs in not having to travel to and from meetings in another town. Thus, it was a very cost-efficient

way of learning how to improve their business processes, and several had the same experience as F1, who stated, “I was a bit skeptical to distance solutions to start with, but it has turned out to be very flexible and smooth”, and F6, who said, “the threshold was lower this way, so it was easier to involve more employees”.

A further success factor was that the university representatives paid much attention to the wishes and needs of the participating firms; “There are continuous evaluations of our ability to understand and make use of their lectures and our interaction. They are very willing to adapt to our needs” (F1). The professors had found that interacting with a diverse group of firms posed both advantages and challenges and that they could learn from each other and bring new perspectives, but that “it is more challenging to communicate with a heterogeneous group of firms” (P1).

DISCUSSION

In contrast to how e-learning has primarily been elaborated on in the school context, this chapter puts forth e-learning in business life in general and business development in particular. It does so through its focus on cooperation between a university and SMEs in a sparsely populated area and thereby integrates literature on the difficulties of such firms related to innovation and business development, with research on e-learning while transferring the latter to a context rarely considered in previous literature. As the theoretical background revealed, research on e-learning has mainly focused on its advantages and disadvantages (cf. Tavangarian et al., 2004; Triacca et al., 2004), along with students’ probabilities to continue with e-learning. It has mostly explicitly or implicitly made comparisons vis-à-vis classroom teaching. Digitalization, in parallel, has put attention to new ways to communicate for information or social purposes (Correa et al., 2010; Kaplan & Haenlein, 2010). The context described in this chapter is a hybrid between the teaching instruction situation and the digital business meeting in how it entails educational content provided by the university while being cooperative in creating improved interaction among SMEs in the regional strategic network. This advances the ideas for when e-learning comes to play and broadens its context (Skillsoft, 2001 in Derouin et al., 2005). The benchmarking vis-à-vis the classroom would, in such a context, be exchanged for a comparison of SMEs developing innovation and business on their own. There, previous research has pointed at how SMEs often become reactive, operational and adopting in their possible approaches to innovation (Bjerregaard, 2009; Patel & Pavitt, 1994; Terziovski, 2010). The lack of structure, strategic thought and proactiveness is thus prominently leading to how the SMEs become locked into positions of dependencies on large firms as customers place complaints or possible development requests at the SMEs.

So, while the e-learning detailed in this chapter echoes advantages of flexibility, convenience, cost and time effectiveness from previous studies (cf. Restauri et al., 2001), and while these advantages are particularly salient for SMEs in sparsely populated regions, it is the ability to start thinking in a more structured way about innovation processes that is the true advantage of the e-learning. Hence, the e-learning related to its traditional way of being depicted is the *enabler* for the learning to happen, while it is the *content* of the teaching that becomes its real advantage. With that said, and before moving on in that direction, the geographical distance between the SMEs and the university created a particular advantage for e-learning in the case. E-learning enabled the SMEs to connect, albeit being distributed over a large geographical space, and also meant that they could contact a university of best fit, rather than the one closest at hand. Although the bridging of space and minimizing of travel costs (Restauri et

al., 2001) are mentioned in previous research, they are not linked to a better matching of parties when geographical distances are erased. Moreover, this means that the benchmarking would not be vis-à-vis classroom teaching but about the project not happening at all, or including parties based on geographical proximities rather than fits, and such parties may not even be there in a sparsely populated area.

Moving back to the *content* of the e-learning, it focused on the innovation processes and thereby meant that the SMEs would be given the tools to become more proactive and think more strategically – as opposed to operationally – in their innovation processes. The SMEs would also, in a more advanced manner, be able to deal with Internet-of-Things, as this was one of the foci in the project. While satisfaction and probabilities to continue with e-learning have been a means to measure its success (Lee, 2010; Park, 2009; Roca et al., 2006), those partaking being firms would mean that the outcome would be measured in their practices of the skills developed during the cooperation. The outcome is twofold in that regard, focusing on the mentioned structured processes but also on the enhancement of cooperative skills among the SMEs, and thereby a change in mindset to working with universities. These latter types of skills emphasizing cooperation largely follow from how the e-learning was performed. Interactivity, as emphasized in more recent studies on e-learning, along with flipped-classroom pedagogy and variation in ways of learning (Short & Graham, 2020), were methods used in the case studied. Particularly, the interaction among the SMEs and some of their representatives taking on teaching roles vis-à-vis their peers proved to be important to create intensified business interaction among them and increase their self-esteem. The digital interaction enabled the SME representatives to drop their guard and feel more comfortable. They could act from their home environment, and less verbally articulate individuals had better chances to make themselves heard (Clark, 2003). The literature depicts how there is a chasm between universities and SMEs not only related to the attractiveness and preunderstandings but also in terms of psychological barriers (e.g., Bruneel et al., 2010). These include how they perceive the counterpart to be very different from themselves, which again means that initial mindsets are reluctant rather than inviting. The case suggests that these barriers could be overcome thanks to the digital format. In addition to tangible outcomes of SME-university cooperation, our study thus shows that these kinds of initiatives may result in shared tacit and practical knowledge and skills regarding communication and cooperation that will facilitate future contacts and cooperation among the participating firms, the firms and the universities, and the firms and their suppliers and customers. This again raises how the socializing among peers should not be underestimated related to e-learning, and hence means that as e-learning has developed to include, for example, interactive components and flipped-classroom pedagogy, so would its advantages not only in schools (Lu et al., 2013) but also related to, for instance, university-SME cooperation and SMEs' consent business development.

CONCLUSION

This chapter describes and discusses the role of e-learning for SME business development. E-learning in such a context is new and would, based on the current situation in society with the pandemic crisis of 2020, be specifically valuable, not only since there are constraints on face-to-face interaction, but more so since the consequences of the crisis expect to require for firms to update or change their business models. As shown in this chapter, e-learning had several roles to fulfil for SMEs: the enablement of SME-university cooperation; the flexibility of learning and repeating; the networking with other SMEs, albeit these being located elsewhere; and the implementation of structure on technological and business

model innovation. Compared to previously, and when analyzing the effects for the SMEs specifically, the structure is the most pronounced change, as is how the SMEs started to consider their value propositions, business models and specifically digitalization and technological innovation.

Ideas for Further Development

In the year 2020, e-learning has risen in terms of use and practices due to the Corona pandemic. The school is still the place where, according to research, e-learning would be practiced (Somyurek et al., 2020), where attention has recently been placed on e-learning related to new pedagogical adaptations such as flipped-classroom learning. While much remains to be known about e-learning in the school system and time probably will tell its long-term effects, even more so is to be learned when it comes to practicing e-learning in the business context. This chapter made an attempt to shed light on e-learning in the particular context of business development including SMEs and universities, where the chapter points at a reconceptualization of e-learning with foci and outcomes different from those presented in previous research on e-learning.

For further research, it would be important to focus on such issues in the context of e-learning and how this resonates with the design of e-learning. This would include the elaboration on various practices, their outcome, and their long-term effects. The research on e-learning as an alternative to classroom teaching is scant on these issues, and the literature on e-learning for business development related to them suggests them being non-existent.

By moving the context of e-learning away from the traditional teacher-student school setting, this chapter introduces ideas that would ideally be further developed in future research: how e-learning varies in its practices and outcomes among contexts and how the design of e-learning would need to be adjusted to each. This again opens up for comparative studies among different contexts as well as practically oriented research borrowing ideas on how to best conduct e-learning among contexts. Producing complementary studies would not only provide further evidence but also test the context-specific degree of impact. Action-based research would prove particularly promising for such testing and meanwhile benefit participating parties: universities, firms and other types of organizations.

For practice, the intertwining between state-of-the-art research on pedagogy and e-learning studies would give further tools on how to best practice teaching, learning and interactive components in schools and beyond, where experiences from the Corona pandemic surely have much to contribute, not the least when business meetings also turn digital to a degree not previously experienced.

REFERENCES

- Amit, R., & Zott, C. (2012). Creating value through business model innovation. *MIT Sloan Management Review*, 53(3), 41–49.
- Baden-Fuller, C., & Haefliger, S. (2013). Business models and technological innovation. *Long Range Planning*, 46(6), 419–426. doi:10.1016/j.lrp.2013.08.023
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600. doi:10.1016/j.jbusres.2013.10.001

- Bjerregaard, T. (2009). Universities-industry collaboration strategies: A micro-level perspective. *European Journal of Innovation Management*, 12(2), 161–176. doi:10.1108/14601060910953951
- Borghini, S., Carù, A., & Cova, B. (2010). Representing B to B reality in case study research – challenges and new opportunities. *Industrial Marketing Management*, 39(1), 16–24. doi:10.1016/j.indmarman.2008.05.006
- Boschma, R. A., & Ter Wal, A. L. (2007). Knowledge networks and innovative performance in an industrial district: The case of a footwear district in the South of Italy. *Industry and Innovation*, 14(2), 177–199. doi:10.1080/13662710701253441
- Bougrain, F., & Haudeville, B. (2002). Innovation, collaboration and SMEs internal research capacities. *Research Policy*, 31(5), 735–747. doi:10.1016/S0048-7333(01)00144-5
- Bruderl, J., & Schussler, R. (1990). Organizational mortality: The liabilities of newness and adolescence. *Administrative Science Quarterly*, 35(3), 530–547. doi:10.2307/2393316
- Bruneel, J., d’Este, P., & Salter, A. (2010). Investigating the factors that diminish the barriers to university–industry collaboration. *Research Policy*, 39(7), 858–868. doi:10.1016/j.respol.2010.03.006
- Brynjolfsson, E., & Saunders, A. (2009). *Wired for innovation: How information technology is reshaping the economy*. MIT Press. doi:10.7551/mitpress/8484.001.0001
- Bulger, M., Bright, J., & Cobo, C. (2015). The real component of virtual learning: Motivations for face-to-face MOOC meetings in developing and industrialised countries. *Information Communication and Society*, 18(10), 1200–1216. doi:10.1080/1369118X.2015.1061571
- Cabrera, A. F., Crissman, J. L., Bernal, E. M., Nora, A., Terenzini, P. T., & Pascarella, E. T. (2002). Collaborative learning: Its impact on college students’ development and diversity. *Journal of College Student Development*, 43(1), 20–34.
- Cantù, C., Corsaro, D., Tunisini, A., de Zubielqui, G. C., Jones, J., Seet, P. S., & Lindsay, N. (2015). Knowledge transfer between actors in the innovation system: A study of higher education institutions (HEIS) and SMEs. *Journal of Business and Industrial Marketing*, 30(3/4), 436–458. doi:10.1108/JBIM-07-2013-0152
- Carson, D., & Gilmore, A. (2000). Marketing at the interface: Not ‘what’ but ‘how’. *Journal of Marketing Theory and Practice*, 8(2), 1–7. doi:10.1080/10696679.2000.11501863
- Chang, V. (2016). Review and discussion: E-learning for academia and industry. *International Journal of Information Management*, 36(3), 476–485. doi:10.1016/j.ijinfomgt.2015.12.007
- Clark, T. (2003, January). Disadvantages of collaborative online discussion and the advantages of sociability, fun and cliques for online learning. *Proceedings of the 3.1 and 3.3 working groups conference on International federation for information processing: ICT and the teacher of the future*, 23, 23–25.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120. doi:10.1086/228943

- Correa, T., Hinsley, A. W., & De Zúñiga, H. G. (2010). Who interacts on the Web? The intersection of users' personality and social media use. *Computers in Human Behavior*, 26(2), 247–253. doi:10.1016/j.chb.2009.09.003
- Dahlander, L., & Magnusson, M. G. (2005). Relationships between open source software companies and communities: Observations from Nordic firms. *Research Policy*, 34(4), 481–493. doi:10.1016/j.respol.2005.02.003
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52. doi:10.1177/002224299405800404
- Derouin, R. E., Fritzsche, B. A., & Salas, E. (2005). E-learning in organizations. *Journal of Management*, 31(6), 920–940. doi:10.1177/0149206305279815
- Ebner, W., Leimeister, J. M., & Krcmar, H. (2009). Community engineering for innovations: The ideas competition as a method to nurture a virtual community for innovations. *R & D Management*, 39(4), 342–356. doi:10.1111/j.1467-9310.2009.00564.x
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. doi:10.5465/amj.2007.24160888
- Foss, N. J., & Saebi, T. (2016). Fifteen years of research on business model innovation. *Journal of Management*, 43(1), 200–227. doi:10.1177/0149206316675927
- Gould, J. M. (2009). Understanding organizations as learning systems. *Strategic Learning in a Knowledge Economy*, 19(6), 56–59.
- Guba, E. G., & Lincoln, Y. S. (1989). Fourth generation evaluation. *Sage (Atlanta, Ga.)*.
- Guercini, S., & Tunisini, A. (2017). Formalizing in business networks as a tool for industrial policy. *IMP Journal*, 11(1), 91–108. doi:10.1108/IMP-07-2015-0040
- Håkansson, H., Havila, V., & Pedersen, A. C. (1999). Learning in networks. *Industrial Marketing Management*, 28(5), 443–452. doi:10.1016/S0019-8501(99)00080-2
- Håkansson, H., & Waluszewski, A. (Eds.). (2007). *Knowledge and innovation in business and industry: The importance of using others*. Routledge. doi:10.4324/9780203947029
- Halinen, A., & Törnroos, J. Å. (2005). Using case methods in the study of contemporary business networks. *Journal of Business Research*, 58(9), 1285–1297. doi:10.1016/j.jbusres.2004.02.001
- Huber, G. P., & Power, D. J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy. *Strategic Management Journal*, 6(2), 171–180. doi:10.1002/mj.4250060206
- Huggins, R., Johnston, A., & Thompson, P. (2012). Network capital, social capital and knowledge flow: How the nature of inter-organizational networks impacts on innovation. *Industry and Innovation*, 19(3), 203–232. doi:10.1080/13662716.2012.669615
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. doi:10.1016/j.bushor.2009.09.003

- Klemp, T., & Nilssen, V. (2017). Positionings in an immature triad in teacher education. *European Journal of Teacher Education*, 40(2), 257–270. doi:10.1080/02619768.2017.1282456
- Koen, P. A., Bertels, H. M., & Elsum, I. R. (2011). The three faces of business model innovation: Challenges for established firms. *Research Technology Management*, 54(3), 52–59. doi:10.5437/08953608X5403009
- Lee, M.-C. (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation-confirmation model. *Computers & Education*, 54(2), 506–516. doi:10.1016/j.compedu.2009.09.002
- Lu, J., Yang, J., & Yu, C. S. (2013). Is social capital effective for online learning? *Information & Management*, 50(7), 507–522. doi:10.1016/j.im.2013.07.009
- Lundberg, H. (2008). *Geographical proximity effects and regional strategic networks* (Doctoral dissertation). Uppsala University, Uppsala, Sweden.
- Lundberg, H., & Johanson, M. (2011). Network strategies for regional growth. In H. Lundberg & M. Johanson (Eds.), *Network strategies for regional growth* (pp. 1–21). Palgrave Macmillan.
- Lundberg, H., & Öberg, C. (2021). The matter of locality: Family firms in sparsely populated regions. *Entrepreneurship and Regional Development*.
- Miles, M. B., Huberman, A. M., Huberman, M. A., & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage (Atlanta, Ga.).
- Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education*, 14(2), 129–135. doi:10.1016/j.iheduc.2010.10.001
- Müller, J. M., Buliga, O., & Voigt, K. I. (2018). Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0. *Technological Forecasting and Social Change*, 132, 2–17. doi:10.1016/j.techfore.2017.12.019
- OCDE. (1993). *Les petites et moyennes Entreprises: Technologie et compétitivité*. OCDE.
- OECD. (2017). Enhancing the Contributions of SMEs in a Global and Digitalised Economy. *Proceedings of the Meeting of the OECD Council at Ministerial Level*.
- Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Journal of Educational Technology & Society*, 12(3), 150–162.
- Patel, P., & Pavitt, K. (1994). The continuing, widespread (and neglected) importance of improvements in mechanical technologies. *Research Policy*, 23(5), 533–545. doi:10.1016/0048-7333(94)01004-8
- Restauri, S. L., King, F. L., & Nelson, J. G. (2001). *Assessment of Students' Ratings for Two Methodologies of Teaching via Distance Learning: An Evaluative Approach Based on Accreditation*. ERIC Document Reproduction Service No. ED 460148, Reports-research (143).
- Roca, J. C., Chiu, C.-M., & Martinez, F. J. (2006). Understanding e-learning continuance intention: An extension of the Technology Acceptance Model. *International Journal of Human-Computer Studies*, 64(8), 683–696. doi:10.1016/j.ijhcs.2006.01.003

- Rosenfall, T. (2012). *Open source vendors' business models*. Linköping University.
- Saebi, T., Lien, L., & Foss, N. J. (2016). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567–581. doi:10.1016/j.lrp.2016.06.006
- Saxenian, A. (1996). *Regional advantage*. Harvard University Press. doi:10.2307/j.ctvjnrsqh
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education*, 49(2), 396–413. doi:10.1016/j.compedu.2005.09.004
- Short, C. R., & Graham, C. R. (2020). (forthcoming). Meaningful online learning: Integrating strategies, activities, and learning technologies for effective designs. *TechTrends*, 64(6).
- Skillssoft. (2001). *E-learning in USA & Canada benchmark survey*. Author.
- Somyurek, S., Brusilovsky, P., Cebi, A., Akhuseyinoglu, K., & Guyer, T. (2020). How do students perceive their own and their peers' progress in e-learning? *International Journal of Information and Learning Technology*, 38(1), 49–74. doi:10.1108/IJILT-05-2020-0073
- Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183–1202. doi:10.1016/j.compedu.2006.11.007
- Tavangarian, D., Leybold, M. E., Nölting, K., Röser, M., & Voigt, D. E. (2004). Is e-Learning the solution for individual learning? *Electronic Journal of e-Learning*, 2(2), 273–280.
- Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: A resource-based view. *Strategic Management Journal*, 31(8), 892–902. doi:10.1002/mj.841
- Triacca, L., Bolchini, D., Botturi, L., & Inversini, A. (2004). Mile: Systematic usability evaluation for e-Learning web applications. *AACE Journal*, 12(4), 4398–4405.
- Woodside, A. G., & Wilson, E. J. (2003). Case study research methods for theory building. *Journal of Business and Industrial Marketing*, 18(6/7), 493–508. doi:10.1108/08858620310492374
- Zhang, D., Zhao, J., Zhou, L., & Nunamaker, J. Jr. (2004). Can e-learning replace classroom learning? *Communications of the ACM*, 47(5), 75–79. doi:10.1145/986213.986216
- Zhao, L., Lu, Y., Wang, B., Chau, P. Y., & Zhang, L. (2012). Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective. *International Journal of Information Management*, 32(6), 574–588. doi:10.1016/j.ijinfomgt.2012.02.006

KEY TERMS AND DEFINITIONS

Business Development: Initiative to raise competitiveness of a firm through refining or advancing its offerings or business processes.

Digitalization: Process in which analogous solutions are replaced with computerized ones.

E-Learning: Digitally supported educational imitative aimed to diffuse knowledge to participants using devices as communication tools.

Regional Strategic Network: Local support to, for instance, enhance attractiveness of a region or create improved opportunities for firms located in it.

SME: Firm with less than 250 employees.

Value Capture: How the total value created is divided among the various players.

Value Creation: How value is delivered and monetized.

Value Proposition: A reason given by a seller for buying their particular product or service, based on the value it offers customers.

Section 2

Online Business Models and Strategies

Chapter 5

Strategic Analysis of the Rise and Fall of UBER in the Private Urban Transport Business: Evidence From the Metropolitan Area of Guadalajara

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ABSTRACT

The objective of this study is to analyze the strategies for entering the private urban transport services market managed by the multinational company Uber in the Guadalajara Metropolitan Area. The analysis included the growth conditions in coverage, its influence on urban mobility movements, and the decline due to competition, and finally to the 2020 pandemic. The entry of Uber to the local metropolitan area of Guadalajara market has experimented an impressive rise despite the conflicts with the traditional taxi systems of private transportation of passengers. However, the pandemic has suddenly turned down the increasing growth into a falling and decreasing phase. As a result, the analysis of this work shows the determining factors that have placed Uber as one of the leading companies within its area of influence and ends with some recommendations on the conflicts that the firm presents when entering a new market location.

INTRODUCTION

Uber is currently an international firm that offers its customers a private transport service, through its platform, an application for smartphones, which associates travelers with drivers of vehicles registered in the system to offer a service of private transportation through vehicles to people. The organization classifies travel in many urban communities around the world and its headquarters are located in Califor-

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nia. Initially, drivers had vehicles that the company certified as appropriate. After 2012, Uber includes a broader determination of cars for the market. The cars assigned with the portable application. With this application, customers can track the area of accessible cars and the qualities of both the car and the driver.

The big data solutions of the Uber Movement platform analyzed as a set of resources that allow the management and analysis of massive amounts of data, as Montealegre Gallocod (2017) concludes, have an important role in companies that need the information to plan or organize market strategies that impacts society by generating positive value for their clients.

The company's operations begin in July 2014 in Mexico and Guadalajara, according to its official website. The qualities of this organization are the association between the driver of the automobile and the traveler who requires the benefit of the vehicle. Operating simultaneously and a stage of virtual private connection and not as a taxi organization. His method of connecting the customer and the supplier has been a progressive path for the market and has changed the big point of view of transport to a creative method of world rivalry. The entry of the firm in Latin America has caused an extraordinary confusion in the organization of the relationship of the taxi drivers with the commercial risk implied by the prominence that Uber obtained in steps. Therefore, there is a solid resistance.

The objective of this work is to reveal information about the Uber mobile application and its foray into the Mexican open transport market, in particular from Guadalajara. The objective of this study is to analyze the strategies for entering the private urban transport services market managed by the multinational company Uber in the Guadalajara Metropolitan Area, the growth conditions in coverage, its influence on urban mobility movements and the decline due to competition, and finally to the 2020 pandemic.

To begin with, the document presents a general description of the strategic aspects of Uber and the service it provides. At this point, a description is made of how it has entered the Mexican market and has entered into direct competition with the conventional taxi service and other firms with a platform model similar to Uber. The article shows a general outline of the idea of Uber and the administration it provides and a brief synopsis of how it has entered the global transportation showcase.

Besides, the document delves into Uber from a strategic and competitive point of view (especially the taxi service), where an attempt is made to discover if the administration that provides this service, with its particularities and its competitive advantages, could be considered as a component of the same important market of different types of public and private transport. The intention to raise the advantages and disadvantages of this company in the market. Besides, what measures taken to solve the latter, as well as raise some competitive advantages that could be beneficial for the firm.

BACKGROUND OF THE PROBLEM

Market Studied

Guadalajara is one of the three most important cities in Mexico accompanied by the Cdmx (México City) and Monterrey, which receives thousands of national and foreign visitors daily who require transportation to visit its squares, colonial monuments, museums, religious buildings, etc. In addition to its mariachis, its great tequila fame and the cordial treatment of its people that make Guadalajara a very attractive city for the public. As for the subject of private auto transport Guadalajara is a great location that receives thousands of visitors daily.

Strategic Analysis of the Rise and Fall of UBER in the Private Urban Transport Business

According to González Pérez (2018) the technocity-system, has configured a motorized urban transport service with peculiar characteristics in the Guadalajara Metropolitan Area. In the land of tequila, the combination of use as a driver of the car should be regulated after having had a wheelie or other types of intoxicating drinks. For this reason, on November 15, 2013, the Operation Saving Lives began, which can be summarized in street and avenue fliers where alcohol tests are performed on drivers; If it is positive, you are credited with an economic fine or an administrative closure in the Urban Center of Alcohol Retention for Alcoholometry (CURVE) (González, 06/13/2017).

From that, many *tapatíos* and visitors were scared; the first weekends the bars and clubs looked half-empty. However, the habits of city dwellers began to change, looking for mobility alternatives because people were not willing to stop drinking alcohol. Months passed after the 2014 World Cup in Brazil arrived and on those days where fans watched games from noon and the party dragged on, a new mobility alternative to the city appeared: Uber. A “shared travel” app to travel quickly and reliably in just minutes, day or night. Without having to park or wait for a taxi or bus. With Uber, you request trips with a simple touch and it is very easy to pay by credit card, or cash in some cities (González, 06/13/2017).

Complementary to the above, the market area and its geographical coverage clarified, for this case. In July 2014, Uber arrives in Guadalajara and later in other states of the Republic, where people can enjoy the benefits provided by the Uber application, registering on the Uber website. It is worth mentioning that the service is currently present in more than 38 cities in Latin America (Ferrer, 2016). The authorization to Uber to operate in private urban transport contributes to increasing the urban mobility chaos experienced by the Guadalajara metropolitan area, whose horizontal expansive infrastructure congested by a vehicle overload (Hernández Romero, Galindo Sosa, 2016). Initially, the Uber service had accessibility restrictions through the mobile application that required payment by the user's credit card in exchange for delivering quality service with friendly service, offering music, bottled water, etc.

Uber's arrival in the city was not to everyone's liking, much less the taxi drivers, who responded with attacks on the drivers-partners of the North American company. Taxi drivers assaulted partner-drivers. Some of the places where attacks were registered were the New Central Trucking in Tlaquepaque, the vicinity of the Expo, and other areas (González, 06/13/2017).

In the beginning, the sector to which this company directed was established. The transport services platform through mobile devices. Uber, launched a new modality in the city that had implemented in other cities in the world, it is the XL service. This modality that is already reflected in the application for Guadalajara users, allows you to have an Uber SUV-type service, but at a cheaper price due to the type of vehicles that can provide this service, such as Toyota Highlanders, Ford Explorers or Nissan Pathfinders, just to mention a few. These Van-type vehicles will accept to move up to six passengers at a much more accessible price than an Uber SUV, which has a similar space but considered as Premium service (Trafficmg, January 14, 2016).

Uber, in the country, has three modes of service: UberX, UberPool and UberBlack; the two initial benefits are accessible or, rather, typically taken by individuals who tend to use typical services, large space or shared use; UberX. It is Uber's well known and recurring alternative, and it incorporates vehicles with a maximum 10-year model. Although this depends on the Uber criteria for each city, it recognizes a maximum of four passengers and, alternatively, it allows the distribution of load between the travelers. Uber Pool: it was a simultaneous launch of UberX, delivering the door open to 3 customers from several areas to request an exit to a typical target that is close to all the customers who share the trip, thus saving a considerable sum of monetary resources. On the other hand, UberBlack is a Premium administration

for clients with greater resources, and part of the latest model of luxury cars, with a limit of four passengers. This frequently used by associations and organizations for the transport of personnel (Uber, 2016).

At Uber, the user calculates the benefits to the portfolio with the launch of a calculator called #EnUberATodo, which compares the cost of your car with that of using this platform to move. One of the characteristics of this system is that it also helps you define if you want to use #UberX or #UberPool, the latter modality shares your journeys with other people and the fare (González, 06/13/2017). To give an idea of the costs, this service costs approximately 112 pesos on a trip from Plaza del Sol to the Omnilife Stadium, with the ease of being able to transport up to 6 passengers.

The same Uber SUV trip would cost between 225 and 290 pesos (Trafficzmg, January 14, 2016). The uberfication generated a boom a few years ago in Guadalajara.

Since arriving in Guadalajara, Uber has caused problems with conventional taxi systems due to the way it operates and its working conditions. When the taxi drivers demonstrated in the city center and tried to paralyze the city with their demonstrations in the main vehicular arteries of the metropolis. Some of them were injured and some of their cars were hit by stones and other objects that fell from the roof of the technology plaza located on Av. September 16 (González, 06/13/2017).

The regulation of the service has become one of the main issues addressed to solve the differences that drivers of this company face from conventional taxi drivers (Pérez, March 21, 2016). In the city of Guadalajara, in the plenary session of the Jalisco Congress, the so-called “Uber Law” was tested. This law regulates Transport Network Companies and it applies to all private transport companies that work in the state, among which is Uber and Cabify. Changes in the law were foreseeable. What forced the Jalisco Congress to approve the so-called #LeyUber, on March 18, 2016, a legislation that regulates the Transportation Network Companies (ERT). It forces them to pay 35 thousand pesos for the operation permit and 1,600 pesos a year for each of the vehicle. In addition, they must allocate 1.5 percent of their income to allocate it to a green fund (González, 06/13/2017).

In theory, this regulation balances the working conditions between this company and that of regular taxi drivers. However, with regulation in place, some characteristics of the private taxi service have approved. Some recognized characteristics of the Uber service were modified (Pérez, March 21, 2016). The initial conditions of the Uber service leaned towards a relaxation accentuated by pluricausal social acceptance due to an increase in demand, subsequently subject to regulations on citizen mobility (González Pérez, 2017a).

While in the course of the third month of the year 2017, several of the companies that provide the transport service through digital platforms had already registered with the Ministry of Mobility (Semov), Uber resisted doing so and there was a reason. They were processing an injunction not to do so. Drivers and companies had until April 28 to register. However, they filed two injunctions. The first by Uber México Technology & Software S.A de C.V; and another by a group of company drivers. In May 2017, a federal judge granted the company a definitive suspension regarding some provisions of the Mobility and Transportation Law of the state of Jalisco, so that drivers will be able to continue operating without fear of being arrested for not registering with the state authorities (González, 06/13/2017).

When Uber completed three years of operating in the Guadalajara Metropolitan Area, they reported that they had created 33,000 jobs with their so-called “partners,” who are the drivers of the cars. What else did Uber bring? What “moved” in the city? Are they still the “best” option? (González, 13/06/2017).

Uber is the fastest-growing urban private transport company in the Guadalajara Metropolitan Area that has generated the greatest number of expressions, giving rise to regulatory changes in the field of motorized urban mobility (González Pérez, 2018; González, 2017b). Uber currently has 1.4 million us-

ers in the city. However, the prospect of the uberfication phenomenon in the Guadalajara Metropolitan Area is a deduction of González Pérez (2018) under the assumption that the traditional way to access the transport service exceeds the conditions of a real subject to irreversibility is highly questionable. The entry of the multinational company Uber into the private urban transport market of the Guadalajara Metropolitan Area has led to the incorporation of cyber services from local companies such as Siggo and Sitio 40 Taxis Las Águilas, among others. Siggo offers as an innovation the Pink service intended for the exclusive transport of women and carried out by women (El informador, 2016).

In May 2020, Dara Khosrowshahi, CEO of the multinational company UBER announced that as part of its economic readjustment process due to COVID-19, the firm decided to close its offices located in Guadalajara. According to the company's new reorganization in Mexico, some of the employees who worked in these offices relocated, but operations continue to operate normally. Due to the dramatic impact of the pandemic and the unpredictable nature of any eventual recovery, the technology company eliminated 6,700 jobs worldwide, due to the reduction in travel through this platform, since most people are confined to their homes (SUN May 22, 2020; Martínez, 22/05/2020). Although it anticipated that Uber could resist the crisis thanks to its delivery services, the reality is that the firm positioned as one of the platforms most affected by the pandemic, which has forced it to modify its business (Gonzalez, 05-22-2020).

At a global corporate level, Uber reported revenue of \$ 3.553 billion between January and March 2020, which exceeded the expectations of specialists. Although the number is not bad, the reality is that the company also registered a loss of 2,940 million dollars, an item that it had managed to contain in its past reports. To minimize these losses, the firm announced cuts in its workforce equivalent to 14 percent, with which nearly 3,700 employees notified of their departure from the company. Following this new reorganization of the company in Guadalajara, some of the employees who worked in these offices to be relocated, and operations will continue to operate normally (Gonzalez, 05-22-2020).

In search of a possible recovery, Uber focuses its efforts on its main mobility and home delivery platforms, resizes the company by stopping non-essential investments and reducing the size of the workforce to match with the new realities of the market (SUN May 22, 2020; Martínez, 22/05/2020; Gonzalez, 05-22-2020). In a scenario that González Pérez (2018) characterizes as entropic, mobility that extends into a perceived horizon that falls into vices such as the obsolescence of means of transport and the hostile attitudes of service providers towards users, Uber has a lot to offer.

THEORETICAL-CONCEPTUAL REVIEW: COMPETITIVE ADVANTAGE

Actors Studied

The characteristics of current and potential consumers defined by the fact that Uber, all over the world, is a company that functions as a link between the driver and the customer. However, not only a few individuals must be transported, as a whole. This type of service required by society sooner or maybe later on a day-to-day basis. It is at that point, while there are alternatives to how to do it, for which numerous factors intervene, among which, the measure of cash that we can pay for the service, the speed of travel, comfort and security (Ávalos, 2015).

The above-described consumers are around 18 to 40 years of age since they are the closest to manage the application that interacts with the driver. These customers are willing to pay for a trip at a reasonable

price, as well as ready to share the road. In Mexico, more than half of the population agrees to travel with another person. No doubt, Uber came to achieve the Mexican market will pay through debit cards, understood that not all customers could access a loan, so, in its progress, has begun to cash in real money. At the end of the day, the buyers of this service are and have a habitual monetary position (Pallares, 2016).

It is worth mentioning that more than half of current customers, instead of using Uber, would use their car. All consumers have a smartphone, less than half have a credit or debit card. However, they all have cash available. On the other hand, a relevant fact is that more than half would drive in a drunken state if it were not for Uber, implies that through this benefit accidents and conceivable deaths that happen every day are reduced. In the United States, Uber has coverage of 75% of the population, of which 22% of active drivers are women. In Mexico, more than 500,000 clients have joined the service (Pallares, 2016).

The company has recently implemented the issuance of invoices, that is, it still has this benefit unlike the competition, which different organizations need to produce charge credit, so current customers may require this voucher, be they, moral persons, as well as to individuals, and thereby achieve a superior position in the market (Bustamante y Vargas-Hernández 2018).

Conflicts Studied

Urban private land transport been affected due to the emergence in the market of the transnational company UBER considered by García Sánchez (2018) as based on the application of collaborative economy in the service sector. This condition has questioned the legality of activities in the private urban transport services market that conflict with the interests of traditional transport systems known as taxis. These conflicts have generated legal debates that take into account at one extreme, whether it is a service that provided in a free market or whether it should be subject to regulations, such as obtaining a government authorization.

The taxi based urban private transportation systems are facing the incursion in the market of collaborative model of leasing the vehicle with driver supported by person to person (P2P) platforms like the case of Uber that compete in a monopolized market by the traditional taxi systems. Guillén Navarro (2018) concludes that the debate on the benefits are associated with the freedom for the provision of these services focusing on the legal regimes to regulate the struggle and conflicts between the traditional taxi sector and the advancement of this p2p service to be solved.

An investigation carried out by Navarro Pérez & Ortiz Aristizábal (2016) to determine the advantages and disadvantages of the Uber service compared to the individual Taxi public transport service, they conclude, among other matters, that for the multinational urban passenger transport company to have the proper operation, it must be legalized as a provider company. of the public transport service, to be governed by the rules and competent institutions, providing both users and drivers with the benefits required by law, as well as paying the taxes corresponding to their income.

A detailed analysis of the conflicts originated based on the legality of urban passenger transport in cars with platform support, as in the case of Uber, is considered by Guillén Navarro (2018) as the transition from a collaborative transport model to Regulated vehicle leasing with a driver has led to disputes and disputes with the traditional taxi transport sector.

The dangers that threaten this company as an organizational entity that provides a private transport service, in the first place, is the professionalism with which it is handled, there is no guarantee that the driver can complete an expert driving, as is hypothetically guaranteed by the certification and in contrast to taxi drivers. The problem of the driving test and the basic requirements to acquire a driver's license

in the corresponding modality shown to offer the service of taxis and other permits that are essential to deal with this specific car, which evidences legal shortcomings that decrease the safety of the traveler (Hernández, Galindo & Vicente 2015).

Another conflict is the certified identification of the driver, even though the driver must be a member of the firm and registered as such in the application and the system. Sometimes abusing the stipulated conditions, some drivers subcontract to others, to generate a business model in which the cars work on behalf of someone else and generate greater profits to the owner. On the other hand, another problem is the insurance coverage. Since as the service provides a private car that granted private transport benefit, the company's protection covers the accidents of the driver and not of the passengers in some cases (Hernández, Galindo & Vicente 2015).

According to Ávalos (2015), "another inconvenience is the lack of loyalty that some leading partners can have towards the company. Some taxi drivers claim that there is an unjustifiable lack and disadvantage since Uber would not be obliged to accept all the needs that expected from the other organizations that report to the SAT (Tax Administration Service). "

REVIEW OF THE EMPIRICAL LITERATURE

Strategic Reasons

Some of the competitive advantages that belong to Uber have to do with the fact of the price that the customer is willing to pay, and the methods of payment. In addition, requesting a taxi in Mexico includes numerous circumstances. The first is the fare, in many parts of Mexico, including Guadalajara is common to be familiar with the idea that taxis have an excessive rate, since drivers not only take advantage of the lack of time that the traveler has, also of the region and the time for which the trip is made. A taxi does not charge the same in case it is requested in different areas of the city.

The Mexican, therefore, pays a taxi of about 40 pesos when talking about a reasonable trip. In any case, normally the benefit is not what is worth, since travelers run the risk of being robbed or arriving unpunctually at the established place. This is a serious disadvantage concerning services such as Uber, because due to this circumstance of stress and uncertainty, it achieves its objective in the quality, speed, and convenience of transport (Barranco & González, 2016).

Regarding the issue of the terms in which the payment made, Uber (whose number of member increases at a rate of 20% each week in Mexico) only allowed payments with debit or credit cards and for that, the card linked with the application. However, Uber also cashes in cash, this is due to how Mexico generally cannot get a payment by card or by fees and the money used for transportation is a part of their daily spending plan (Uber, 2017).

Another important point that has been a strategic feature of Uber is the growing trend in the market. The development of Uber around the world has been exponential. It is available in more than four hundred cities, in seventy nations, and makes more than five million departures per day. In Mexico, the company is available since 2014 and from then its development is no less amazing. Each week the number of downloads of its application increases between 10% and 15%. This is a competitive advantage of the company's performance that around 30% of the drivers complement their common salary working with Uber (Ávalos, 2015).

For the case of the components that allow their development in the market, emphasis placed on the use of innovation. All consumers of the service in Mexico have a cell phone and know how to use it. From that point of view, where are the cars that work as Uber, it can be chosen a traditional car or a larger one, as mentioned above. In addition, the application allows the brand of the vehicle, the color, and the image of the driver. It can also be seen the progress before and during the trip on the map of the application. The foregoing is how, progressively, Uber has taken this strategy to reach the client (Barranco & González, 2016).

Another significant factor is the dynamism, transparency, and accessibility of the rates. These cannot change once the trip accepted and these not established through the channel. The cost of the trip estimated not by meter, but by the GPS of the app, and the course recorded in the application. When the consumer pays, as a client of Uber, when the company entered the Mexican market, it was important to enter a bankcard number and at the end of the service. The application charged the agreed amount at the beginning, with the objective that the clients do not should deal with cash or stress over the fee or if the driver has enough change.

Likewise, in Mexico Uber saw that a large part of the clients could not access a credit, so the payment method updated to make it in cash. If the trip shared, the application allowed for separate passage. This draws attention on the basis that the fees never exceed the desire to pay for a typical taxi (Barranco & González, 2016).

The results found by González Pérez (2017a) in an investigation focused on content analysis and ethnographic exercises in the Guadalajara Metropolitan Area, suggest that there are variations in the exercise of motoring, through complex hybridizations of the *modus normalis* and this new transport management option, which does little to discourage the practice of motorized urban mobility.

In the daily life of the consumer, when it is transported and the service provided causes some dissatisfaction, the company gives the option of accessing a driver rating system, an innovative and really useful aspect, which is that, upon completion of the travel, the app asks the consumer to value, through stars, how was the provision of transport service. With which, the company system records and evaluates the conditions and opinions of the consumer, in addition to checking if there is a conflict, taking some measures to receive the satisfaction of the user, and can even reimburse the payment if it is the case. These features not presented in the taxi service.

Another factor impacts its performance in the market is the advertising coverage it has. Uber manages the promotion through social networks and with a recommended method, and much of the Internet. The models and conditions of the cars also influence the way to reach Mexican consumers, in contrast to taxis. Uber offers distinctive car models, regularly ventilated and substantially more current than regular taxis (Ferrer, 2015).

The competitive advantages that Uber has play an extremely important role, since derived from them this company positioned as a leader in the market. The drivers enjoy that there are no established hours to work, also that the commission charged for the use of the platform is about one-fifth of the ticket and a part is involved in the promotion costs with the objective that the system keeps working.

The assignment of orders for trips done automatically as the system will request the service depending on the vehicle that is closest to the customer. There are no fees for opening or registration fees. The collection of services is typically week after week and with automatic deposits. Finally, it provides a reliable environment for the driver, because the trip recorded in the system and who is the passenger.

The consumer also has several strategic advantages that the company has established, for example, through the app that is user friendly and easy to use, the cost for the service specified and does not change

before requesting it. Besides, the application is accessible to change the route. The client can also evaluate and provide feedback to the service. On the other hand, Uber intends that the user is in a reliable and comfortable environment because whoever takes it knows that his order, the trip, and the driver are registered in the system. It also allows for monitoring the trip. Finally, a vehicle is available quickly.

On the contrary, to the above, it is relevant to establish what competitive disadvantages Uber has and analyze later what it can do to solve them. The driver may appreciate that, for example, he has no labor protection, unlike taxi drivers. The type of coverage provided by insurers in a lawsuit may be uncertain. One aspect that usually occurs when Uber enters a new city is that the company has to negotiate with the corresponding authorities since they do not have the proper regulations for this type of service at present. Another disadvantage is that it is necessary to have data to connect with the platform.

RESEARCH METHOD

Analysis of Competitiveness in the Private Transport Business

For the projection of demand of the company to study, proposal to take as a reference the city of Guadalajara, which has a population of approximately 3 million citizens. It is in this sense that the projection of interest is expected to increase by one year around 35% in terms of the people who need and use Uber in Guadalajara, as well as in different urban areas where the benefit of Uber is accessible (Uber, 2016).

Regarding the competence analysis, Uber works similarly to that of traditional taxis, causing direct rivalry with this type of transport. New applications that offer a feature such as Uber, for example, Easy-Taxi or Cabify that have a place with a similar rank, qualify as immediate rivalry; car manufacturers could be displaced by this service, so they run the risk of reducing consumer demand.

Normally, in the market of public and private transport, the offeror chooses the places where the traveler being pick-up and the client decides them. In other words, there are some significant differences between the types of public transport, for example, the train, the trolleybus, the ecobici or the buses, the taxis differ by choosing the stops. The variables that choosing the service type of any option, for example, Uber, lie in the season, the amount of traffic, and the speed of the service.

EasyTaxi or Cabify are not transported companies, they are organizations that grant the delivery of private vehicles (which registered as taxis) and, from time to time, process this modality. Also, a similar passenger transport benefit is given by an alternative legal person to these organizations, that is, the driver of the vehicle.

ANALYSIS OF RESULTS

For the analysis of Uber's competence from a global point of view, Easytaxi is broad in 420 urban areas and in 30 countries, close to where Cabify has a reach only in Latin America, Spain, and Portugal. Uber in the five continents since 2011 and is developing as one of the most revolutionary organizations in the world sector. This firm registers a growth of 10% around downloads that are made of the application.

In the case of allude to the classification of requested cars there are two groups of consumers, the principal obtains the car by necessity and the second simply requests the car to acquire social status. The customer of need looks for a car for safety, comfort, quality, space, and a lower price, so when choosing

a car depends on the costs. However, the customer who only needs to have the car by status does not focus on the cost alone in the comfort and image of a luxurious year-round car.

On the side of the prices of the use of taxis in Guadalajara depend on many variables such as the price of gasoline, distance, time, supply, demand, traffic expectation, the area, the state of the car, insurance, etc. On a general average, the price per kilometer should be around 7.25 pesos with an increase of approximately one fifth at night. The tariffs in the different platforms are based on 5 variables mainly: time, distance, efficient route, traffic, and demand.

According to Uber's behavior as a company, it is within an oligopolistic market structure. An oligopoly is a market governed by few organizations specialized in the sector. The result of having two members in this type of market, each oligopolist knows the activities of its rivals. Since the choices of an organization influence or cause effects on the choices of others, a circumstance of equilibrium established by the companies, with which the rivalry will not exhibited. It is worth noting that, in an oligopoly of this type, there is no evident rivalry for the fact that organizations can collude to leave no space for another firm to position itself as a contender and to have communication between the companies involved in the oligopoly process can get the best benefits. On the contrary, if they compete with each other, what the leading company does would cause a specific response from the rival.

According to what the game theory establishes, if an organization is a pioneer or leader (Uber) instead of waiting for an equilibrium in which all competitors simultaneously reach an equilibrium (Nash, for example). The advantage of the leader company over the followers, that is, having a dominant business advantage over the other firms, which results in first making a decision to which they respond, that is, they take it later, the followers. A clear example in this model is the decision Uber made when agreeing to an alliance with cell phone companies (Telcel and Movistar) to offer their free wireless Wi-Fi service with customers who hire a rate plan.

This leads the leader to consider, for each election, that the followers will react according to their decision, so they correct their method of positioning themselves in the market, taking into account what the others' choices will be, as if in some way could control them and result in their advantage.

One strategy of the oligopolies, in recent times, is to reduce the cost below costs so that the other companies cannot compete, and they raise their prices indiscriminately. By establishing the oligopoly as a conceivable case, there would also be the possibility of collusion. This happens when the firms in the oligopoly agree to act in a planned manner when they offer their products or services and increase costs, they achieve a greater advantage more important for each of them than when they act independently.

If Uber or other platforms were prohibited, the oligopoly of the taxis would be maintained since they would impose their prices according to their criteria. In case they enter these allowed platforms without restrictions, either fiscal or monetary, these would include the new oligopoly that would replace the conventional taxi service. In some way, no measure is reasonable for the current financial situation. Despite the above, it is not the only answer that shown by a competitor. The scenario where Uber develops exponentially and becomes an imposing business model, that is, a Monopoly.

Limited to the above, it would be normal that, once the taxi service and the different contenders eliminated, Uber will raise its rates and the commission it charges drivers. Most likely, as has happened with the taxi, the absence of rivalry will have an opposite effect on the nature of the company's initial. From the perspective of travelers and drivers, the situation of a private tax business model may not be entirely different from what previously established with taxis. Beyond Uber building its market control as a monopolist, it is currently smaller and considered. Particularly in the possibility that the firm has

Strategic Analysis of the Rise and Fall of UBER in the Private Urban Transport Business

strategies to evade rivalry. For example, the imposition of UberPool (accessible in Mexico City) represents a significant disadvantage for rivals with smaller market scales.

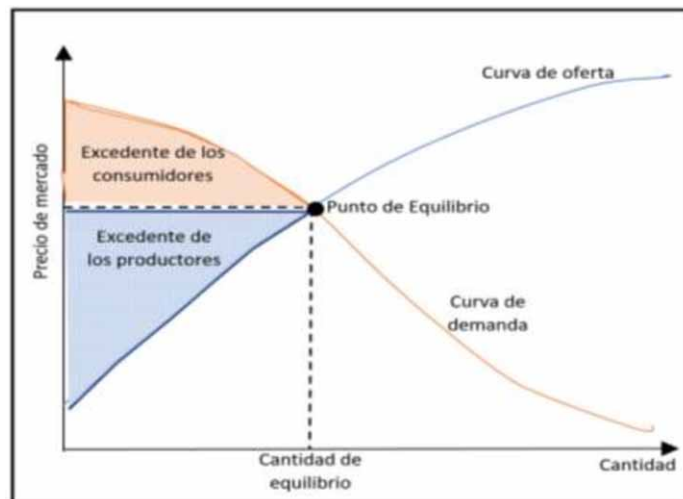
A relevant aspect related to the analysis of prices, the rates are different in each city. The rates vary due to the types of trips and these estimated by base rate, distance, and time in Guadalajara. The standard fare is 7.25 pesos per km and 3.50 pesos per minute, where Uber charges commission between 20% to 25% final fare of all trips. The cost of the fare also depends on the type of car chosen, of which the most relevant ones mentioned.

This type of service uses the dynamic rate, which applies when there are numerous trips requested in a specific area of the city and there are not enough drivers. For example, if there are a couple of cars and numerous requests, the service estimate doubled by the estimation of the dynamic rate. The dynamic rate calculated by increasing the base rate of the service by estimating the current dynamic rate.

The provision of this type of service works according to the law of supply and demand. The more consumers there are, the higher the cost to achieve a balance in the offer, or there would be an unstable demand. For example, if the cost is the same, but there are limited service providers. The waiting time would increase considerably, to the point where it will be unreasonably expensive, and customers would not wait much longer. This solved by increasing the cost so that customers who travel value the service even more. The above shown in the following graph in Figure 1.

Figure 1. Balance point regarding supply and demand

Source: Own elaboration with data from the MTJ (2011)



The company has reasons to increase costs, and that means it can put more cars available for use, since drivers would get more cash on each trip, and they will be encouraged to activate the app and provide the service. That would suggest an expansion in the offer, so more users could travel, and therefore, Uber will have more benefits. Prices can go up well in times of high activity of people, big events. Several cases of people who have paid four times more than normal, for not risking public transportation in Guadalajara.

CONCLUSION AND RECOMMENDATIONS

After the analysis conducted on the entry of Uber, a multinational firm of private passenger urban transportation to the market of the Metropolitan Area of Guadalajara, and the successful increase in the segment, despite the legal conflicts due to competitive activities with the main sector of public and private passenger transportation based on the traditional taxi systems. However, the turning point of these increasing and sustainable growths has been the pandemics. Now the operations of Uber in the Metropolitan Area of Guadalajara are falling and decreasing posing new strategic challenges to the firm.

A Smart City, or smart city, is a city that applies information and communication technologies (ICT) to provide it with an infrastructure that guarantees sustainable development. The netizen who has used applications that provide the private transport service, offered by organizations that work with pairing between the user and the driver, has changed the act of its urban versatility. Therefore, these organizations are also designing another method to offer the benefit of transportation, even though, first of all, the service was considered elitist and selective for a part of the population in its beginnings, for example, because of having credit cards. From now on, with the modifications and changes according to the collection system, the market opens up for a more prominent number of people,

Based on the previous analysis, it affirmed that Uber in the Mexican market has placed itself as an oligopoly that, little by little, has managed to control its competitors (followers) that provide a similar service. Without a doubt, the market that Uber covers to provide this service maintains the specific attributes identified with the simplicity of its platform, through the app, the low cost, the comfort it offers, its service monitoring interface, and its attention to the client. The latter is what differentiates it mainly from the taxi service. The above added to the effectiveness of the service have allowed users to start adopting this service from casual to usual.

Apart from the fact that Uber has its market, it is not the only solution to satisfy the demand for transport, an example of this is its direct competitors. The economic theory of the producer, states that these options called substitute goods and are one of the components that affect the demand for the service. For this situation, the demand for Uber could have been met with these substitute goods, for example, taxis, trains, trucks, or ecobici.

However, if the client considers that the cost, ratio, and quality of service are insufficient to choose another option, he chooses to pay the increase in the cost created by an increase in Uber's demand. The theory of the producer mentions that, instead of establishing a maximum tariff for the benefit of the consumer, the entry of competitors should be encouraged and the conditions of the alternatives improved. It concluded that a maximum rate does not solve the problem of excess demand, competition does.

REFERENCES

- Ávalos, M. (2015), Baby, you can't drive my car. The case of Uber in Mexico. *Economy Informs*, (390), 104-112.
- Barranco, M. C., & González, M. G. (2016). Intra condominium transportation in the daily mobility of periurbanization: the community link of the Guadalajara Metropolitan Area. *Transport and Territory Magazine*, (14), 167-188. Retrieved from <http://revistascientificas.filo.uba.ar/index.php/rtt/article/view/2434/2092>

Bravo, M. (2015). *Expensive and bad, public transportation in Mexico*. Retrieved from <https://meganoticias.mx/tu-ciudad/guadalajara/especiales-meganoticias/item/85874-carro-ymalo-el-transport-publico-en-mexico.html>

Bustamante, C., & Vargas-Hernández & J. G. (2018). Uber's competitive advantages over its direct competition in the private transportation business in Guadalajara, Jal. *Economic Sciences, Faculty of Economic Sciences UNL*, 15(2), 107-116.

Ferrer, A. (2016). *Taxi drivers against Uber: the fight for passengers in Mexico City*. Obtained from http://www.milenio.com/df/conflict_uber_taxis_df-fight_uber_taxis_ciudad_mexico-apps_debate_taxis_df_0_647335583.html

García Sánchez, M. (2018). *The case of UBER from a public view of Law. Final Master's Project in the practice of law*. International University of La Rioja.

Gonzalez, F. (2020). *Uber says goodbye to its Monterrey and Guadalajara offices: What will happen to employees?* Merca2.0. <https://www.merca20.com/uber-dice-adio-a-sus-oficinas-de-monterrey-y-guadalajara-que-pasara-con-los-empleados/>

González, J. (2017). *In three years, how has Uber moved to Guadalajara?* Okupo +. <http://okupo.mx/tres-anos-ha-movido-uber-guadalajara>

González Pérez, M. A. (2018). Uberification and urban mobility in the Metropolitan Area of Guadalajara: entropy in the new access configurations to motorized transport. *Science ergo-sum*, 25(2), 25-34. Available at <https://cienciaergosum.uaemex.mx/article/view/9500>

González Pérez, M. G. (2017a). Uber and urban mobility in the Guadalajara metropolitan geography: Rise and decline. *Geograficando*, 13(1), e020. doi:10.24215/2346898Xe020

González Pérez, M. G. (2017b). Motorized mobility and transport infrastructures in Culiacán: an entropic situation. In *Power, Culture and Development* (pp. 60–77). University of Guanajuato.

Guillén Navarro, N. (2018). Vehicle leasing with driver (VTC) and its legal framework: The advance of Uber, Cabify and the collaborative economy. *Journal of Local and Autonomous Administration Studies*, (9), 128–147. doi:10.24965/reala.v0i9.10470

Hernández, Y., Galindo, S., & Vicente, R. (2015). Conflict for the operation of public passenger transport (taxi mode) in urban areas of Tecamac, State of Mexico. *Public Spaces Magazine, UAEM*, 18(42), 135–156.

Hernández Romero, Y., & Galindo Sosa, R. V. (2016). UBER transport service management model. Who loses and who wins? *Public Spaces*, 19(47), 157–175.

Martínez, C. (2020). *Uber closes offices in Guadalajara, Monterrey and relocates employees*. The universal. <https://www.eluniversal.com.mx/cartera/uber-cierra-oficinas-de-guadalajara-monterrey-y-reubica-empleados>

Montealegre Gallocod, A. C. (2017). *Importance of the big data solution in the mobility application Uber movement Monograph Diploma Big*. Free University Faculty of Engineering. Systems engineering program. Bogotá D.C.

MTJ. (2015). Study of supply and demand of taxi transport services and the new transport network companies UBER and City Drive in the Guadalajara Metropolitan Area. *The Informant*. Obtained from https://issuu.com/el_informador/docs/estudio_taxis_uber

Navarro Pérez, K. L., & Ortiz Aristizábal, A. F. (2016). Evaluation of advantages and disadvantages of Uber compared to the taxi transport service between streets 53 to 45 and av. Caracas and Seventh. Degree work. Catholic University of Colombia. Faculty of Engineering. Civil Engineering Program. Bogota Colombia.

Olivares, E. M. (2014). *Economic systems and models of modern economy*. Autonomous University of Colombia.

Pallares, M. A. (2016). Uber has 1.2 million users in Mexico. *The Universal newspaper*. Obtained from <https://www.eluniversal.com.mx/articulo/cartera/negocios/2016/03/8/uber-suma-12-millones-de-usuarios-en-mexico>

Peng, M. W. (2012). *Global Strategy*. Thomson South-Western.

Pérez, D. (2016). 7 Uber service points that will change with its regulation in Guadalajara. *Attraction 360*. <https://www.atraccion360.com/que-es-ley-uber-en-guadalajara>

SUN. (2020). Uber announces the closure of its offices in Guadalajara The company adapts its business model in the midst of the crisis caused by COVID-19. *The Reporter*. <https://www.informador.mx/economia/Uber-anuncia-el-cierre-de-sus-oficinas-en-Guadalajara-20200522-0129.html>

SUN. (2020). Uber anuncia el cierre de sus oficinas en Guadalajara La empresa adecua su modelo de negocios en medio de la crisis causada por el COVID-19. *El Informador*. <https://www.informador.mx/economia/Uber-anuncia-el-cierre-de-sus-oficinas-en-Guadalajara-20200522-0129.html>

The Press. (2016). *Uber will receive payment in cash*. Obtained from https://www.prensa.com/economia/Uber-recibira-pago-efectivo_0_4543795641.html

The Reporter. (2016). *New executive taxi platforms arrive*. Accessed on January 14, 2016. Available at <https://www.informador.mx/Jalisco/Llegan-nuevas-plataformas-de-taxi-ejecutivo-20160526-0207.html>

Tiongson, J. (2015). Mobile App Marketing Insights: How Consumers Really Find and Use Your Apps. *Think with Google*. Retrieved from <https://www.thinkwithgoogle.com/articles/mobile-app-marketing-insights.html>

Tiongson, J. (2015). Mobile App Marketing Insights: How Consumers Really Find and Use Your Apps. *Think with Google*. Obtenido de <https://www.thinkwithgoogle.com/articles/mobile-app-marketing-insights.html>

Trafficzmg. (2016). *Uber launches the XL version for Guadalajara*. <https://traficozmg.com/2016/01/uber-lanza-la-version-xl-para-guadalajara/>

Tráficozmg. (2016). *Uber lanza la versión XL para Guadalajara*. <https://traficozmg.com/2016/01/uber-lanza-la-version-xl-para-guadalajara/>

Uber. (2016). *Uber moves Guadalajara*. Obtained from <https://www.uber.com/es-US/cities/guadalajara/>

Uber. (2016). *Uber mueve a Guadalajara*. Obtenido de <https://www.uber.com/es-US/cities/guadalajara/>

Uber. (2017). *Newsroom*. Retrieved from <https://newsroom.uber.com/locations/#na-region>

Uber. (2017). *Sala de redacción*. Retrieved from <https://newsroom.uber.com/locations/#na-region>

Yeung, E. (2012). *How to Launch Your App in an International Market*. Mashable. Retrieved from <http://mashable.com/2012/02/13/mobile-apps-international/#aeYWOgIPIOq8>

Yeung, E. (2012). *How to Launch Your App in an International Market*. Mashable. Obtenido de <http://mashable.com/2012/02/13/mobile-apps-international/#aeYWOgIPIOq8>

KEY TERMS AND DEFINITIONS

Competitive Advantage: A competitive advantage is any characteristic of a company, country or person that differentiates it from others, placing it in a relative superior position to compete. That is, any attribute that makes it more competitive than the others.

Digital Application: A digital application (also called an app) is simply a computer program created to carry out or facilitate a task on a computing device. It should be noted that although all applications are programs, not all programs are applications.

Private Transportation: The act and consequence of moving something from one place to another, as a service offered by individuals. It also allows to name those gadgets or vehicles that serve for this purpose, carrying individuals or goods from one place to another.

Strategy: The direction given to the internal resources of an organization based on changes in the environment, to obtain advantages.

Supply and Demand: The term demand refers to the quantity of goods or services that requested or desired in a certain market of an economy at a specific price. Offer, refers to the amount of goods, products or services that are offered in a market under certain conditions.

Uber: Uber is the name of an international company dedicated to the transport of passengers connecting customers and drivers thanks to a free application.

Urban Transport: Transportation that runs entirely within the same municipal term. ... Some regulations define it, in a less appropriate way, such as that which runs entirely on urban or developable land.

Virtual Platform: Digital platforms or virtual platforms are spaces on the Internet that allow the execution of various applications or programs in the same place to satisfy different needs.

Chapter 6

Revealing the Disintermediation Concept of Blockchain Technology: How Intermediaries Gain From Blockchain Adoption in a New Business Model

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ABSTRACT

Typically, people have a misconception about blockchain as they associate this technology with cryptocurrency. This chapter does not focus, however, on bitcoin or cryptocurrencies that pertain to its intrinsic value. Rather, the authors focus on the disintermediation feature of blockchain technology by providing insights into how this technology could substitute for the functions and roles of the intermediary. The findings show that blockchain technology is not equipped with financing and physical distribution functions. The current research further demonstrates that most of the blockchain service providers that are listed in the Liechtenstein Blockchain Act are required to perform the traditional roles of an intermediary. Thus, blockchain technology is not found to support a full concept of disintermediation. This chapter is vital in order for existing intermediaries to gain a deeper understanding of how to analyze and optimize their existing functions and roles while adjusting their business model in the token-based economy.

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INTRODUCTION

The approval of the Token and Trustworthy Technology Service Providers Act (AKA Liechtenstein Blockchain Act or simply the Blockchain Act), which came into force on January 1, 2020, has introduced a new list of blockchain service providers. Importantly, the Blockchain Act focuses on blockchain and tokens in general rather than emphasizing cryptocurrency. In this regard, any form of assets or rights—money, securities, rights to assets, rights to real estate, license rights, rights of use—could be tokenized, and a *token* is defined as “a piece of information in a [blockchain]¹ system which can represent claims or rights of memberships against a person, rights to property, or other absolute or relative rights, and is assigned to one or more [blockchain] identifiers” (p. 117 of the Blockchain Act). Thus, the token-based economy relates to using a set of immutable digital data to represent any assets or rights with blockchain technology. With this Blockchain Act, tangible and intangible assets could be legally tokenized on the blockchain platform, and thereby, firms should equip themselves with the knowledge of analyzing how blockchain technology could bring benefits to their business model.

A business model is essential to a firm’s plan for making a profit and ensuring business sustainability. It explains how the firm creates, delivers, and captures value in the economy (Chong et al., 2019). As opposed to being firm-internal centric, Berglund and Sandström (2013) suggested that a technology-oriented business model should be recognized from an open systems perspective, which highlights the importance of making sure that the business model is complementary with other business partners and mutually beneficial to collaborative business relationships (Hummel et al., 2010). Following this notion, an open business model is considered relevant to blockchain service providers due to blockchain’s distributed database that facilitates resource sharing (Goertzel et al., 2017), such as an open-source model (Casadesus-Masanell & Llanes, 2011). Despite this, previous research has found that blockchain technology could transform the economy by accelerating the disintermediation of many key players in the marketplace, such as banks (Scott et al., 2017), auditors (Dai & Vasarhelyi, 2017), lawyers (Pivovarov, 2019), and real estate brokers (Kejriwal & Mahajan, 2017). As such, blockchain technology itself is considered an autonomous entity (Tapscott & Tapscott, 2016) as it can perform the functions and roles of the intermediary.² Nonetheless, some scholars have raised their concerns regarding the disintermediation role of blockchain technology (Hawlitschek et al., 2018; Zamani & Giaglis, 2018).

To the best of our knowledge, no research has provided a marketing theory-based analysis of the intermediary functions and roles in the context of blockchain technology. In this chapter, we aim to fill this research gap by focusing on whether the existing intermediaries may optimize current functions and roles while adjusting their business model in the token-based economy. Thus, drawing on intermediary functions (Alderson & Martin, 1965; Monash, 2020) and middleman theory (Krakovsky, 2015), we conducted a series of theory-based analyses, exploring the potentials and limitations of blockchain technology in performing the intermediary functions and roles, as well as mapping the intermediary roles with the descriptive roles of the blockchain service providers that are stated in the Liechtenstein Blockchain Act.

In so doing, the current research contributes to several works of literature. First, regarding the disintermediation concept of blockchain technology (Hawlitschek et al., 2018), our results contrast with and challenge the prior research, which has mostly reported the advantages of blockchain technology across the distribution networks (Chang et al., 2019; Rashideh, 2020). Indeed, blockchain technology has its inherent limitations in regard to performing financing and physical distribution functions; however, this technology owns three core intermediary functions: reducing transaction costs, the automation of agree-

ment (i.e., smart contracts), and the integration of information and shared resources. Second, we extend the middleman literature (Krakovsky, 2015) by extending the descriptive roles of the intermediary into the context of blockchain service providers. Remarkably, most of the blockchain service providers have to perform the traditional roles of the intermediary since blockchain technology itself does not have the capacity to match the potential sellers and buyers. Third, we also provide a contribution to the integration of the blockchain marketing strategy and open business model literature (Casadesus-Masanell & Llanes, 2011; Goertzel et al., 2017). We demonstrate that marketing strategy is considered essential for achieving a sustainable open business model; it highlights the functions and roles of the intermediary as a link between the collaborative blockchain organizations (e.g., service providers) and their customers (Gattringer & Wiener, 2020).

The managerial implications of our findings state that for taking innovative action towards transforming business models in the token-based economy, the existing intermediaries should focus on those intermediary functions and roles that are not accomplished by the blockchain technology itself. Further, apart from blockchain governance, the revenue model, financial strategy, and supply chain strategy, blockchain service providers should include a thoughtful marketing strategy as part of their process in preparing business models.

The Disintermediation Concept Of Blockchain Technology

In the context of blockchain, *disintermediation* refers to the power of removing intermediaries in the distribution network (Gaur, 2020), which means transferring power from suppliers to consumers by establishing a direct relationship between the producers and end users via a blockchain platform (Rashideh, 2020). In this regard, the disintermediation role of blockchain technology is expected to lower costs, reduce inefficiencies, and increase data security (Chang et al., 2019).

Blockchain is considered a trustworthy technology as it is characterized by decentralized networks, an immutable and timestamped database, data transparency and traceability, and a unique data security mechanism (Wang et al., 2019). *Decentralized networks* refer to governing a network in a distributed fashion, which means that no single authority has absolute rights to exert power in the network, whereas data is copied and spread across a network of computers (Beck et al., 2018). In contrast to the relational database that allows for modifications and updates, blockchain data is stored chronologically and the data cannot be altered or deleted (Michelman, 2017). Further, blockchain enables the transparency of information (Chong et al., 2019), and it is possible to perform an audit trail to trace back each transaction due to its immutability feature. Lastly, blockchain technology offers highly secure and tamper-proof access to shared information by utilizing top-level cryptographic technology, which ensures that only authorized network nodes can access data (Wang et al., 2019).

Technically, blockchain technology provides a trust mechanism for the multistakeholder in the blockchain ecosystem (Chang et al., 2019). That is, consumers or involved parties put their trust in the blockchain platforms rather than trusting intermediaries that serve to protect against the risks associated with the exchange of resources (Zamani & Giaglis, 2018). In this regard, blockchain technology creates an internet [or Internet] of trust that guarantees trust in monetary transactions, the exchange of information, security, privacy, and it directly reduces the cost of building trust that is conventionally performed by the intermediaries (Ahluwalia et al., 2020). For this reason, an exchange of value and transfer of ownership occur in a trustless environment as blockchain is an authentication and verification technology without the presence of a trusted third party or central institution (Kiviat, 2017).

Recently, Hawlitschek et al. (2020) criticized the common misconception (i.e., the disintermediation fallacy) about the applicability of blockchain technology in superseding the intermediary roles in the sharing economy. In theory, it is understood that blockchain should be decentralized and the community should be incentivized to take responsibility for the platform (Beck et al., 2018). However, in practice, especially for online business platforms that aim to survive in a competitive environment, it is unfeasible to achieve sustainable business models if there are no central platform providers that are accountable for thoughtful designs and management of the blockchain-based marketplace platform (Hawlitschek et al., 2020). Besides, new types of intermediaries should evolve across the adoption of blockchain technology in different industries, albeit some existing intermediaries will be ostracized by blockchain technology (Zamani & Giaglis, 2018). Based on this notion, we argue that the central value proposition of blockchain technology is unconvincingly associated with the concept of disintermediation.

The Analysis Of The Blockchain Capability And The Key Functions Of Intermediary

To provide insights into how blockchain technology could possibly replace intermediaries in the distribution network (i.e., disintermediation), we analyzed the capability of blockchain technology substituting for the functions of the intermediary. From the marketing perspective, intermediaries exist between firms as they enhance end-user convenience, market coverage, and the efficiency of the distribution network by performing three basic functions in the distribution channel (Alderson & Martin, 1965; Monash, 2020):

- **Transactional Functions:** This function explains how intermediaries create and improve a marketplace, which includes their resources for increasing market linkages between the sellers and buyers, establishing a satisfactory buyer–seller relationship, minimizing transaction costs, and bearing the risk of loss of money. As presented in Table 1, we argue that blockchain technology itself increases the market linkages as it provides a public trading environment; however, this function is only applicable for permissionless blockchain networks such as Bitcoin and Ethereum. In terms of permissioned blockchain technology (e.g., Libra and Hyperledger), participants must first join a consortium to access their membership rights in the network. Thus, a mis-linkage of market linkages occurs if any relevant and important parties are not part of the consortium. Despite blockchain technology enhancing transparency, reducing information asymmetrically, and subsequently minimizing transaction costs in a trustless environment (Kiviat, 2017), it does not guarantee a long-term buyer–seller relationship since other criteria should be considered, such as product quality and the post-purchase customer experience. With a smart contract, risk management may be performed by carefully predefining a self-executed smart contract. However, blockchain technology itself does not bear any unsold inventory and volatile assets as handled by intermediaries. Thus, blockchain technology partially fulfills the transactional functions of the intermediary.
- **Facilitating Functions:** To enhance the engagement between sellers and buyers, intermediaries play an important function in facilitating both physical exchange and the transaction of goods, including providing relevant information, financing, the preparation of a purchase agreement, and the post-purchase customer experience. In general, buyers and sellers can access relevant information easily from the blockchain technology; however, it only covers the necessary information about the products/transaction and information that is shared by the participants within

the blockchain network. Other important information for decision-making—such as market intelligence, market research data, statistics, and customer feedback on competitor products—are not indispensably appended in the blockchain. The main reason given is that self-executed agreements on smart contracts only process transactional-related information. Importantly, our analysis found that blockchain technology itself does not offer financing services,³ instead, financing activities are independently handled by another entity or intermediaries. Further, blockchain technology itself does not include non-transactional initiatives in the smart contract, such as customer inquiries, product care tips and updates, and a newsletter. As such, blockchain technology only handles the post-purchase customer experiences that are listed on the smart contract's predefined terms and conditions, such as refunds and returns, a warranty, rewards for loyalty, replenishment reminders, and product satisfaction feedback. Thus, blockchain technology does not fully cover the facilitating functions of the intermediary, including providing relevant information for decision-making, a financing facility, and a post-purchase customer experience.

- **Logistical Functions:** This function focuses on the flow of goods, resources, and information between the origin and the endpoint of consumption. The logistical function includes both physical distribution (e.g., product storage, shipping, and assortment) and the integration of information and shared resources. As stated by Catalini and Gans (2020), blockchain technology is more suitable for digitalized assets (e.g., cryptocurrencies, music, software, and e-books); such an inherent characteristic has prevented blockchain from performing physical distribution as the movement of a physical object occurs in the physical world. An important remark is that we reject the idea of an IoT blockchain as an IoT device is considered a separate entity/actor in the blockchain ecosystem (Tan & Saraniemi, 2020). Thus, blockchain technology only performs information integration using different entities and shared resources.

Table 1. An analysis of using blockchain technology in substituting for the functions of the intermediary

The basic functions of the intermediary	Capability of blockchain technology (Is blockchain technology capable of replacing the function?)
Transactional functions (marketplace)	
• Increase market linkages.	Partially
• Reduce transaction costs.	Yes
• Establish a buyer–seller relationship.	Partially
• Bear risks.	Partially
Facilitating functions (engagement)	
• Provide relevant information.	Partially
• Make agreements.	Yes
• Enable/provide financing.	No
• Provide a post-purchase customer experience.	Partially
Logistical functions (the flow of goods, resources, and information)	
• Physical distribution.	No
• Integration of information and shared resources.	Yes

How Do The Existing Roles Of The Intermediary Match With Blockchain Service Providers?

We suggest that, in general, blockchain technology itself could partially improve or substitute for certain functions of the intermediary. However, our findings do not support the concept of disintermediation—cutting out the intermediaries—that has been heavily communicated in scientific research (e.g., Morkunas & Paschen, 2019; Rashideh, 2020) and popular news media (Kejriwal & Mahajan, 2017; Pivovarov, 2019). To elucidate how the existing intermediaries could act as the legalized entities that are stated in the Liechtenstein Blockchain Act, we conducted the following analysis by classifying the intermediary roles of blockchain technology into certifier, enforcer, risk bearer, concierge, bridge, and insulator roles (Krakovsky, 2015):

- **Certifier:** We suggest that blockchain technology should play a vital role as the certifier; it adds value for both buyers and sellers by performing the business and/or transaction verification process (Catalini & Gans, 2020). Further, blockchain's immutable and audit trail features make it credible for it to act as a certifier. For these reasons, blockchain technology can act as the intermediary and completely supersedes most of the certificate authorities or entities.
- **Enforcer:** Due to blockchain's timestamp, transparency, and decentralized characteristics, blockchain could theoretically make sure buyers and sellers put forth a full effort, cooperate, and stay honest. Essentially, a legally enforceable smart contract can be stored in a blockchain and it automatically executes. For instance, payment is automatically transferred to recipients' accounts when predetermined terms and conditions are met between the parties involved. Nonetheless, when there is a dispute or misbehavior during the transaction, blockchain merely does not proceed with the non-compliant smart contract, without having any authority to punish or to enforce that "bad players" act in good faith (Gomez et al., 2019). To overcome this issue, related authorities have to step in to protect against the post-contractual pitfalls of misappropriating actions. As such, blockchain technology partially plays the role of the enforcer.
- **Risk Bearer:** This role serves to reduce uncertainty between the parties involved, which requires the ability to recognize both internal and external risks, as well as excel in risk management. We propose that blockchain technology could partially act as an effective risk bearer because of its capability to integrate information and shared resources. For example, the data/information of the business intelligence in risk management could be stored in the blockchain and subsequently be embedded in the smart contract. That is, blockchain technology utilizes an integrated database to diversify risk by performing risk management functions rather than directly bearing risk on behalf of parties involved.
- **Concierge, Bridge, and Insulator:** A *concierge* serves to make buyers' lives easier by compiling information in one place (e.g., aggregators, such as Expedia, Skyscanner, and Booking.com). A *bridge* serves to create opportunities or a marketplace by matching disconnected buyers and sellers, for example, Facebook social commerce, eBay, Uber, and Airbnb. An *insulator* serves to diffuse the responsibilities of sellers and buyers so as to avoid an unwilling experience occurring during the transaction process, which is highly associated with the task to "act and hold responsibility on involved parties' behalf." For example, an insulator is a professional football agent who is fully responsible for negotiating an agreed price, salary package, and benefits on the behalf of players while transferring to another football club. One common characteristic amongst these

three intermediary roles is the ability to match the potential sellers and buyers. That is, such roles require the capability of understanding customers' needs and sellers' offers, an act of searching, an act of matching, an act of negotiating, and other value-added efforts. In this sense, we argue that blockchain technology itself is not designed to perform matchmaking activities.

Referring to the Liechtenstein Blockchain Act, we conducted an analysis by mapping the existing roles of intermediaries with the descriptive roles of blockchain service providers. As shown in Table 2, we found that only verifying authority could be replaced by the blockchain technology itself as it only functions in the certifier roles. Other proposed blockchain service providers are found to play other intermediary roles that are not absolutely substituted for by the blockchain technology (i.e., enforcer, risk bearer, concierge, bridge, and insulator).

Table 2. Mapping between blockchain service providers and the roles of the intermediary

Blockchain service providers	The roles of intermediary					
	Certifier ^a	Enforcer ^b	Risk bearer ^b	Concierge ^c	Bridge ^c	Insulator ^c
Verifying authority	Yes	-	-	-	-	-
Physical validator	Yes	Yes	Yes	-	-	-
Depositories	-	-	Yes	-	-	-
Token issuer	-	Yes	Yes	-	-	-
Protector	-	Yes	-	-	-	Yes
Exchange service provider	-	-	-	-	Yes	-
Price service provider	-	-	-	Indirectly	-	-
Identity service provider	Yes	-	Yes	-	-	-
^a Blockchain acts as the intermediary. ^b Blockchain partially acts as the intermediary. ^c Blockchain is not able to act as the intermediary.						

- **Verifying Authority:** This term relates to a person or entity that verifies the legal capacity and requirements for token disposal. This blockchain service provider can be performed by software or an individual human being in checking these prerequisites for disposal (the certifier role).
- **Physical Validator:** This is a person or entity who ensures the existence and enforcement of contractually obligatory rights to property represented in a blockchain technology system in the sense of property law. That is, the physical validator—a legal entity—serves to guarantee that the tokenized object or item physically exists, which shall be recognized in both digital and analog worlds. The physical validator covers three intermediary roles, including the identification and rights to the object of value (the certifier role), ownership transfer of the object (the enforcer role), and storage of the physical object on behalf of the owners (the risk bearer role).
- **Depositories:** There are two types of depositories: key and token depositories. A key depositary is defined as a person or entity acting as a custodian who holds private keys on behalf of the principal, whereas a token depositary relates to a person or entity who holds tokens (both private and public keys) on behalf of another person or another person's or entity's account. Such service

providers are important to owners for reducing the risk of losing private keys—a private key and token are entrusted to depositories for safekeeping and to bear the risk of hacker attacks (the risk bearer role). The reason given is that in the token-based economy, owners will not be able to retrieve their assets if they lose the private keys, and any tokenized rights in assets are lost to heirs if the decedents fail to make their private keys accessible to inheritors.

- **Token Issuer:** This is a person or entity offering tokens to the public on the token issuer's behalf or that of another person or entity. To provide protection for users and to minimize the risk of abuse, a token issuer must ensure the token issuance follows the guidelines of the Financial Market Authority (the enforcer role). The token issuer also has responsibilities in the disclosure of basic information at any time during token issuance, the execution of token issuance, and the maintenance of interruptions during the token issuance (the risk bearer role).
- **Protector:** This is a person or entity holding tokens in their own name in a blockchain technology system for the benefit of a third party (the insulator role) that has authorization pursuant to the Trustees Act. An important note is that only service providers licensed under the Banking Act or the Professional Trustees and Fiduciaries Act are permitted to perform the role of protector so as to ensure the legitimate protection of privacy and to minimize the risk of money laundering in blockchain systems (the enforcer role).
- **Exchange Service Provider:** This is a person or entity who exchanges fiat (legal tender) for tokens (or vice versa). Such a blockchain service provider connects disconnected buyers and sellers in their exchange or trading platforms by publicly disclosing comparable market prices and the up-to-date purchase and selling prices of the traded tokens (the bridge role).
- **Price Service Provider:** This is a person or entity providing blockchain technology system users with aggregated price information based on buying and selling offers or completed transactions. As mentioned in the introduction, the token-based economy consists of a wide range of tokenized assets and rights, such as the rights to real estate (e.g., land and houses), rights to assets (e.g., diamonds and paintings), or license rights (e.g., music rights). As such, these categories of price information may not be publicly accessible compared with the price movement of cryptocurrency. Thus, a price service provider is essential in ensuring the transparency of a published price, avoiding insider dealing and conflicts of interest when setting prices, and in disclosing relevant information to involved parties, which indirectly establishes a new and *price-informed* marketplace amongst parties who are interested in selling and buying the tokenized assets and rights (the concierge role).
- **Identity Service Provider:** This provider serves to identify the *actor* in possession of the right of disposal related to a token and the provider records it in a blockchain directory. There are two forms of actors in the blockchain context: legal persons or representatives who are physically present (e.g., business entities and individual human beings) and legal persons who are not physically present (e.g., IoT devices and decentralized autonomous organizations). This service provider ensures that the involved sellers and buyers are lawful actors (the enforcer role) and that they are reliably identified before the transaction occurs (the certifier role).

In both analyses, our findings show that the blockchain technology itself is not able to supersede either the functions or the roles of the intermediary utterly. In this regard, the existing intermediaries should recognize the approval of the Blockchain Act as a golden opportunity to take innovative action to

transform or adjust their business model in the token-based economy rather than view the development of blockchain technology as a threat to their future revenue model (Sandner et al., 2020).

Theoretical Implications

This research provides a three-fold contribution. First, using existing intermediary theories, our study addresses how blockchain could accelerate disintermediation in the token-based economy (Hawlitschek et al., 2018; Zamani & Giaglis, 2018). To the best of our knowledge, this is the first research that systematically analyzes the capability of blockchain to substitute for the functions of intermediaries (Alderson & Martin, 1965; Monash, 2020) throughout the distribution channel. We provide a detailed breakdown for each basic function and classify each function with a key attribute in the context of blockchain technology. Specifically, the transaction function is related to the marketplace, the facilitating function reflects the engagement process, and the logistical function refers to the flow of goods, resources, and information. Such theoretical implication is important to any intermediary analysis of new technology (e.g., artificial intelligence and virtual reality) as the technology itself should not unconditionally replace the entire functions of the intermediary. Seemingly, blockchain technology owns three core intermediary functions: reducing transaction costs, the automation of agreement (i.e., smart contracts), and the integration of information and shared resources. However, blockchain technology itself is not an autonomous entity that has cognitive, analytical, and strategic mindsets with which to perform business operations. For this reason, it faces inherent limitations in providing financing and distributing or storing a physical item, which is witnessed by most of the functions of the existing intermediaries (e.g., banks, suppliers, and retailers).

Second, the current research contributes to the middleman theory (Krakovsky, 2015) by articulating the intermediary roles of blockchain technology. Blockchain technology itself does not have the capacity of understanding customers' needs and sellers' offers. An important note is that artificial intelligence (AI) is another form of technology, and thus, this chapter does not consider the matching capability to use AI with blockchain data. In this sense, blockchain technology is not designed to act as a concierge, bridge, or insulator for business matchmaking activities when no predefined conditions are stated in a particular smart contract (Gomez et al., 2019). Rather, blockchain technology plays an absolute role as the certifier, as well as partially acting as enforcer or risk bearer. Further, we provide the relevancy of existing intermediary roles by mapping blockchain service providers that are stated in the Liechtenstein Blockchain Act. Interestingly, most of the listed blockchain service providers overlap with the intermediary roles that could not be autonomously performed by the blockchain technology itself. That is, despite exaggerating the disintermediation feature of blockchain technology, we found that, regardless of how services are provided, most of the listed blockchain service providers are required to perform the traditional roles of the intermediary in the blockchain ecosystem, including overcoming an agreement dispute (the enforcer role), risk management and diversification (the risk bearer role), the creation of a marketplace with aggregated information (the concierge role), the matching between disconnected parties for business opportunities (the bridge role), and the role of acting as a representative (the insulator role).

Third, we shed light on the importance of integrating marketing strategy and open business model literature (Casadesus-Masanell & Llanes, 2011; Goertzel et al., 2017) in the context of blockchain. Blockchain technology has been heavily associated with disintermediation (Rashideh, 2020), and it plays a crucial role in disrupting social media marketing (e.g., Facebook/YouTube ads) by incentivizing consumers to have a direct-brand relationship (Harvey et al., 2018). In this regard, less attention has been

placed on the relationship between the blockchain business model and marketing strategy. Critically, our findings show that blockchain technology itself is not equipped with the capability of understanding the needs and wants of customers, whereas most of the blockchain service providers that are stated in the Liechtenstein Blockchain Act have to have such a capability in the marketplace. Thus, our research demonstrates that marketing strategy is considered essential for achieving a sustainable open business model as it highlights the function and roles of the intermediary as a link between the collaborative blockchain organizations (e.g., service providers) and their customers (Gattringer & Wiener, 2020).

Managerial implications

To date, most research on blockchain's use in business has focused on blockchain governance (Beck et al., 2018; Montes & Goertzel, 2019), business models (Chong et al., 2019; Xu et al., 2018), financial strategy (Böhme et al., 2015), and supply chain strategy (Kshetri, 2018). Relatively, we suggest that blockchain service providers have to include contemplative planning for their marketing strategy into their business models. Specifically, more marketing effort has to be focused on those intermediary functions and roles that are not effectuated by the blockchain technology itself, including how to (a) understand the market trend and customers' needs and wants, (b) create business opportunities between potential buyers and sellers, (c) increase market linkages, (d) establish a buyer–seller relationship, (e) reduce or diversify the risk between buyers and sellers, (f) provide financing facilities, (g) enhance the post-purchase customer experience, and (h) distribute physical products efficiently and effectively.

Besides the above, we suggest that the existing intermediaries—such as banks, audit firms, law firms, and real estate brokers—should view blockchain technology as a business transformative opportunity by understanding the impacts of blockchain technology on their current business models. In this regard, intermediaries first should analyze how blockchain technology could possibly affect existing functions and roles in the marketplace (i.e., what are their current weaknesses) and how it is unlikely to affect existing functions and roles in the marketplace (i.e., what are their current strengths). Then, intermediaries can take innovative actions to optimize their strengths while piloting blockchain technology in their business operations.

For instance, banks are expected to be essential players in the context of the Facebook-initiated Libra stablecoin and the digital programmable Euro (Sandner et al., 2020). The reason given is that banks could utilize their existing capability and networks to provide custody for digital money and distribute digital money, to ensure daily transactions are in compliance with Know Your Customer and Anti-Money Laundering policies, to get involved in the development of an interoperability standard in a banking consortium, and to act as designated dealers or virtual asset service providers in the Libra stablecoin ecosystem.

Auditing services could be transformed into more technological, analytical, and consulting-oriented services, including code audits on smart contracts, predictive audits, fraud detection, and risk management (Dai & Vasarhelyi, 2017). As for law firms, lawyers should benefit relatively from their legal knowledge; they need to equip themselves with the fundamental knowledge about blockchain in order to code the agreement of a smart contract that is enforced under the law (Kiviat, 2015). Despite blockchain in real estate being perceived to have the potential to replace intermediaries (Kejriwal & Mahajan, 2017), we strongly believe that brokers will maintain their position in searching for the right property that matches the needs of purchasers, especially for non-public listed properties. Thus, in line with the work of Seyedsayamdost and Vanderwal (2020), we find that blockchain technology does not appear to comply

with its disintermediation roles is in the marketplace; rather, it replaces traditional and nonprofessional intermediaries with new blockchain experts and professional service providers.

LIMITATIONS AND FUTURE RESEARCH

Our research has several limitations that can be seen as directions for future research. First, the current study only conducts analysis based on the blockchain service providers that are listed in the Liechtenstein Blockchain Act. Key-informant interviews (Kumar et al., 1993) and case studies (Yin, 2014) of blockchain utilization could be conducted to further differentiate the functions and roles of the intermediary that are performed by blockchain technology itself versus blockchain service providers. Second, the functions and roles of the intermediary are considered an essential element of the marketing strategy. Thus, future research could investigate other elements of the marketing strategy in the context of blockchain technology, such as segmentation, branding, communication and engagement, the marketing mix, and the role of the institutional environment in marketing channels (Grewal & Dharwadkar, 2002). Third, future research should analyze the blockchain business model using a boundary-spanning perspective (Zott et al., 2011). Fourth, our discussions do not make a distinction between permissionless versus permissioned blockchain technology. For this reason, future research that focuses on a comparison of different blockchain platforms (e.g., Ethereum, Hyperledger, Stellar, EOS, and R3 Corda) is needed in order to provide greater understanding of blockchain-marketing strategy. Lastly, future research should investigate how the evolving role of intermediaries due to blockchain affecting value network structures, platform-based business settings, and even industrial or business segments as a whole.

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REFERENCES

- Ahluwalia, S., Mahto, R. V., & Guerrero, M. (2020). Blockchain technology and startup financing: A transaction cost economics perspective. *Technological Forecasting and Social Change*, 151, 119854. doi:10.1016/j.techfore.2019.119854
- Alderson, W., & Martin, M. W. (1965). Toward a formal theory of transactions and transvections. *JMR, Journal of Marketing Research*, 2(2), 117–127. doi:10.1177/002224376500200201
- Beck, R., Müller-Bloch, C., & King, J. L. (2018). Governance in the blockchain economy: A framework and research agenda. *Journal of the Association for Information Systems*, 19, 1020–1034. doi:10.17705/1jais.00518

- Berglund, H., & Sandström, C. (2013). Business model innovation from an open systems perspective: Structural challenges and managerial solutions. *International Journal of Product Development*, 8(3/4), 274–285. doi:10.1504/IJPD.2013.055011
- Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). Bitcoin: Economics, technology, and governance. *The Journal of Economic Perspectives*, 29(2), 213–238. doi:10.1257/jep.29.2.213
- Casadesus-Masanell, R., & Llanes, G. (2011). Mixed source. *Management Science*, 57(7), 1212–1230. doi:10.1287/mnsc.1110.1353
- Chang, S. E., Chen, Y. C., & Lu, M. F. (2019). Supply chain re-engineering using blockchain technology: A case of smart contract based tracking process. *Technological Forecasting and Social Change*, 144, 1–11. doi:10.1016/j.techfore.2019.03.015
- Chong, A. Y. L., Lim, E. T., Hua, X., Zheng, S., & Tan, C. W. (2019). Business on chain: A comparative case study of five blockchain-inspired business models. *Journal of the Association for Information Systems*, 20(9), 1310–1339. doi:10.17705/1jais.00568
- Dai, J., & Vasarhelyi, M. A. (2017). Toward blockchain-based accounting and assurance. *Journal of Information Systems*, 31(3), 5–21. doi:10.2308/isisys-51804
- Gattringer, R., & Wiener, M. (2020). Key factors in the start-up phase of collaborative foresight. *Technological Forecasting and Social Change*, 153, 119931. doi:10.1016/j.techfore.2020.119931
- Gaur, N. (2020). Blockchain – A platform for disintermediation. *Infocast*. Available at: <https://infocastinc.com/market-insights/technology/blockchain-a-platform-for-disintermediation/>
- Goertzel, B., Goertzel, T., & Goertzel, Z. (2017). The global brain and the emerging economy of abundance: Mutualism, open collaboration, exchange networks and the automated commons. *Technological Forecasting and Social Change*, 114, 65–73. doi:10.1016/j.techfore.2016.03.022
- Grewal, R., & Dharwadkar, R. (2002). The role of the institutional environment in marketing channels. *Journal of Marketing*, 66(3), 82–97. doi:10.1509/jmkg.66.3.82.18504
- Harvey, C. R., Moorman, C., & Toledo, M. (2018). *How blockchain will change marketing as we know it*. Working Paper. Available at SSRN 3257511.
- Hawlicschek, F., Notheisen, B., & Teubner, T. (2018). The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy. *Electronic Commerce Research and Applications*, 29, 50–63. doi:10.1016/j.elerap.2018.03.005
- Hawlicschek, F., Notheisen, B., & Teubner, T. (2020). A 2020 perspective on “The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy. *Electronic Commerce Research and Applications*, 40, 100935. doi:10.1016/j.elerap.2020.100935
- Hummel, E., Slowinski, G., Matthews, S., & Gilmont, E. (2010). Business models for collaborative research. *Research Technology Management*, 53(6), 51–54.

- Kejriwal, S., & Mahajan, S. (2017). Blockchain in commercial real estate: The future is here! *Deloitte Center for Financial Services*. Available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-dcfs-blockchain-in-cre-the-future-is-here.pdf>
- Kiviat, T. I. (2015). Beyond Bitcoin: Issues in regulating blockchain transactions. *Duke Law Journal*, 65, 569–608.
- Krakovsky, M. (2015). The middleman economy: How brokers, agents, dealers, and everyday matchmakers create value and profit. Palgrave MacMillan US. doi:10.1007/978-1-137-53020-2
- Kshetri, N. (2018). Blockchain's role in meeting key supply chain management objectives. *International Journal of Information Management*, 39, 80–89. doi:10.1016/j.ijinfomgt.2017.12.005
- Kumar, N., Stern, L. W., & Anderson, J. C. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, 36(6), 1633–1651.
- Michelman, P. (2017). Seeing beyond the blockchain hype. *MIT Sloan Management Review*, 58(4), 17–19.
- Monash. (2020). Transactional functions. *Marketing Dictionary*. Available at: <https://www.monash.edu/business/marketing/marketing-dictionary/t/transactional-functions>
- Montes, G. A., & Goertzel, B. (2019). Distributed, decentralized, and democratized artificial intelligence. *Technological Forecasting and Social Change*, 141, 354–358. doi:10.1016/j.techfore.2018.11.010
- Morkunas, V. J., Paschen, J., & Boon, E. (2019). How blockchain technologies impact your business model. *Business Horizons*, 62(3), 295–306. doi:10.1016/j.bushor.2019.01.009
- Pivovarov, V. (2019). What happens when legal tech meets blockchain. *Forbes*. Available at <https://www.forbes.com/sites/valentinpivovarov/2019/01/24/legalnodes/#7fec0364d2c8>
- Rashideh, W. (2020). Blockchain technology framework: Current and future perspectives for the tourism industry. *Tourism Management*, 80.
- Sandner, P., Gross, J., Grale, L., & Schulden, P. (2020). *The digital programmable Euro, Libra and CBDC: Implications for European Banks*. Working Paper. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3663142
- Scott, B., Loonam, J., & Kumar, V. (2017). Exploring the rise of blockchain technology: Towards distributed collaborative organizations. *Strategic Change*, 26(5), 423–428. doi:10.1002/jsc.2142
- Seyedsayamdost, E., & Vanderwal, P. (2020). From good governance to governance for good: Blockchain for social impact. *Journal of International Development*, 32(6), 943–960. Advance online publication. doi:10.1002/jid.3485
- Tan, T. M., & Saraniemi, S. (2020). *Stakeholder well-being and engagement in a permissioned blockchain ecosystem*. Working paper.
- Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology behind Bitcoin is Changing Money, Business, and the World*. Penguin.

- Wang, Y., Han, J. H., & Beynon-Davies, P. (2019). Understanding blockchain technology for future supply chains: A systematic literature review and research agenda. *Supply Chain Management*, 24(1), 62–84. doi:10.1108/SCM-03-2018-0148
- Xu, Y., Ahokangas, P., Yrjölä, S., & Koivumäki, T. (2018). The blockchain marketplace as the fifth type of electricity market. In *International Conference on Smart Grid Inspired Future Technologies* (pp. 278–288). Springer. 10.1007/978-3-319-94965-9_28
- Yin, R. K. (2012). Case study methods. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbooks in psychology. APA handbook of research methods in psychology, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 141–155). doi:10.1037/13620-009
- Zamani, E. D., & Giaglis, G. M. (2018). With a little help from the miners: Distributed ledger technology and market disintermediation. *Industrial Management & Data Systems*, 118(3), 637–652. doi:10.1108/IMDS-05-2017-0231
- Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019–1042. doi:10.1177/0149206311406265

KEY TERMS AND DEFINITIONS

Blockchain: A distributed ledger database that is consensually shared and synchronized across the multistakeholder using cryptography.

Decentralized Networks: Refer to governing a network in a distributed fashion, which means that no single authority has absolute rights to exert power in the network, whereas data is copied and spread across a network of computers.

Disintermediation: Refers to the power of removing intermediaries in the distribution network.

Exchange Service Provider: A person or entity who exchanges fiat (legal tender) for tokens (or vice versa).

Functions of Intermediary: Include transactional functions, facilitating functions, and logistical functions.

Identity Service Provider: A provider serves to identify the actor in possession of the right of disposal related to a token and the provider records it in a blockchain directory.

Intermediary: A mediator or middleman who acts as a link between people/business entity in order to try and bring about an agreement.

Key Depositary: A person or entity acting as a custodian who holds private keys on behalf of the principal.

Physical Validator: A person or entity who ensures the existence and enforcement of contractually obligatory rights to property represented in a blockchain technology system in the sense of property law.

Price Service Provider: A person or entity providing blockchain technology system users with aggregated price information based on buying and selling offers or completed transactions.

Protector: A person or entity holding tokens in their own name in a blockchain technology system for the benefit of a third party that has authorization pursuant to the Trustees Act.

Smart Contract: A self-executing digital contract that automatically executes the terms and conditions of an agreement in a blockchain or distributed ledger technology.

Token: A token is defined as a piece of information in a blockchain system which can represent claims or rights of memberships against a person, rights to property, or other absolute or relative rights, and is assigned to one or more blockchain identifiers.

Token Depositary: A person or entity who holds tokens (both private and public keys) on behalf of another person or another person's or entity's account.

Token Issuer: A person or entity offering tokens to the public on the token issuer's behalf or that of another person or entity.

Token-Based Economy: Using a set of immutable digital data to represent any assets or rights with distributed ledger or blockchain technology.

Verifying Authority: A person or entity that verifies the legal capacity and requirements for token disposal.

ENDNOTES

- ¹ To maintain the consistency of the terminology used in this chapter, we replaced the original term *trustworthy technology* with *blockchain*.
- ² *Function* refers to the natural purpose of the duty of the blockchain technology itself, whereas *role* is a part played by blockchain technology or blockchain service providers in a certain situation.
- ³ One exception is using a smart contract to automatically receive financing from decentralized autonomous organizations. Nevertheless, such a theoretically possible implication is not successfully evidenced yet.

Chapter 7

Internet–Enabled Business Models and Marketing Strategies

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ABSTRACT

The internet is continuously growing and evolving as a vital resource with which organizations can upgrade their capabilities and expand their business activities. The revolution of information technology has a major impact on internet-based business models. At the basic level, it is the shift from analog to digital technologies that are responsible for much new information technology (IT) capabilities. The IT-enabled business trends are profoundly altering the business landscape with the pace of technology change, innovation, and business adoption. Digital technologies have created innovative trends for organizations to create value propositions and perform value-added activities. The chapter articulates the various internet-based models, e-marketing business models, internet marketing strategies, and mix adopted by the organizations in leveraging the unique features of digital technology to create competitive advantages. Further, focuses on the emerging internet-based market structure and IT-enabled business marketing trends.

INTRODUCTION

The technology-driven initiatives such as the Internet, wireless communications, and other digital technologies are having an imperative influence on the economy. They have done so by changing the ways businesses interact with each other and with consumers. This has not only created an environment in which businesses can be performed at a higher level i.e., faster, cheaper, and smarter but also has created many new business opportunities. Many organizations are still struggling with the basic issue of using the Internet and digital technologies for their best advantage.

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With the advent of information technology (IT) and IT-enabled services, new ways of performing business activities are developing. Most of the business models that capture public attention are consumer-oriented. Less publicity is given to the way the Internet can be used for business-to-business electronic commerce, although such commerce is a reality today. New forms of electronic commerce are being piloted in many sectors of industry, for business-to-business, business-to-consumer, and business-public administration relationships. Various business models are used by the organizations and enabling them to have more marketability. These business models include e-shop, e-procurement, e-auction, e-mall, third party market place, virtual communities, value-chain integrators, value-chain service providers, collaboration platforms, information brokers, etc (Timmers, 1998).

The Internet and digital technologies have created new opportunities for business organizations to create value. The value-adding activities such as search, evaluation, problem-solving, and transaction have enhanced by Internet capabilities. Search activities include processes for gathering information and identifying purchase options. Evaluation activities refer to the process of considering alternatives and comparing the costs and benefits of various options. Problem-solving activities include identifying problems or needs and generating ideas and action plans to address those needs. Transaction activities involve the process of completing a sale, including negotiating and agreeing contractually, making payments, and taking delivery. These activities are supported by different types of content that Internet businesses often use. These contents include customer feedback, expertise, and entertainment programming (Lumpkin & Dess, 2004).

Internet business models provide a context for enacting value-adding activities. The adoption of different business models by organizations has been proving successful for use by Internet organizations. Strategic use of value-adding activities, as well as the different business models, can help organizations build competitive advantages and contribute to profitability. Organizations have also found that combinations of the Internet business model can contribute to greater success. Organizations that want to benefit from these new value-adding approaches need to ask how the Internet is affecting their current operations and how they might effectively implement Internet capabilities. Identifying the practices and models that will enhance and not weaken from an organization's value proposition is central to using the Internet to create wealth.

There is growing recognition that the IT-enabled business models used by the business organizations while transacting with suppliers, customers, and partners are structured and executed. This has been a distinctive source of value creation and appropriation. However, the concept of business models' (BMs) enabling IT remains uneven in the information systems and strategic management (Rai & Tang, 2014). Digital capability reflects on the organizational ability to identify IT-enabled opportunities and organize IS/IT to mobilize resources and structures to exploit those opportunities. Business model reconfiguration captures management schema to raise value propositions for customers, partners, and other stakeholders to create and capture value. It entails altering organizational resources and processes to enable such value propositions (Golshan, 2018). The transformation of the traditional marketplace into an Internet-enabled market environment and the digitization of information products have had a major impact on contemporary marketing practice. These technological advances have also significantly affected the marketing of non-information products as a consequence of the digitization of their information attributes (Varadarajan & Yadav, 2009).

Thus, the Internet is having a strong impact on many business sectors. In some, it is creating opportunities to attract customers and generate new revenues. But successfully creating wealth requires that companies identify which technologies and solutions can be enacted to add value. Monitoring the

effect of these technologies and the changes that they stimulate will become an increasingly important task for strategic managers as organizations adjust to the new practices and possibilities of the Internet-enabled digital economy.

BACKGROUND

The advent of the techno-information age, shrinking product lifecycles, and intense competition, business organizations are incessantly seeking to renew their business models to exploit new market opportunities. Developments in information technology and the growth of corporate-wide IT platforms are facilitating the use of technological resources across the organization and are driving to the evolution of business models (Queiroz et al., 2019). Digital technologies have reformed the way business organizations perform in the markets in terms of their selling propositions, value demonstrations, posing new requirements to a firm's capabilities (Gandhi et al., 2018; Syam & Sharma, 2018). Value propositions are referred to as is as a statement of benefits offered to a customer group and the price a customer will pay (Ballantyne et al., 2011). Value demonstration is referred to as all those interactions with customers that aim at convincing customers to buy a firm's value propositions (Corsaro, 2014). The business model paradigm is a system of interdependent events that surpass the focal enterprise and spans its boundaries (Zott & Amit, 2010). It comprises three correlated attributes namely, the firm's value proposition for the customer, the system of interrelated processes that create customer value, and how the firm can retain value while serving the customer (Teece, 2018). Demil and Lecocq (2010) state that business models are developed when organizations renew or update their value propositions.

According to Vendrell-Herrero et al. (2017), the digital transformation of business models is reshaping consumer preferences and consumption as industries are introducing digital technologies to enhance their competitiveness to change customer relationships, internal processes, and value propositions. Varadarajan and Yadav (2002), identified five factors as principal drivers of the business's marketing strategy decisions in an Internet-enabled marketing environment. These factors include firm, industry, product, buyer, and macro environment characteristics. Marketplace performance and financial performance are the specific outcomes of the marketing strategy. Lumpkin and Dess (2004) identified four value-adding activities like search, evaluation, problem-solving, and transactions that have been enhanced by Internet capabilities. These four activities are supported by three different types of content that Internet businesses often use customer feedback, expertise, and entertainment programming. The Internet and digital technologies have created new opportunities for firms to create value.

Barua et al. (1999) proposed a four-layer framework for measuring the size of the Internet economy as a whole. The Internet infrastructure layer addresses the issue of backbone infrastructure required for conducting business through the Internet. The Internet applications layer provides support systems for the Internet economy through a variety of software applications that enable organizations to commercially exploit the backbone infrastructure. The Internet intermediary layer includes a host of companies that participate in the market making process in several ways. Finally, the Internet commerce layer covers companies that conduct business in an overall ambience provided by the other three layers. Schlachter (1995) identified five possible revenue streams for a website. These included subscriptions, shopping mall operations, advertising, computer services, and ancillary business. The emphasis was to show how revenue models existing in the brick and mortar scenario would be exploited in a web-based business. Additionally, timed usage and sponsorship and public support also influence in generating possible

revenue streams (Fedwa, 1996). Parkinson (1999) stressed the role of business affinities such as logistic providers in creating the value proposition.

In distinct markets with frequent product launches, and market leaders facing unpredictable attacks from new sources of competition, competitive advantage is increasingly transient and vague (Sinfield et al., 2012; Hacklin et al., 2018). Many companies have crafted successful business models by leveraging information technology platforms comprising both fixed and modular IT infrastructure components, IT applications, and data (Westerman & Bonnet, 2015). Ross et al. (2006) argued that an internal corporate-wide IT platform used to standardize business processes and meet the shared needs of various departments facilitates business change, thus enabling firms to cope with market threats and opportunities. Sirmon et al. (2011) stated that the purpose of leveraging is to utilize capability bundles to create solutions for current and new customers. It differs from the traditional logic of market positioning by drawing attention to the pace of market change and the way organizations exploit capabilities to take advantage of market opportunities as they emerge. For organizations investing in corporate IT platforms, this suggests that competitive advantage is contingent on their ability to build and leverage IT platform capabilities, which facilitates business transformation, to exploit emerging opportunities (Yetton et al., 2013). Zott and Amit (2008) argued that in a digitally interconnected world, the organization and structure of transactions or governance choices to pursue inter-organizational collaborations are structured and executed with partners, suppliers, and customers make up distinct sources of value creation and appropriation that differs from an organization's product-market strategy.

OBJECTIVES

The objective of the chapter is to examine the various internet-based models and classification of e-marketing business models. The chapter articulates the internet marketing strategies and mixes adopted by the organizations in leveraging the unique features of digital technology to create competitive advantages. Further, the chapter also focuses on the emerging internet-based market structure and IT-enabled business marketing trends.

INTERNET-BASED BUSINESS MODELS

The Internet provides an exclusive platform for business activities to transform into a new marketplace. To conduct business activities in this new arena, various Internet business models can be adopted by business organizations. A business model is a process that describes how an organization can create value and earn profits in a competitive environment. Some models are quite simple and traditional even when applied in an Internet context, and some models have features that are unique to the digital environment. Lumpkin and Dess (2004) proposed seven Internet-based business models that account for the vast majority of businesses conducted online.

1. **Production-based models:** Production-based models are adopted by the business organizations that add value in the production process by transforming raw materials into value-added finished products. Therefore, this model is also referred to as the manufacturing model. Internet technology adds value to this model by lowering marketing costs by enabling direct contact with end-users

and facilitating customization and problem-solving. Most of the large enterprises' online ordering system is supported by a state-of-the-art customized manufacturing process and unique delivery solutions.

2. **Markup-based models:** Markup-based models are adopted by business organizations that add value in marketing and sales by acquiring products, marking up the price, and reselling them at a profit. This model can be adopted by both wholesalers and retailers; therefore, it is also referred to as the merchant model. It includes bricks and mortar companies having a successful online operation, and also the vendors whose products are purely digital.
3. **Promotion-based models:** Promotion or advertising-based models are adopted by the business enterprises that provide content and/or services to customers and sell advertising to business organizations that want to reach the customers. It is similar to the broadcast television model in which viewers watch shows produced with advertising dollars. The basic difference is that online customers can interact with both the ads and the content, whereas it is not possible in the television model. Many online and speciality portals are adopting this category by providing services to customers as well as business enterprises.
4. **Commission-based models:** Commission-based models have adopted organizations that provide services for a certain amount of fees or commission. This sort of business organization is usually a third-party intermediary and the commission charged is often based on the size of the transaction. The most common business activity is a brokerage service such as a stockbroker or a real estate agent. It also includes auction-based enterprises that relate sellers and buyers to exchange products online and earns a commission. Reverse auction-based business activities have also gained much significance by generating substantial savings in procurement costs for business-to-business (B2B) users.
5. **Referral-based models:** Referral-based models are adopted by the business organizations that direct customers to another organization for a specified fee. This model is also referred to as the affiliate model, as a vendor pays an affiliate a fee each time the visitor clicks through the affiliate's website and makes a purchase from the vendor. Most of the reputed business organizations adopt affiliate programs to create more customer base and generate higher revenue. The affiliate programs can be managed through e-mail marketing, online shopping, social media, etc.
6. **Subscription-based models:** Subscription-based models can be adopted by the business organizations that charge a flat fee for providing either a service or proprietary content. Internet service providers are one example of this model. These companies provide the Internet connections for a certain fee that is charged whether buyers use the service or not. This model is also used by content creators where some recognizable enterprises often provide free content but only a small portion is available for free and advertises that the maximum of its content is available only to subscribers.
7. **Fee-for-service-based models:** Fee-for-service-based models are adopted by the business organizations providing ongoing services similar to a utility-based organization. Unlike the commission-based model, the fee-for-service model involves a pay-as-you-go system. In other words, business activities are metered, and the organizations pay only for the amount of service utilized by them. Application service providers fall into this category. For instance, an enterprise can provide a virtual workspace where people in different physical locations can collaborate online. Users essentially rent Internet space, and a host of tools that make it easy to interact, for a fee based on their usage.

However, most business enterprises must combine these models to achieve a competitive advantage among other organizations in the market. For instance, an organization can not only sell advertising but also earn a commission as a third-party intermediary and earn fees by referring viewers to other websites through its affiliate programs. Similarly, some organizations earn revenues by reselling marked-up merchandise and also generate income by charging fees for providing expertise based on its transaction capabilities. Major manufacturers are using their websites to manage procurement with suppliers and are also advertising their services to provide consumers with information that is used to order customized products.

CLASSIFICATION OF E-MARKETING BUSINESS MODELS

The digital marketing business models have been gaining importance over the past decade. These business models describe a particularly unique aspect of doing business over the net and ignore other aspects. Timmers (1998) identified certain business models and classified them based on the degree of innovation and functional integration. These business models include e-shop, e-procurement, e-mall, e-auction, the third-party marketplace, collaboration platform, virtual communities, value-chain service provider, value chain integrators, and Information brokerage, trust, and other services.

1. **E-Shop:** E-Shop is an online marketing model to promote the company and its products and services. In this Business model, there is a possibility to order and pay online. It is often combined with traditional marketing models. The main advantage for the business organizations in using this model is to increase demand, reduce the cost of promotion and sales, and low-cost global presence. The customer also has certain benefits like low prices compared with traditional offers, a wide range of selection, proper information, the convenience of selecting the products, purchasing the products, availability, and delivery. Most of the commercial business organizations are using electronic shops for generating higher revenue and to sustain in the market. However, there may be a low degree of innovation and functional integration in this model.
2. **E-Procurement:** It refers to the use of electronic mode for the procurement of products. Most of the large business organizations and public authorities adopt some form of e-procurement on online websites. The various advantages sought in adopting e-procurement are to have a wider choice of suppliers, leading to lower cost, enhanced quality, improved delivery system, and reduced cost of procuring raw materials. Online negotiation and collaborative work can save time and cost for business organizations. The benefits of suppliers are having more tendering opportunities both at the local and global scale, lower cost of submitting a tender, and the possibility of tendering in parts suitable for the size of the organization.
3. **E-auction:** Electronic auctions offers digital implementation of the bidding mechanism through the Internet. This can be accompanied by a multimedia presentation of the products. Usually, they are not restricted to a single function. they may also offer integration of the bidding process with contracting, payments, and delivery. The sources of income for the auction provider are in selling the technology platform, transaction fees, and advertising. Benefits for suppliers and buyers are increased efficiency and time-savings, no need for physical transport until the deal has been established, global sourcing. Because of the lower cost, it becomes feasible to also offer for sale small quantities of low value. Sources of income for suppliers are in reduced surplus stock, bet-

ter utilization of production capacity, lower sales overheads. Sources of income for buyers are in reduced purchasing overhead costs and reduced cost of goods or services purchased.

4. **E-mall:** The basic form of an electronic mall includes a collection of well-known/branded e-shops, usually enhanced by a common umbrella. It might be enriched by a common guaranteed payment method. The e-malls provide entry to individual e-shops into the market. When they specialize in a certain market segment such malls become more of an industry marketplace, which can add value by virtual community features like FAQ, discussion forums, closed user groups, and so on. The e-mall operator may not have an interest in an individual business that is being hosted. Instead, the operator may seek benefits in enhanced sales of the supporting technologies. The benefits are sought in services, or advertising space, and/or brand reinforcement or in collective benefits for thee-shops that are hosted such as increased traffic, with the expectation that visiting one shop on the e-mall will lead to visits to neighbouring shops. When a brand name is used to host the e-mall, it can lead to more trust, and therefore, increase dreariness to buy. Benefits for the e-mall members are lower cost and complexity to be on the web with sophisticated hosting facilities such as electronic payments, and additional traffic generated from other e-shops on the mall or the attraction of the hosting brand. Revenues are from membership fees that include a contribution to software/hardware and set-up costs as well as a service fee, advertising, and transaction fees.
5. **Third-party marketplace:** Third-party marketplace is an emerging model suitable for business organizations desiring to outsource the web marketing activities to other marketing channels. Third-party channels offer the user interface to the suppliers' product catalogues. Several additional features like branding, payment, logistics, ordering, and ultimately the full scale of secure transactions are added to third-party marketplaces. However, it may equally appeal to banks or other value chain service providers. Revenues can be generated based on the one-off membership fee, service fees, transaction fee, or percentage on transaction value.
6. **Collaboration platform:** Collaboration platforms provide a set of tools and an information environment for collaboration between business organizations. This can focus on specific functions, such as collaborative design and engineering, or in providing project support with a virtual team of consultants. The business opportunity for collaboration platform providers is in selling specialist tools such as design, workflow, document management, etc. They can generate revenue in the form of membership fees or usage fees by managing the platform.
7. **Virtual communities:** The ultimate value of virtual communities is from the customers or partners, who add their information onto a basic environment provided by the virtual community company. The membership fees as well as advertising are the revenue-generating perspectives. A virtual community can also be an important add-on to other marketing operations to build customer loyalty and receive customer feedback. Virtual communities are abundant within specific market sectors like books, apparel/garments, steel industry, nanotechnology, and so on. Virtual communities are also becoming an additional function to enhance the attractiveness and opportunities for new services of several other business models like e-malls, collaborative platforms, and third-party marketplaces.
8. **Value-chain service provider:** Value-chain service providers are specialized in specific functions for the value chain, such as electronic payments or logistics to make that into their distinct competitive advantage. The financial sector has been positioning themselves as such since long, but may find new opportunities using networks. Innovative approaches are also emerging in production and stock management where the specialized expertise needed to analyze and fine-tune production is

offered by new intermediaries. A commission or percentage-based scheme is the basis for revenues for these service providers.

9. **Value-chain integrators:** The value-chain integrators focus on integrating multiple steps of the value chain, with the potential to exploit the information flow between those steps as further added value. The value-chain integrators can generate revenues from consultancy fees or possibly transaction fees. Some of the third-party marketplace providers are moving into the direction of value chain integration.
10. **Information brokerage, trust, and other services:** A whole range of new information services are emerging, to add value to the huge amounts of data available on the open networks or coming from integrated business operations, such as information search, customer profiling, business opportunities brokerage, investment advice, etc. Usually, information and consultancy have to be directly paid for either through subscription or on a pay-per-use basis, although advertising schemes are also plausible. A special category is trust services, as provided by certification authorities and electronic notaries and other trusted third parties. Subscription fees combined with one-off service fees as well as software sales and consultancy are the sources of revenue. Many consultancies and market research companies are now offering commercial business information services via the Internet. Search engines are a special category of information services, with the public Internet facility usually based on advertising as a source of revenue.

INTERNET MARKETING STRATEGIES AND MIX

According to Smith and Chaffey (2001); Strauss et al. (2006), the different stages involved in internet marketing strategy development are:

1. **Strategic analysis** refers to continuous scanning of the micro and macro-environment of an organization, particularly emphasizing the changing needs of customers, business models of competitors, and opportunities afforded by new technologies. The different techniques include resource analysis, demand analysis, and competitor analysis, application portfolio analysis, SWOT analysis, and competitive environment analysis.
2. **Strategic objectives** are related to the vision set by the organization on whether digital media will complement or replace other media and their capacity for change. Defining clear objectives and goals helps in setting online revenue contribution.
3. **Strategy classification** is related to the various decisions to be made by the organizations. It includes strategies such as target market, positioning, and differentiation, internet market resources, priorities, focuses on customer relationship management, market and product development, pricing models, business and revenue models, organizational restructuring, and channel structure modifications. All these decisions may be considered as sub-strategies within the general strategy that has already been defined.
4. **Strategy implementation** refers to devising and executing the tactics needed to achieve strategic objectives. This includes re-launching a website, campaigns associated with promoting the site and monitoring the effectiveness of the website.

5. The **strategic budget** refers to the tactical plan for operating revenue and expenditure for investment in marketing is designed and proposed, so is the engagement of individuals and groups, as well as the duration of individual activities.
6. In the **strategic evaluation** stage, the established parameters are monitored, measured, and compared with the standards to take corrective actions in case of deviations.

Internet marketing strategies are based on the traditional principles and values of offline marketing. In the traditional marketing mix 4Ps (Product, Price, Promotion, and Place) are considered for planning necessary competitive strategies. As the market conditions and environment have changed in the past decade, the traditional concept of the marketing mix has also changed and expanded to 4Ps + 3Ps, where the existing basic concepts were extended with the three new elements People, Processes, and Physical evidence. However, Jovevski et al. (2010) stated that seven elements of the internet marketing mix should be the basis for the development of a new internet marketing strategy. The new internet marketing mix should be based on the formula $2P + 2C + 3S$. The 2Ps include personalization and privacy, 2Cs include care for consumers and community, and 3Ss include security, website, and sales promotion.

1. **Personalization:** It is related to the need for recognition, the establishment of communication, and relationships with customers. It is important to identify potential customers and gather the required information about them to develop products and services according to their expectations.
2. **Privacy:** Privacy is related to the personalization element of the marketing mix. It is very important to discriminate the users of customer information which is collected in databases. One of the key things when developing an e-marketing strategy is the creation and development of policies and procedures on protecting, preserving, and collecting information from customers.
3. **Customer Care:** This feature is necessary and applies as a supplemental function of the Internet. The customer care can be reduced down to one-to-one communication, functioning around the clock.
4. **Community:** Marketing is accustomed to the existence of the Internet. It allows individuals or groups to connect and exchange information and data. Group entities that interact for some common goals are called a community. Social networks are just one type of such communities. Customers can be viewed as part of networks and communities in which they are constantly interacting among themselves. Therefore, the development of networks for their own business should be an important task for any company operating on the Internet.
5. **Security:** The security factor has grown into a key feature of the e-marketing mix, which must be carried throughout all channels of distribution. As a feature, security is very closely related to privacy and personalization.
6. **Website:** A website is a prerequisite for digital interaction between the vendor and the customer. The existence of a virtual place where consumers can purchase and conduct transactions by using computers or mobile devices is a necessity.
7. **Sales Promotion:** Promotion in the e-marketing mix does not differ much from well-known techniques and concepts in the promotion of traditional marketing. In Internet marketing, marketers should consider the possibilities of innovative ways of promotion that come with the nature of the online environment.

EMERGING INTERNET-BASED MARKET STRUCTURE

The Internet has divided the overall market space into three broad structures like portals, market makers, and product/service providers (Barua et al., 1999; Mahadevan, 2000).

1. A portal engages primarily in building a community of consumers of information about products and services. It has emerged as the central point for influencing the channel traffic into websites managed by product/service providers and other intermediaries. It primarily focuses on customer attention to these websites in a targeted fashion.
2. Market makers are another emerging structure in the Internet market space. It plays a similar role as a portal in building a community of customers and/or a community of suppliers of products and services. The market makers invariably participate in a variety of ways to facilitate the business transaction that takes place between the buyer and the supplier. He is often expected to have a high degree of domain knowledge. Unlike a portal, a market maker endeavours to provide value to suppliers and customers through a system of implicit or explicit guarantee of security and trust in the business transaction.
3. The third market structure comprises the product/service providers (PSP) dealing directly with their customers when it ultimately comes to the business transaction. The suppliers will conduct their business with their partners directly over the Internet. This will call for extensive customization of their information system and business processes to accommodate customer requirements online.

The emerging-market structure indicates a few characteristics of the Internet-based e-commerce business applications. Each of these market structures addresses a key constituent of the business that is carried through the Internet. The three market structures exist in both business-to-business (B2B) and business-to-customer (B2C) segment. Therefore, these market spaces cover the whole range of the Internet economy. Moreover, there may be a high level of inter-dependency among the players in the three market structures.

IT-ENABLED BUSINESS MARKETING TRENDS

As technological transformation is accelerating and the adoption rates are increasing certain trends are emerging for the business organizations. The information technology-enabled business trends are profoundly altering the business landscape with the pace of technology change, innovation, and business adoption. The implications of these trends for companies' strategies, business models, organizational approaches, and relationships with customers and employees have grown according to the current market requirements. (Bughin et al., 2013).

Big data and advanced analytics have been setting the capabilities to be deeply embedded across functions and operations, enabling managers to have a better basis for understanding markets and making business decisions. Social technologies are also becoming a powerful social matrix of organizational infrastructure that links and engages employees, customers, and suppliers as never before. The Internet of Things linking the physical objects with embedded sensors is being exploited at a breakneck pace, simultaneously creating massive network effects and opportunities. The cloud, with its ability to deliver

digital power at low cost and in small increments, is not only changing the profile of corporate IT departments but also helping to spawn a range of new business models.

The integration of digital and physical experiences is creating new ways for businesses to interact with customers, by using digital information to augment individual experiences with products and services. Consumer demand is rising for products that are free, sensitive, and completely customer-oriented. The rapid evolution of IT-enabled business is reducing entry barriers and opening new revenue streams to a range of individuals and companies. The embrace of digital technologies by different sectors is thus, a trend of immense importance to business organizations, which indirectly finances many services and would benefit greatly from the rising skills and improved health of individuals everywhere.

The various IT-enabled business marketing trends include:

1. **Social Network:**

Social technologies connect many organizations internally and increasingly reach outside their borders and customers. It extends beyond the co-creation of products and the organizational networks. Nowadays, it has become the digital marketing environment in which more and more businesses are conducted. Many organizations are relying on distributed problem solving, tapping the brain-power of customers and experts from within and outside the company for breakthrough thinking. Organizations also are becoming more porous, able to reach across units speedily and to assemble teams with specialized knowledge. Social features are becoming a part of digital communication or transaction embedded in products, markets, and business systems.

2. **Big data and advanced analytics:**

Big data and analytics have become a part of a new foundation for competitiveness. The power of data analytics is rising while the costs are declining. Data visualization, wireless communications, and cloud infrastructure are extending the power and reach of information. With abundant data from multiple touchpoints and new analytic tools, companies are getting better and better at customizing products and services through the creation of ever-finer consumer microsegments. Advanced analytic software allows machines to identify patterns hidden in massive data flows or documents. Despite the widespread recognition of big data's potential, organizational and technological complexities, as well as the desire for perfection, often slow progress. Planning must extend beyond data strategy to encompass needed changes in organization and culture, the design of analytic and visualization tools frontline managers can use effectively, and the recruitment of scarce data scientists. Decisions about where corporate capabilities should reside, how external data will be merged with propriety information, and how to instil a culture of data-driven experimentation are becoming major leadership issues.

3. **Internet of All Things:**

Small sensors and actuators, proliferating at astounding rates are exploding over a period, potentially linking many physical entities as costs fall and networks become more pervasive. The organizations have started using these technologies to run complex operations so that systems make autonomous decisions based on data the sensors report. Smart networks now use sensors to monitor vehicle flows and reprogram traffic signals accordingly or to confirm whether repairs have been made effectively in electric-power grids. Innovative technologies are leading to quantified self-movement, allowing customers to become highly involved with their devices and patterns.

4. **Cloud-based Services:**

The buying and selling of services derived from physical products is a business-model shift that gaining steam. An attraction for buyers is the opportunity to replace big blocks of capital investment with more flexible and granular operating expenditures. This model is spreading beyond IT as a range of companies test ways to monetize underused assets by transforming them into services, benefitting corporate buyers that can sidestep owning them. A growing number of business organizations with excess office space are finding that they can generate revenue by offering space for short-term uses. Cloud-based online services are feeding the trend both by facilitating remote-work patterns that free up space and by connecting that space with organizations that need it. Other organizations are seizing opportunities in consumer markets. Online services are now allowing rentals of everything from designer clothing and handbags to books. IT that can track usage and bill for services is what makes these models possible.

5. **Knowledge Automation:**

Physical labour and transactional tasks have been widely automated over the past decades. Now advances in data analytics, low-cost computer power, machine learning, and interfaces that understand humans are moving the automation frontier rapidly toward the world's knowledge workers. Powerful productivity-enhancing technologies already are taking root. Developments in how machines process language and understand context are allowing computers to search for information and find patterns of meaning at superhuman speed. Machines also are becoming adept at structuring basic content for reports, automatically generating marketing and financial materials by scanning documents and data. At information-intensive enterprises, the culture and structure of the organization could change if machines start occupying positions along the knowledge-work value chain. In the existing market situations, the business organizations can begin to plan for low-cost Watsons and of higher-priced workers with the judgment and technical skills to manage the new knowledge workforce. At the same time, business and government leaders will be jointly responsible for mitigating the destabilization caused by the displacement of knowledge workers and their reallocation to new roles. Retraining workers, redesigning education, and redefining the nature of work will all be important elements of this effort.

6. **Engaging digital citizens:**

As the incomes are rising, citizens are becoming wired, connected by mobile computing devices, particularly smartphones that will only increase in power and versatility. Several emerging markets have experienced growth in Internet adoption. Rising levels of connectivity will stimulate financial inclusion, local entrepreneurship, and enormous business opportunities. As Internet-enabled smartphones and other mobile devices move rapidly down the cost curve, they will enable vast new applications and sources of value.

7. **Digital and Physical market experiences:**

The borders of the digital and physical world have been blurring for many years as consumers learned to shop in virtual stores and to meet in virtual spaces. In those cases, the online world mirrors the experiences of the physical world. Increasingly, the market has been experiencing an inversion as real-life activities, from shopping to factory work, become rich with digital information, and as the mobile Internet and advances in natural user interfaces give the physical world digital characteristics. The organizations are adopting these technologies to experiences that have remained resolutely physical, creating a new domain of customer interaction. Businesses are also integrating the digital world into physical work activities, thereby boosting their productivity and

effectiveness. Executives need to examine their businesses to find areas where immersive experiences or interactive touchpoints can stimulate engagement with customers. They should reflect on the potential for interactive digital platforms to play roles in product design and marketing or in gathering customer feedback. These possibilities will grow in importance as customers and employees come to expect interaction between heightened digital and physical offerings.

8. **Internet-stimulated personalization and simplification:**

After experiencing shopping, reading, watching, seeking information, and interacting over the Internet, customers expect services to be free, personalized, and easy to use without instructions. This ethos presents a challenge for business organizations, since customers expect instant results, as well as splendid and transparent customer service, for all interactions from web portals to traditional stores. Failure to deliver such services and competitors' offerings are only an app download away. Indeed, customers will probably never pay for many valuable technology-enabled services, such as search and the list seems to be growing rapidly. Providers of these free services will need to innovate with alternative business models. The most successful are likely to be multisided ones, which tap large profit pools that can be generated from information gathered by an adjacent free activity that's commercially relevant. This approach could require changes to back-end systems, which are often designed for mass production. Businesses will need new ways to collect information that furthers personalization, to embed experimentation into product-development efforts, and to ensure that offerings are easy to use and even fun.

9. **Digital Buying and Selling:**

The rise of the mobile Internet and the evolution of core technologies that cut costs and vastly simplify the process of completing transactions online are reducing barriers to entry across a wide swath of economic activity. Amped-up technology platforms are enabling peer-to-peer commerce to replace activities traditionally carried out by companies and giving birth to new kinds of payment systems and monetization models. Entry costs have fallen to the point where people who knit sweaters, for example, can tap into a global market of customers. Mobile-payment networks, sometimes augmented with services that extend beyond pure transactions, are the second area of evolution for e-commerce as costs fall.

10. **Digital Transformation:**

The private sector has a big stake in the successful transformation of government, health care, and education, which together account for a third of global gross domestic product (GDP). They have lagged in productivity growth at least in part because they have been slow to adopt web-based platforms, big-data analytics, and other IT (information technology) innovations. Technology-enabled productivity growth could help reduce the cost burden while improving the quality of services and outcomes, as well as boosting long-term global-growth prospects. Many governments are already using websites to improve services and reduce waste. Technology also is opening new opportunities to contain rising health-care costs and improve access.

However, as these trends take hold, the management of business organizations must prepare for the disruption of long-standing commercial and social relationships, as well as the emergence of unforeseen business priorities. The difficulty of embracing those realities while addressing related risks and concerns may give some leaders pause. But it's worth keeping in mind that if the future traces experience, these technology-enabled business trends will not only be a boon for consumers but also stimulate growth, innovation, and a new wave of pace-setting business.

CONCLUSION

The global market has been witnessing a rapid development of the internet and technology-based business activities. The internet-based business has become a driving force for globalization and a key factor in determining the international competitiveness of organizations. Digital business and marketing activities are increasingly growing and hence, are leading the development of the global service industry. With the adoption of ICT in all segments of society, the creation of the digital business environment for the organizations has gained much importance in the market. By providing and implementing different initiatives and laws, countries are focused on creating and supporting business environment such as infrastructure, legislation, etc., to stimulate and help organizations which are using digital business applications for extending their activities to global markets.

In such a competitive environment, it has become necessary to alter the existing marketing mix and strategies. The organizations are forced to use familiar techniques of marketing in new and untried market places. The developments in technology, marketing perspectives, digitization of information products, and digitization of the information attributes of non-information products, has necessitated businesses to fundamentally rethink, as well as institute major changes in their marketing strategies. Effective integration of the Internet into an organization's marketing strategy and marketing operations is increasingly becoming a competitive imperative.

MANAGERIAL IMPLICATIONS

The Internet and digital technologies have created new opportunities for organizations to create value. Internet business models provide a context for enacting value-adding activities. While digitization is likely to continue to affect the business world, its content and direction demand efficient managerial attention. Organizations need to build and leverage their digitization capability through certain dimensions like data, permission, and analytics. To obtain success through internet-based business models and marketing strategies, the digitization capability will need to be aligned with the rest of the business activities. The digitization capability provides the basis for the ensuing commercialization of data, which expresses itself in digital value propositions and value demonstrations. The wealth of opportunities related to the use of technologies and applications in value propositions and value demonstrations makes digitization a key managerial challenge, as organizations need to understand the areas on which they should focus and how they can best apply digital technologies.

Real-time information, instant price discovery, and quick problem resolution are becoming basic expectations of consumers as well as business organizations in the digital realm. Business models built on transparency and responsiveness will not only satisfy customers but also help organizations become more lively, innovative, and credible with all their stakeholders. As the automation of knowledge, work is gaining momentum, and computers can handle the growing number of tasks performed by knowledge workers, recruiting individuals with higher-level skills have become essential. Providing new forms of training to upgrade knowledge workers' capabilities and rethinking the nature of public education will be critical priorities for business and government leaders.

The Internet-based business models and values, particularly connectivity and non-hierarchical interactions, have significant organizational implications in the present competitive market environment. The pinnacle of many of these trends could imply decentralization, along with changing relationships

among managers, employees, suppliers, and customers. These changes may not be comfortable for business managers, but they hold the potential for boosting innovation, loyalty, business reach, productivity, and marketing effectiveness while reducing costs. Keeping up with state-of-the-art encryption standards and security-management practices will enhance the customer's loyalty towards business organizations.

REFERENCES

- Ballantyne, D., Frow, P., Varey, R. J., & Payne, A. (2011). Value propositions as communication practice: Taking a wider view. *Industrial Marketing Management*, 40(2), 202–210. doi:10.1016/j.indmarman.2010.06.032
- Barua, A., Pinnell, J., Shutter, J., & Whinston, A. B. (1999). *Measuring Internet economy: An exploratory paper*. University of Texas.
- Bughin, J., Chui, M., & Manyika, J. (2013). Ten IT-enabled business trends for the decade ahead. *The McKinsey Quarterly*, 13(May).
- Corsaro, D. (2014). The emergent role of value representation in managing business relationships. *Industrial Marketing Management*, 43(6), 985–995. doi:10.1016/j.indmarman.2014.05.011
- Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency. *Long Range Planning*, 43(2-3), 227–246. doi:10.1016/j.lrp.2010.02.004
- Fedewa, C. S. (1996). *Business Models for" Internetpreneurs*. Internet Entrepreneurs Support Service.
- Gandhi, S., Thota, B., Kuchembuck, R., & Swartz, J. (2018). Demystifying data monetization. *MIT Sloan Management Review*, 1–9.
- Golshan, B. (2018). *Digital Capability and Business Model Reconfiguration: a co-evolutionary perspective* (Doctoral dissertation). Linnaeus University Press.
- Hacklin, F., Björkdahl, J., & Wallin, M. W. (2018). Strategies for business model innovation: How firms reel in migrating value. *Long Range Planning*, 51(1), 82–110. doi:10.1016/j.lrp.2017.06.009
- Jovevski, D., Tijan, E., & Karanikić, P. (2010). Internet marketing strategies and ICT as a common ground for business development. In *The 33rd International Convention MIPRO* (pp. 1120-1125). IEEE.
- Lumpkin, G. T., & Dess, G. G. (2004). E-business strategies and internet business models: How the internet adds value. *Organizational Dynamics*, 33(2), 161–173. doi:10.1016/j.orgdyn.2004.01.004
- Mahadevan, B. (2000). Business models for Internet-based e-commerce: An anatomy. *California Management Review*, 42(4), 55–69. doi:10.2307/41166053
- Parkinson, J. (1999). Retail models in the connected economy: Emerging business affinities. *Online document*. Retrieved from https://www.ey.com/global/gcr/nsf/us/insights_-_eBusiness_-_Ernst_&_Young_LL
- Queiroz, M., McGraw, J. L., & Coltman, T. (2019). Information Technology and The Renewal of Business Models. *Proceedings of the 27th European Conference on Information Systems (ECIS)*.

- Rai, A., & Tang, X. (2014). Information Technology-Enabled Business Models: A Conceptual Framework and a Coevolution Perspective for Future Research. *Information Systems Research*, 25(1), 1–14. doi:10.1287/isre.2013.0495
- Ross, J. W., Weill, P., & Robertson, D. (2006). *Enterprise architecture as strategy: Creating a foundation for business execution*. Harvard Business Press.
- Schlachter, E. (1995). Generating revenues from websites. *Board Watch*, (July), 374.
- Sinfield, J. V., Calder, E., McConnell, B., & Colson, S. (2012). How to identify new business models. *MIT Sloan Management Review*, 53(2), 85–90.
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37(5), 1390–1412. doi:10.1177/0149206310385695
- Smith, P. R., & Chaffey, D. (2001). *eMarketing eXcellence-at the heart of eBusiness*. Oxford, UK: Butterworth Heinemann.
- Strauss, J., Ansary, A., & Raymond, F. (2006). *EMarketing*. Pearson Prentice-Hall.
- Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. *Industrial Marketing Management*, 69, 135–146. doi:10.1016/j.indmarman.2017.12.019
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49. doi:10.1016/j.lrp.2017.06.007
- Timmers, P. (1998). Business models for electronic markets. *Electronic Markets*, 8(2), 3–8. doi:10.1080/10196789800000016
- Varadarajan, P. R., & Yadav, M. S. (2002). Marketing strategy and the internet: An organizing framework. *Journal of the Academy of Marketing Science*, 30(4), 296–312. doi:10.1177/009207002236907
- Varadarajan, R., & Yadav, M. S. (2009). Marketing strategy in an internet-enabled environment: A retrospective on the first ten years of JIM and a prospective on the next ten years. *Journal of Interactive Marketing*, 23(1), 11–22. doi:10.1016/j.intmar.2008.10.002
- Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Servitization, digitization and supply chain interdependency. *Industrial Marketing Management*, 60, 69–81. doi:10.1016/j.indmarman.2016.06.013
- Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. *MIT Sloan Management Review*, 56(3), 10.
- Yetton, P., Henningsson, S., & Bjorn-Andersen, N. (2013). Ready to acquire': IT resources for a growth-by-acquisition strategy. *MIS Quarterly Executive*, 12(1), 19–35.
- Zott, C., & Amit, R. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal*, 29(1), 1–26. doi:10.1002/mj.642

Zott, C., & Amit, R. (2010). Business model design: An activity system perspective. *Long Range Planning*, 43(2-3), 216–226. doi:10.1016/j.lrp.2009.07.004

KEY TERMS AND DEFINITIONS

Ancillary Business: An ancillary business is generally considered non-essential, although it does provide services to a primary business.

Business Model: It is a plan for the successful functioning of an organization, identifying sources of revenue, the potential customer base, products, and financing.

Digital Transformation: It refers to the use of innovative, fast, and frequently changing digital technology to solve problems.

Marketing Strategy: It refers to a long-term, forward-looking approach and an overall plan of any organization with the fundamental goal of achieving a sustainable competitive advantage by understanding the preferences of the customers.

Revenue Stream: It is the source of revenue of an organization made up of either recurring revenue, transaction-based revenue, project revenue, or service revenue.

Strategic Analysis: It is the process involving researching an organization's business environment within which it operates.

Value Creation: When an organization exercises its effort and resources to generate something of value that is sold to a customer base is referred to as value creation.

Value Proposition: It refers to the promise of value to be delivered, communicated, and acknowledged, and the belief of the customer about how value will be delivered, experienced and acquired.

Chapter 8

Digital Banking and the Impersonalisation Barrier

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ABSTRACT

This chapter discusses bank customer perceptions of digital banking and the impersonalisation barrier. It compares the perceptions of various groups of customers based on empirical evidence from Sweden. In 2020, a pilot-tested online questionnaire was sent to young and old, urban and rural, and high- and low-income bank customer groups and the data were statistically analysed. Overall, it is argued that the impersonalisation barrier makes the ongoing transition from traditional to digital banking difficult. All studied groups, old bank customers in particular, perceive the impersonalisation barrier as significant. This indicates that the risk of the financial exclusion of some bank customer groups must be considered in an increasingly digital environment. However, the relatively low impersonalisation concerns among young bank customers indicate that this group represents a promising market for ongoing digital banking development. This group also stands out regarding its intention to increase the use of digital banking.

INTRODUCTION

Various payment channels have emerged since the first computer-based banking services were introduced (Bátiz-Lazo et al., 2014), and over the past ten years digitalisation has changed bank customer behaviour. In countries such as Sweden, bank customers are now used to making transactions mostly via digital channels such as Internet-based or mobile applications. Moreover, an increasing number of bank customers prefer to use digital devices not only for payments, but also to monitor and verify transactions and even for private and customised financial consultations. In fact, traditional banking has more or less been replaced by digital banking.

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In several respects, the development of advanced technologies in the banking sector and the introduction of various digitalised financial services have been beneficial. For example, bank customers now have unlimited access to their bank accounts every day at any hour (Rehncrona, 2018) thanks to the ability to conveniently access services from home. Most bank customers appreciate financial services that help them conduct daily transactions in a convenient, fast, and flexible way (Gomber et al., 2017). They also seek financial consultation via digital banking services (Belanche et al., 2019).

Previous research has mostly focused on the advantages of digital banking based on the assumption that innovations should be adopted because they are good enough (Laukkanen & Kiviniemi, 2010). However, the other side of the coin is also of interest. An apparent disadvantage of adopting digital innovations is that it entails bothersome changes in individuals' perceptions of money. For example, Larsson et al. (2016) argued that customers are more likely to buy unnecessary goods via digital transactions due to the intangible character of digital money and the ease of using digital payment channels. Decreased personal service – for example, personal banking advisors' gradual replacement with chatbots and robo-advisors – may also be problematic (Belanche et al., 2019). The latter illustrates that the gap between traditional and digital banking can be related to impersonalisation issues, i.e., lack of personal contact. Limited personal contact can therefore be seen as a barrier to the ongoing development of digital banking and, in turn, as a risk factor for the financial exclusion of vulnerable bank customer groups.

Of particular interest is that the replacement of human-to-human interaction in favour of human-to-machine or human-to-artificial intelligence (AI) interaction can be perceived differently by different bank customers. Customers can be grouped based on their demographic characteristics, and studies report significant differences between younger and older bank customers in how they perceive bank services (e.g., Poon, 2008). For example, young bank customers are more flexible regarding new and alternative financial services than are older ones. Bank customers may also differ depending on their location (e.g., Arvidsson, 2017). For example, those living in rural areas have more limited access to the Internet than do those living in villages. Another demographic characteristic that seems to influence customer perceptions of financial services is income (e.g., Johnson et al., 2018); for example, income level is normally positively related to education level, financial knowledge, and access to advanced financial services.

Against this background, and in line with a call for additional research (Tucker et al., 2019) and the lack of relevant studies from the customer perspective (Belanche et al., 2019), it is important to investigate bank customer perceptions of digital banking and impersonalisation, and to compare the perceptions of various groups of bank customers. This is what the current chapter aims to do. Empirical evidence was collected from Sweden, one of the countries closest to having a cashless payment system in which the only available payment channels are digital (Arvidsson et al., 2017).

DIGITAL BANKING, IMPERSONALISATION, AND VARIOUS TYPES OF BANK CUSTOMERS

As indicated, adoption of digital banking innovations can evoke resistance by creating an impersonalisation barrier, which can be perceived differently by various groups of bank customers. In other words, in the growing digital financial environment and amidst ongoing digital developments, some customers seem to be more sensitive than others to having more limited personal contacts with bank employees.

Digital Banking

The transition from traditional to digital banking began when the automated teller machine was introduced for customer convenience in the 1960s (Calisir & Gumussoy, 2008; Shaikh & Karjaluo, 2016). Despite a rather slow initial development period, overall digitalisation has pushed the banking sector towards radical change (Oertzen & Odekerken-Schröder, 2019). Nowadays, bank customers have access to a variety of Internet and mobile banking services (Kurila et al., 2016), and one illustration of this development is that today's digital services are considered no more than milestones in the ongoing bank service digitalisation process.

Martins et al. (2014, p. 2) defined digital banking – also known as e-banking, electronic banking, and online banking – as “the use of banking services through the computer network (the Internet), offering a wider range of potential benefits to financial institutions due to more accessibility and user-friendly use”. Following this definition, the range of potential benefits for banks includes decreased costs for branches, staff, and transportation (Lundberg et al., 2014). For bank customers, the benefits are increased autonomy and rapid, round-the-clock service (Namahoot & Laohavichien, 2018; Rehncrona, 2018).

It is worth noting that digital banking services vary slightly from bank to bank. However, they mostly include digital transactions (via bank cards, Internet banking, and mobile banking applications), payment monitoring and verification, savings and loans access, customer support, and financial consultations with bank employees via video calls, chatbots, or robo-advisors (e.g., Marinova et al., 2017).

In Sweden, the transition from traditional to digital banking has been going on for a relatively long time with far-reaching consequences. This can be illustrated by the fact that cash payments account for just 1.4% of the total transaction value (Eaton, 2018) and approximately 6% of all payments (Sveriges Riksbank, 2019). Due to the relatively high costs of using cash (Arvidsson et al., 2017; Bátiz-Lazo et al., 2014; Lundberg et al., 2014), the Swedish banking sector is interested in promoting a wide range of digital payment channels in order to replace cash.

Impersonalisation

Traditionally, face-to-face interaction has been considered important in bank–customer relationships, and Singh (2004) reported that bank customers are often dissatisfied in situations characterised by a lack of personal attention. The same author claimed that the closure of bank branches may lead bank customers to seek other face-to-face financial services. In line with this, Mbama et al. (2018) and Bravo et al. (2019) argued that the most important link in the bank–customer relationship is employees who interact with their customers to build trust. Bravo et al. (2019) also highlighted the competitive advantage of banks that offer both personal and impersonal services.

Singh (2004) used the concept of impersonalisation in the digital banking context, arguing that it is a traditional barrier to innovations that affect customer habits. The lack of human characteristics such as sympathy may therefore be troublesome in this context (Dimitrova et al., 2019). In the same vein, Laukkanen et al. (2008) suggested that it is hard to replace personal service with AI and digital banking. Overall, it is argued that impersonalisation negatively affects the bank–customer relationship and makes the transition to digital banking difficult (Bátiz-Lazo et al., 2014). However, the seriousness of the impersonalisation barrier in terms of a lack of human-to-human bank service interactions and a lack of cash payments can depend on bank customers' demographic characteristics (Szopiński, 2016). Below, three of these characteristics are discussed further: age, location, and income.

Young vs. Old Bank Customers

Several studies in the banking sector have focused exclusively on young bank customers as the target group (e.g., Calisir & Gumussoy, 2008; Nourallah et al., in press; Rehncrona, 2018; Tan & Leby Lau, 2016; Yang et al., 2015). A reason for the researchers' interest in this group is that it represents the future. In Sweden, the number of people who will retire within five to ten years is projected to increase substantially (Statistics Sweden, 2018) and younger individuals will consequently gradually replace the older workforce. This indicates that this group of young individuals represents a promising market for Swedish banks.

Younger bank customers are seen as comparatively more adaptable to the changes involved in transitioning traditional banking to digital banking. They are more interested in innovations and they adopt new technologies faster than older bank customers (Martins et al., 2014; Tan & Leby Lau, 2016). In fact, young bank customers' digital knowledge is said to be high (Larsson et al., 2016), which could accelerate the ongoing technology-driven development of the banking sector, not least because this group of bank customers tends to have a rather limited patience.

Although mature and older individuals constitute a huge part of the total number of bank customers, they are claimed to be under-researched and to some extent even neglected by banks (Mattila et al., 2003). An exception is older customers who are especially profitable for banks, i.e., "rich" and "almost rich" individuals served by personal advisors (Wahlberg et al., 2016). However, among the bank customers served by dedicated personal advisors, younger ones can also be found.

Of interest here is that studies indicate that some groups of bank customers, such as older ones, are more likely to be vulnerable when digital banking gradually replaces traditional banking (e.g., Laukkanen et al., 2008). They experience difficulties in adopting innovations (Laukkanen, 2016), so traditional banking is the preferred financial channel for most of them (Jiménez & Díaz, 2019). However, Martins et al. (2014) suggested that even older bank customers could have high intentions to use digital banking services. Mature bank customers have continuously increased their access to Internet and new technologies (Mani & Chouk, 2018), and become increasingly comfortable with using high-tech financial services (Chaouali & Soudien, 2019).

Urban vs. Rural Bank Customers

A common tendency is for bank customers living in big cities to differ from those living in smaller communities. This tendency is found in Sweden because its geographical conditions make for very low population density (Arvidsson, 2017). This means that many bank customers outside big cities, in Sweden and elsewhere, must travel far to reach physical service facilities, bank branches included. These customers may experience limited access to financial services during the transition to digital banking, which can be an obstacle to accessing and transferring money. Studies indicate that some groups of bank customers, such as those living in rural areas, are more likely to be vulnerable when digital innovations are implemented (Laukkanen et al., 2008). A lack of digital knowledge and unstable wireless technology can be serious issues (Sveriges Riksbank, 2019), so cash is still preferred by individuals in many small rural settlements in Sweden (Arvidsson, 2017).

Even in this respect the coin has two sides. It can be argued that ongoing digitalisation in the banking sector is advantageous for those living in places, usually rural, where the most bank branches have closed (Fabris, 2019). Moreover, Penz and Sinkovics (2013) argued that there are no significant differ-

ences between urban and rural dwellers regarding adopting innovations such as digital payments as, for example, both groups seem to view digital banking services with the same lack of confidence.

High- vs. Low-Income Bank Customers

Income seems to affect customer perceptions of digital banking, and higher-income bank customers are more likely to use digital banking (Akhter, 2015; Flavián et al., 2006; Poon, 2008). This finding seems valid in countries such as Italy, Spain, New Zealand, and the USA (Jiménez & Díaz, 2019). In Greece, Giordani et al. (2014) found the same pattern as presented above. However, Santouridis and Kyritsi (2014) investigated Greek customers with bank accounts and found that the relationship between income and the use of digital banking was negative, meaning that the higher the income, the lower the utilisation of digital banking services. This indicates that bank customer behaviour could be difficult to compare due to cultural conditions even in highly digitalised European countries (Larsson & Viitaoja, 2017).

The same factor can give rise to opposite behaviours. On one hand, higher income is often associated with more highly educated customers, and these customers would seem more likely to adopt new technologies and new payment channels (Van der Cruysen et al., 2017), making low-income earners more vulnerable in an increasingly digital banking service environment. Higher income may also be associated with different lifestyles, including financial behaviour characterised by a larger number of transactions (Akhter, 2015). On the other hand, one finding of Jiménez and Díaz (2019) is that higher-income bank customers pay more attention to personal service than do lower-income customers. One reason suggested by the authors is that face-to-face services are more important in complex and high-value financial operations, mostly affecting bank customers with relatively high income.

In the Swedish context, Wahlberg et al. (2016) found that personal advisors play an important role in the bank–customer relationship, and that they could make a difference when serving high-income bank customers. The authors proposed that customer satisfaction with the services delivered by their personal advisors may “rub off” on their satisfaction with the bank. In other words, the customers’ impressions of a personal advisor are assumed to confirm or disconfirm their image of the bank and its services, again indicating the importance of bank employees.

RESEARCH QUESTIONS AND METHODOLOGICAL ISSUES

In this chapter, the following three research questions are of interest:

- How does the perceived degree of impersonalisation as a barrier among young and old bank customers affect their intention to increase the use of digital banking?
- How does the perceived degree of impersonalisation as a barrier among urban and rural areas bank customers affect their intention to increase the use of digital banking?
- How does the perceived degree of impersonalisation as a barrier among high- and low-income bank customers affect their intention to increase the use of digital banking?

Based on various demographic characteristics, in 2020, a pilot-tested online questionnaire was sent to 2513 Swedish bank customers with at least one account in a Swedish bank. In total, 542 completed

questionnaires were returned, for a response rate of 21.6%. The gender distribution was fairly balanced. Regarding the sample's age, location, and income characteristics, please see Table 1.

The questionnaire items were responded to using Likert scales anchored at 1 (strongly disagree) and 4 (strongly agree). Several statistical methods were considered suitable for analysing the collected data. Cronbach's α testing was conducted to determine the reliability of the constructs. By applying independent sample *t*-tests, comparisons of different groups of bank customers – i.e., young versus old, urban versus rural, and high- versus low-income – were made regarding views of the impersonalisation barrier and the intention to increase digital banking usage. An ordinal regression analysis was conducted to investigate the relationships between the variables.

Results

Table 1 presents the descriptive statistics for the six bank customer groups under study. As mentioned, the total number of respondents was 542, but only the size of each selected bank customer group is of interest in this case. This means that the respondents belonging to the other age group, i.e., those aged 30–53 years, are not covered in the table. As can be seen, the sample included more old than young bank customers, and the urban and low-income groups are larger than the rural and high-income groups, respectively.

The lower part of Table 1 presents means and standard deviations for the impersonalisation barrier (comprising four items) for the studied groups of bank customers, together with the theoretical range of values (from min to max). The mean values for all six groups are towards the upper end of the range of impersonalisation values, i.e., closer to the maximum (16) than to the minimum value (4), indicating that this barrier is important. The highest number is found for old bank customers (13.18) and the lowest for young bank customers (10.06). Regarding the intention to increase the use of digital banking (comprising one item), young bank customers stand out with the highest mean value (2.63), indicating that this group is most interested in using digital banking channels.

Table 2 shows the independent *t*-test results. Regarding the age-based groups, there is a significant difference between young and old bank customers in their views of the impersonalisation barrier ($p < 0.01$), indicating that old bank customers are more concerned about the lack of personal contact than are younger ones. However, there is no significant difference between the urban and rural bank customers (although the impersonalisation barrier has a slightly higher mean value for the latter group) or between the high- and low-income groups (although the mean value is slightly higher for the former group).

Table 2 further shows a significant difference between young and old bank customers in their intention to adopt digital banking innovations ($p < 0.01$). There are also significant differences between the urban and rural bank customers, with those living in cities being more interested in increasing their use of digital banking services, and between the high- and low-income groups, with the lower-income customers being more interested in changing their banking behaviour.

Table 3 shows the ordinal regression results when gender and past experience of payment channels are also included as control variables. The impersonalisation barrier is significantly related to the intention to increase the use of digital banking among the old bank customers ($p < 0.05$), but is unrelated among the young ones. The urban customers perceive impersonalisation to have a significant influence on increased digital banking usage ($p < 0.01$), while no such relationship could be found for rural customers. It also seems that high- and low-income earners have different views of this matter, and a relationship could be found among the low-income customers ($p < 0.05$), but not among those with high income.

Table 1. Descriptive statistics

Demographic variable	Category	Number of respondents (<i>n</i> = 542)		
Age	Young bank customers (18–29 years)	128 (23.6%)		
	Old bank customers (over 53 years)	210 (38.7%)		
Location	Urban (cities over 50,000 inhabitants)	297 (54.8%)		
	Rural (settlements under 15,000 inhabitants)	149 (27.5%)		
Income	High income (>SEK 40,000 monthly)	53 (9.8%)		
	Low income (<SEK 30,000 monthly)	344 (63.5%)		
	Groups	Min	Max	Mean (SD)
<i>Interval (Likert scale)</i>				
Impersonalisation barrier	Total	4	16	12.05 (3.14)
- Age	Young bank customers (18–29 years)	4	16	10.06 (3.07)
	Old bank customers (over 53 years)	4	16	13.18 (2.59)
- Location	Urban (cities over 50,000 inhabitants)	4	16	11.89 (3.28)
	Rural (settlements under 15,000 inhabitants)	4	16	12.40 (2.80)
- Income	High income (>SEK 40,000 monthly)	4	16	12.19 (3.44)
	Low income (<SEK 30,000 monthly)	4	16	11.58 (3.18)
Digital banking intention	Total	1	4	1.65 (1.03)
- Age	Young bank customers (18–29 years)	1	4	2.67 (1.12)
	Old bank customers (over 53 years)	1	4	1.17 (0.50)
- Location	Urban (cities over 50,000 inhabitants)	1	4	1.79 (1.08)
	Rural (settlements under 15,000 inhabitants)	1	4	1.38 (0.84)
- Income	High income (>SEK 40,000 monthly)	1	4	1.42 (0.89)
	Low income (<SEK 30,000 monthly)	1	4	1.85 (1.11)

DISCUSSION

The transition from traditional to digital banking has been relatively rapid in Sweden, which is one of the countries closest to using only digital payment channels. However, various barriers, including impersonalisation, are affecting this ongoing development (Singh, 2004; Sveriges Riksbank, 2019). Overall, it is argued that impersonalisation negatively affects the bank–customer relationship, making the transition to digital banking difficult (Bátiz-Lazo et al., 2014). All groups studied here, particularly the older bank customers, perceive the impersonalisation barrier as significant. This is in line with the claims of Chaouali and Souiden (2019), Laukkanen (2016), and Poon (2008) that many older bank customers visit traditional bank branches and prefer personal contact, making these customers vulnerable in an increasingly digital bank service environment. However, the relatively low impersonalisation concerns among young bank customers indicate that this group, which will eventually become the mature bank customer group, represents a promising market for ongoing digital banking development (Nourallah et al., in press). Young bank customers also stand out regarding their intention to increase the use of digital banking. In line with previous studies (Larsson et al., 2016; Martins et al., 2014; Tan & Leby

Lau, 2016), this study finds that young bank customers are interested in innovations and in adopting new technologies, and they are not worried about the implementation of new technologies in terms of dehumanisation. This supports the argument of Belanche et al. (2019) that personal bank advisors are gradually being replaced by chatbots and robo-advisors.

Perceptions of the impersonalisation barrier do not seem to depend on the bank customers' demographic characteristics in terms of location, which is in line with Penz and Sinkovics (2013). However, location does seem to affect the intention to increase the use of digital banking and how perceptions of impersonalisation are related to digital payments and human-to-machine bank service interaction. Our results indicate that urban bank customers view impersonalisation as a somewhat greater barrier to the increased use of digital payment channels than do rural customers. This is in contrast to researchers such as Arvidsson (2017) and Laukkanen et al. (2008), who argue that rural bank customers display greater resistance to digital payments than do urban ones.

Table 2. Results of independent sample t-tests

Factor	Variable	Segmentation	Mean	Mean difference	t-value	Sig. (2-tailed)
Impersonalisation	Age	Young bank customers (18–29 years)	10.06			
		Old bank customers (over 53 years)	13.18			
		Equal variance assumed		3.118	9.988	0.000
	Location	Urban (cities over 50,000 inhabitants)	11.89			
		Rural (settlements under 15,000 inhabitants)	12.40			
		Equal variance assumed		0.504	1.604	0.109
	Income	High income (>SEK 40,000 monthly)	12.19			
		Low income (<SEK 30,000 monthly)	11.58			
		Equal variance assumed		0.613	1.293	0.197
Intention to increase the use of digital banking	Age	Young bank customers (18–29 years)	2.67			
		Old bank customers (over 53 years)	1.17			
		Equal variance assumed		1.500	16.923	0.000
	Location	Urban (cities over 50,000 inhabitants)	1.79			
		Rural (settlements under 15,000 inhabitants)	1.38			
		Equal variance assumed		0.419	4.137	0.000
	Income	High income (>SEK 40,000 monthly)	1.42			
		Low income (<SEK 30,000 monthly)	1.85			
		Equal variance assumed		0.437	2.729	0.007

Table 3. Ordinal regression results

Summary OLR results per group (dependent variable: intention to increase the use of digital banking)									
Factor		Segmentation	Estimate	Std. error	Wald	df	Sig.	95% CI lower bound	95% CI upper bound
Impersonalisation	Age	Young bank customers (18–29 years)	–0.077	0.071	1.180	1	0.277	–0.215	0.062
		Old bank customers (over 53 years)	–0.246	0.116	4.538	1	0.033	–0.473	–0.020
	Location	Urban (cities over 50,000 inhabitants)	–0.220	0.056	15.281	1	0.000	–0.330	–0.110
		Rural (settlements under 15,000 inhabitants)	–0.205	0.131	2.438	1	0.118	–0.462	0.052
	Income	High income (>SEK 40,000 monthly)	1.363	2.350	0.336	1	0.562	–3.244	5.969
		Low income (<SEK 30,000 monthly)	–0.129	0.051	6.394	1	0.011	–0.229	–0.029

Notes: Link function: Logit. **Age:** Young/old bank customers; Model fitting information: $p = 0.000/0.000$, Goodness-of-fit $p = 0.431/1.000$; Pseudo R^2 : Cox and Snell 0.489/0.615, Nagelkerke 0.524/1.000; Test of parallel lines $p = 0.472/1.000$. **Location:** Urban/rural; Model fitting information: $p = 0.00/0.00$, Goodness-of-fit $p = 0.487/1.000$; Pseudo R^2 : Cox and Snell 0.600/0.473, Nagelkerke 0.671/0.626; Test of parallel lines $p = 1.000/0.000$. **Income:** Low/high; Model fitting information: $p = 0.00/0.00$, Goodness-of-fit $p = 1.000/1.000$; Pseudo R^2 : Cox and Snell 0.579/0.783, Nagelkerke 0.646/1.000; Test of parallel lines $p = 0.993/1.000$.

In contrast to many previous studies (Akhter, 2015; Flavián et al., 2006; Giordani et al., 2014; Poon, 2008; Van der Crujisen et al., 2017), this study finds that perceptions of impersonalisation do not seem to differ depending on income. However, of particular interest is that those with lower income seem more interested in changing their behaviour in terms of using more digital payments, which corresponds to previous findings of Santouridis and Kyritsi (2014). One possible reason for this is that low-income customers do not see the importance of seeking face-to-face services for complex and high-value financial operations in the same way as do high-income bank customers (Jiménez & Díaz, 2019). However, the perceived lack of personal contact with bank employees seems to affect low-income bank customers more than high-income bank customers regarding interest in adopting digital banking innovations.

CONCLUSION AND FUTURE RESEARCH DIRECTIONS

This chapter has discussed bank customer perceptions of digital banking and the impersonalisation barrier, and compared the perceptions of various groups of customers based on empirical data from Sweden. Overall, it can be concluded that impersonalisation is a barrier meriting consideration in the ongoing transition to digital banking. This barrier seems to affect various bank customer groups' willingness to increase the use of digital banking channels, and the lack of personal contact could be an obstacle to ongoing digital developments in the banking sector. Banks should therefore acknowledge that traditional face-to-face communication may still be preferred among certain bank customers. Addressing issues, such as impersonalisation, could reduce resistance to the increased use of digital financial banking

services, and a solution could be to offer “omni-channel” service, i.e., service via a combination of traditional and digital channels (Bravo et al., 2019). Retaining “bricks-and-mortar” bank branches will likely attract older bank customers and those who resist digital innovations regardless of age, location, or income. Combining service via physical bank branches with the use of mobile bank applications is a flexible way to satisfy various groups of bank customers (Martins et al., 2014).

Banks should also be aware of the risk of financially excluding bank customers such as older ones. Society has a duty of care for vulnerable groups of bank customers (not only senior citizens, but also the foreign born and disabled), and seems prepared to counteract financial exclusion by regulation if needed (Sveriges Riksbank, 2019). In Sweden, the situation facing banks is similar to that facing companies that provide medical services. To be allowed to deliver digital medical services, companies are required by new regulations to be locally present and are also obliged to offer physical premises. This indicates that banks should be proactive and develop innovative solutions before increased legislation regulates such conditions in the banking sector as well. To encourage changed bank customer behaviour and gradually “win over” more customers to the “digital coin” it is not enough simply to replace personal bank advisors with chatbots and robo-advisors (Belanche et al., 2019). Instead, banks could increase their efforts to provide the best possible and most cost-effective services without human-to-human interaction. Developing chatbots and robo-advisors to be as human-like as possible would probably help customers accept the ongoing transformation process. This also includes young customers, who find the impersonalisation barrier less problematic than do other groups of bank customers and who are most interested in increasing their use of digital banking services.

This chapter has only discussed the impersonalisation barrier, but other barriers such as access, privacy, and security issues are also of interest when investigating and discussing the transition from traditional to digital banking (Yang et al., 2015). Considering such barriers would also facilitate more advanced data analysis and help produce more comprehensive results. Forthcoming studies could also consider the various advantages of digital banking, and these advantages could be compared with various barriers facing different groups of bank customers. This could help banks not only reduce or overcome these barriers but also strengthen the advantages related to the ongoing development of digital banking services. We would also encourage cross-cultural studies comparing the situation regarding both barriers and benefits in different countries, i.e., countries that have gone a short or a long way towards a more developed digital payment system. Moreover, research on particular digital banking innovations, such as chatbots and robo-advisors, could help provide deeper knowledge of the future of digital banking services.

REFERENCES

- Akhter, S. H. (2015). Impact of Internet usage comfort and internet technical comfort on online shopping and online banking. *Journal of International Consumer Marketing*, 27(3), 207–219. doi:10.1080/08961530.2014.994086
- Arvidsson, N. (2017). *Building a cashless society: The Swedish route to the future of cash payments*. Springer International Publishing.

- Arvidsson, N., Hedman, J., & Segendorf, B. (2017). Cashless society: When will merchants stop accepting cash in Sweden – A research model. In S. Feuerriegel & D. Neumann (Eds.), *Enterprise applications: Markets and services in the finance industry. Eighth international workshop, FinanceCom 2016, Frankfurt, Germany, 8 December 2016, revised papers* (pp. 105–113). Springer.
- Belanche, D., Casaló, L. V., & Flavián, C. (2019). Artificial Intelligence in FinTech: Understanding robo-advisors adoption among customers. *Industrial Management & Data Systems*, 119(7), 1411–1430. doi:10.1108/IMDS-08-2018-0368
- Bravo, R., Martínez, E., & Pina, J. M. (2019). Effects of customer perceptions in multichannel retail banking. *International Journal of Bank Marketing*, 37(5), 1253–1274. doi:10.1108/IJBM-07-2018-0170
- Bátiz-Lazo, B., Haigh, T., & Stearns, D. L. (2014). How the future shaped the past: The case of the cashless society. *Enterprise and Society*, 15(1), 103–131. doi:10.1093/es/kht024
- Calisir, F., & Gumussoy, C. A. (2008). Internet banking versus other banking channels: Young consumers' view. *International Journal of Information Management*, 28(3), 215–221. doi:10.1016/j.ijinfomgt.2008.02.009
- Chaouali, W., & Souiden, N. (2019). The role of cognitive age in explaining mobile banking resistance among elderly people. *Journal of Retailing and Consumer Services*, 50, 342–350. doi:10.1016/j.jretconser.2018.07.009
- Dimitrova, I., Öhman, P., & Yazdanfar, D. (2019). Challenges in the limited choice of payment methods in terms of cashless society: Bank customers' perspective. In *ICEEG 2019: Proceedings of the 2019 3rd international conference on e-commerce, e-business and e-government* (pp. 45–48). Association for Computing Machinery. 10.1145/3340017.3340034
- Eaton, G. (2018). The rise of the cashless economy: How Swedes abandoned notes and coins. *New Statesman (London, England)*, 147(5411), 19.
- Fabris, N. (2019). Cashless society: The future of money or a utopia? *Journal of Central Banking Theory and Practice*, 8(1), 53–66. doi:10.2478/jcbtp-2019-0003
- Flavián, C., Guinalú, M., & Torres, E. (2006). How bricks-and-mortar attributes affect online banking adoption. *International Journal of Bank Marketing*, 24(6), 406–423. doi:10.1108/02652320610701735
- Giordani, G., Floros, C., & Judge, G. (2014). Econometric investigation of Internet banking adoption in Greece. *Journal of Economic Studies (Glasgow, Scotland)*, 41(4), 586–600. doi:10.1108/JES-04-2011-0042
- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and FinTech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537–580. doi:10.1007/11573-017-0852-x
- Jiménez, J. R. Z., & Díaz, I. A. (2019). Educational level and Internet banking. *Journal of Behavioral and Experimental Finance*, 22, 31–40. doi:10.1016/j.jbef.2019.01.004
- Johnson, V. L., Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of M-payment services: Understanding the impact of privacy risk on M-Payment services. *Computers in Human Behavior*, 79, 111–122. doi:10.1016/j.chb.2017.10.035

- Kurila, J., Lazuras, L., & Ketikidis, P. H. (2016). Message framing and acceptance of branchless banking technology. *Electronic Commerce Research and Applications*, 17, 12–18. doi:10.1016/j.elerap.2016.02.001
- Larsson, A., & Viitaoja, Y. (2017). Building customer loyalty in digital banking: A study of bank staff's perspectives on the challenges of digital CRM and loyalty. *International Journal of Bank Marketing*, 35(6), 858–877. doi:10.1108/IJBM-08-2016-0112
- Larsson, S., Svensson, L., & Carlsson, H. (2016). Digital consumption and over-indebtedness among young adults in Sweden (LUii reports, Vol. 3). Lund University Internet Institute.
- Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, 69(7), 2432–2439. doi:10.1016/j.jbusres.2016.01.013
- Laukkanen, T., Sinkkonen, S., Laukkanen, P., & Kivijarvi, M. (2008). Segmenting bank customers by resistance to mobile banking. *International Journal of Mobile Communications*, 6(3), 309–320. doi:10.1504/IJMC.2008.017513
- Laukkanen, T., & Kiviniemi, V. (2010). The role of information in mobile banking resistance. *International Journal of Bank Marketing*, 28(5), 372–388. doi:10.1108/02652321011064890
- Lundberg, H., Öhman, P., & Sjödin, U. (2014). Transaction convenience in the payment stage: The retailers' perspective'. *Managing Service Quality*, 24(5), 434–454. doi:10.1108/MSQ-02-2014-0032
- Mani, Z., & Chouk, I. (2018). Consumer resistance to innovation in services: Challenges and barriers in the Internet of things era. *Journal of Product Innovation Management*, 35(5), 780–807. doi:10.1111/jpim.12463
- Marinova, D., de Ruyter, K., Huang, M. H., Meuter, M. L., & Challagalla, G. (2017). Getting smart: Learning from technology-empowered frontline interactions. *Journal of Service Research*, 20(1), 29–42. doi:10.1177/1094670516679273
- Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management*, 34(1), 1–13. doi:10.1016/j.ijinfomgt.2013.06.002
- Mattila, M., Karjaluto, H., & Pento, T. (2003). Internet banking adoption among mature customers: Early majority or laggards? *Journal of Services Marketing*, 17(5), 514–528. doi:10.1108/08876040310486294
- Mbama, C. I., Ezepue, P., Alboul, L., & Beer, M. (2018). Digital banking, customer experience and financial performance. *Journal of Research in Interactive Marketing*, 12(4), 432–451. doi:10.1108/JRIM-01-2018-0026
- Namahoot, K. S., & Laohavichien, T. (2018). Assessing the intentions to use Internet banking. *International Journal of Bank Marketing*, 36(2), 256–276. doi:10.1108/IJBM-11-2016-0159
- Nourallah, M., Strandberg, C., & Öhman, P. (in press). Mobile bank applications: Loyalty of young bank customers. *Financial Services Review*.

- Oertzen, A. S., & Odekerken-Schröder, G. (2019). Achieving continued usage in online banking: A post-adoption study. *International Journal of Bank Marketing*, 37(6), 1394–1418. doi:10.1108/IJBM-09-2018-0239
- Penz, E., & Sinkovics, R. R. (2013). Triangulating consumers' perceptions of payment systems by using social representations theory: A multimethod approach. *Journal of Consumer Behaviour*, 12(4), 293–306. doi:10.1002/cb.1420
- Poon, W. C. (2008). Users' adoption of e-banking services: The Malaysian perspective. *Journal of Business and Industrial Marketing*, 23(1), 59–69. doi:10.1108/08858620810841498
- Rehncrona, C. (2018). Young consumers' valuations of new payment services. *International Journal of Quality and Service Sciences*, 10(4), 384–399. doi:10.1108/IJQSS-11-2017-0111
- Santouridis, I., & Kyritsi, M. (2014). Investigating the determinants of Internet banking adoption in Greece. *Procedia Economics and Finance*, 9(1), 501–510. doi:10.1016/S2212-5671(14)00051-3
- Shaikh, A. A., & Karjaluoto, H. (2016). On some misconceptions concerning digital banking and alternative delivery channels. *International Journal of E-Business Research*, 12(3), 1–16. doi:10.4018/IJEBR.2016070101
- Singh, S. (2004). Impersonalisation of electronic money: Implications for bank marketing. *International Journal of Bank Marketing*, 22(7), 504–521. doi:10.1108/02652320410567926
- Statistics Sweden. (2018). *Sveriges framtida befolkning 2018–2070* [Sweden's future population, 2018–2070]. Statistics Sweden.
- Sveriges Riksbank. (2019). *Payments in Sweden 2019*. Sveriges Riksbank.
- Szopiński, T. S. (2016). Factors affecting the adoption of online banking in Poland. *Journal of Business Research*, 69(11), 4763–4768. doi:10.1016/j.jbusres.2016.04.027
- Tan, E., & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18–31. doi:10.1108/YC-07-2015-00537
- Tucker, M., Jubb, C., & Yap, C. J. (2019). The theory of planned behaviour and student banking in Australia. *International Journal of Bank Marketing*, 38(1), 113–137. doi:10.1108/IJBM-11-2018-0324
- Van der Crujisen, C., Hernandez, L., & Jonker, N. (2017). In love with the debit card but still married to cash. *Applied Economics*, 49(30), 2989–3004. doi:10.1080/00036846.2016.1251568
- Wahlberg, O., Öhman, P., & Strandberg, C. (2016). How personal advisors make a difference in serving “almost rich” bank customers. *International Journal of Bank Marketing*, 34(6), 904–923. doi:10.1108/IJBM-03-2015-0027
- Yang, Q., Pang, C., Liu, L., Yen, D. C., & Tarn, J. M. (2015). Exploring consumer perceived risk and trust for online payments: An empirical study in China's younger generation. *Computers in Human Behavior*, 50, 9–24. doi:10.1016/j.chb.2015.03.058

KEY TERMS AND DEFINITIONS

Dehumanisation: The lack of human characteristics such as sympathy, similar to impersonalisation.

Digital Banking: The use of banking services through the Internet, offering a range of potential advantages such as greater accessibility and convenience.

High-Income Bank Customers: Bank customers earning more than SEK 40,000 per month.

Impersonalisation: The lack of personal contact and communication in a specific context.

Low-Income Bank Customers: Bank customers earning less than SEK 30,000 per month.

Old Bank Customers: Bank customers over 53 years old.

Rural Bank Customers: Bank customers who live in settlements with fewer than 15,000 inhabitants.

Urban Bank Customers: Bank customers who live in settlements with more than 50,000 inhabitants.

Young Bank Customers: Bank customers 18–29 years old.

Section 3

Transformation of Online Business

Chapter 9

Small and Medium-Sized Enterprises in the Digital Business Sector: Examining Six Theories About Digital SME Success

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ABSTRACT

The chapter is a systematic literature review of fundamental theories about small and medium business (SME) success. The chapter examines how they specifically impact digital SMEs. The chapter examined six theories: dynamic capability view (DCV), composition-based view of firm growth (CBV), resource-based view (RBV), resource dependence theory (RDT), upper echelon theory (UET), strategic contingency theory (SCT). The results showed that RBV, DCV, and UET become relevant in articulating the value inherent to the internal resources in SMEs (which render their capabilities dynamic). In contrast, the SCT framework and the RDT model show more significance in relation to uncertainty and contingency. CBV was found to be a more pertinent framework to predict the success of SMEs. The results support CBV's hypothesis that SMEs (including digital SMEs) are able to be competitive without extensive resource advantage, too complicated technologies, or market power. The increased deployment of CBV can be advocated as a critical determinant of digital SME success.

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INTRODUCTION

The past three decades have seen a significant growth in the literature coverage of small and medium-sized enterprises (SMEs) which are said to represent some 90 per cent of the businesses globally; (OECD, 2019). Despite their numbers and contributions, SMEs do not attract as many headlines in the business media as the larger businesses and multinationals (Mesquita & Lazzarini, 2008). This is often attributed to the fact that a single large company can make a significantly noticeable impact due to the number of people they employ and the posted yearly profit. It is equally thought that the prominence of large firms in the headlines is linked to the fact that their strategy formulation draws extensively on external environmental factors and resources in the public domain, thus affecting many people and communities. Conversely, SMEs' strategy formulation draws on adequate resources and contexts that are SME-specific and with less widely spread footprint. This is particularly visible in digital SMEs.

What constitutes an SME has been clarified by many academics. However, political definitions have also been formulated through guidelines in various economic zones. For instance, in the European Union, an SME is a company that has fewer than 250 employees, and under £45 million in annual turnover (Europäische & Equal Opportunities Unit, 2005). In the United States, SMEs are often thought to be constrained by resource shortages. The definition of SME adopted in this paper encapsulates businesses with limited resources whose competitiveness derives largely from stretching ordinarily available resources into dynamic capabilities. These actions are instrumental for their survival (Korsakienė & Diskienė, 2015; Luo & Child, 2015) as they attempt to compete with larger businesses with more established resources. The academic literature coverage of SMEs has been extensive in the past two decades (Rakićević et al., 2016).

A key issue in digital SME's success research is the development of a theoretical foundation. More understanding of the arena of enterprise scholars in enterprise and that of digital SME owners probing the theories that support SME growth. There is, however, some obscurity around what is known about pertinent theoretical frameworks in the field. This research, thus, purports to examine some common theories deployed by academics to expound the achievement of SMEs. This study is equally an effort to establish critically pertinent theories to support scholarly investigations in the future.

The paper centres on the following research questions:

- What are the critical assumptions of Dynamic Capability View (DCV), Resource-Based View (RBV), Upper Echelon Theory (UET), Strategic Contingency Theory (SCT), Resource Dependence Theory (RDT), and Composition-Based View of Firm Growth (CBV)?
- What are the main criticisms and critiques on Dynamic Capability View (DCV), Resource-Based View (RBV), Upper Echelon Theory (UET), Strategic Contingency Theory (SCT), Resource Dependence Theory (RDT), and Composition-Based View of Firm Growth (CBV)?
- What is the most appropriate theory to study the SME's business context w.r.t sustained organisational performance and competitive advantage?

This paper has three main parts. The first is concerned with the methodology that is used to approach the investigation; the second part reviews the literature surrounding the four theoretical frameworks under investigation, and the third part provides a critical evaluation of the literature and the theories discussed.

Background

Much of the body of the theoretical perspectives in which are the subject of this paper (DCV, RBV, and UET) emphasise that endogenous aspects such as in the entrepreneurs' competencies and attributes are critical to succeed (Ayuso & Navarrete-Báez, 2018; Bruneel & De Cock, 2016; Hollender et al., 2017). Some other theories (SCT and RDT) take a different perspective and view exogenous aspects as key to SMEs' competitiveness (Akingbola, 2013; Arosa et al., 2013; Zhou et al., 2018). Finally, CBV is concerned with how more common (or smaller SMEs) succeed (Luo & Bu, 2018; Luo & Child, 2015) because they deploy mixed resources and creatively amalgamate their limited capabilities. However, DCV, RBV, UET, SCT and RDT were used in many investigations as basic frameworks to study SMEs despite reservations about their suitability to examine SME realities. Thus, such studies have drawn an amount of criticism.

The lack of coverage of the context of digital SMEs is a critical aspect of these criticisms. This shows how the application of these theoretical frameworks has not adapted to the evolving nature of SMEs. i.e. how RBV, DCV, SCT, UET and RDT could aid the investigation into SMEs whose operations have transcended traditional 'land-based' SME operations. More specifically, the RBV and DCV perspectives tend to heighten the VRIO (valuable, rare, inimitable, organisation) framework that may not necessarily be unique to SMEs generally and digital SMEs in particular due to the widespread digitisation that many businesses tend to take advantage of. This begs the need to categorise a more suitable framework to investigate new forms of SMEs, particularly those that live mostly digitally. Hence, this study relinquishes the examination of the CBV framework to make sense of new forms of SMEs, such as the digital ones. Authors such as Luo and Child (2015) see CBV theory as more appropriate to examine a plurality of SME contexts, thus offering avenues to consider digital SMEs which were not widely considered in the traditional SME domain. Thus, CBV differs from other analytical theories such as DCV and RBV because CBV is viewed as a pragmatic (thus dynamic) approach which can help capture the evolving nature of SMEs (Volberda & Karali, 2015). The authors also view CBV as less appropriate for the study of more sizable companies due to its emphasis on basic day-to-day capabilities, as is the case in SMEs.

A case for rejecting other theories such as the resource-based view (RBV) and dynamic capability view (DCV) in the examination of the SME contexts is made by Li (2016) who see these frameworks as more suitable for examining larger companies. Li (2016) contends that the RBV is not appropriate to deal with survival perspective as seen in the fiercely competitive global marketplace due to RBV's excessive focus on VRIO as explained earlier. Similarly, Barney (1991) believes that dynamic capabilities (DCV) theory does not qualify for the study of SME context because it is merely an extension of the RBV framework. The maintenance of competitive advantage in RBV and DCV is determined by firms' ability to appropriate unique, rare, inimitable, valuable, and non-substitutable organisational resources. The DCV framework mainly views capabilities as uniformly spread in the company because they rest on organisations' unique processes and asset positions; this then excludes, SMEs are chiefly and first concerned with imminent realities, thus a temporary competitive advantage.

Owing to the recentness of the CBV theory, it is more likely to capture recent phenomena such as the emergence and growth of digital SME businesses and mainly because it focuses on survival rather than growth. It is well known that digital SMEs emerge fast but they could also vanish fast, making this field suited for the application of CBV (OECD, 2019) because they do not have "the benefit of resource advantage, proprietary technologies and market power" (Luo & Child, 2015, p. 379). Despite the limita-

tions of this research, because undertaken initially only in the Chinese context, Luo and Child's finding offer some insights into emerging market contexts.

METHODOLOGY

The Use of Systematic Literature Review

This research conducted a systematic review of the literature, which critically discussed the body of research in the field. The advantage of the systematic literature review is that it allows the researchers to account for most relevant studies and operate a critical examination of these sources. As Dochy (2006) contends, the process aims to decrease bias and increase the robustness of the study. This research examines digital SMEs in this paper in the light of common theories deployed by previous researchers, in view to suggest a more suitable analytical, theoretical framework. This means that this systematic literature review endeavour had to focus on topics that tightly connected with the field, as Collins and Fauser (2005) advise.

Two forms of systematic reviews have emerged over time: (1) traditional narrative-based review and (2) evidence-based review. In traditional narrative-based literature reviews, the research seeks to highlight how scholarly knowledge has been widened. In evidence-based reviews, researchers seek to analyse qualitative results in the body of literature available in view to aid policy formulation (Hack-Polay, 2020; Shujahat et al., 2017). Our paper uses evidence-based systematic review. By research questions, summarise the data, and assesses and integrates reliability and validity of the data. The paper also synthesises the significant perspectives visible in scholarly theories that holistically conceptualise theories such as CBV, DCV, RBV, RDT, SCT and UET. Below it is clarified how the systematic literature review in this paper was completed.

Sources of Data

The current study probed central databases in the area of management science (Academy of Management, Cambridge University Press, Emerald, Elsevier, Google Scholar, InformaPubsOnLine, John Wiley & Sons, JSTOR, ProQuest, SAGE, Wiley InterScience Journals and Wiley Online Library). Table 1 summarises these sources, and Table 2 shows the strings defined to obtain the literature.

Inclusion/Exclusion Criteria

This study opted to include in the study pertinent papers with the characteristics: (1) published in English; (2) date of publication between 1970 and 2017 (3) Non-empirical, empirical, theoretical and qualitative investigations related to the theories selected for this study. Papers that were duplicates studies were excluded from the study.

To perform the final review, keywords and abstracts were used to assess the related papers for this study from the remaining research papers. Besides, full-text articles were readout of remaining papers to assess the studies that met inclusion criteria. The remaining papers were screened out based on their abstracts that did not indicate any assumption or criticism on understudy theories. The remaining studies were studied thoroughly to include the most relevant and comprehensive studies. This led to the selection

of 64 articles which were reviewed. The main summarised points from each study were synthesised and then integrated into the methodology part to answer the research questions.

DISCUSSION OF SELECTED THEORIES IN DIGITAL SMES CONTEXT

Some of the theories discussed earlier, particularly DCV, RBV, UET, and CBV, will now be closely reviewed, applying them to the specific context of digital SMEs. The first theory, DCV, assumes that DCs of firms can result in superior performances. This explains how companies attain sustainable competitive advantage through the deployment of their DCs in response to the competitive environment (Teece, 2007). DCV addresses the component of the external environment explains the sources of organisational performance; it provides little room to understand the reasons why a number of digital SMEs experience more significant growth than others (Miles, 2012). DCV assumes that sustainable competitive advantage is a direct result of management and organisational processes of coordination, integration, reconfiguration, and learning. Individuals or SMEs that are new entrants to a given market can show high attainment as they amass information and understanding of that market and its actors (suppliers, customers, competitors) and they alter their entrepreneurial responses to market requirements. The application of the framework proposed by DCV is minimal in terms of its application to digital SMEs, those businesses start with one individual or very few individuals, with some remaining largely unstructured entities. Such entities then do not necessarily have the formal and bureaucratic (managerialistic) processes akin to larger companies because a strategy is down to the competencies and intent of the owner-entrepreneur who can single-handedly better identify and exploit emerging possibilities in the digital market.

The next framework applied to digital SMEs is the RBV theory which is concerned with how businesses develop a strategic competitive advantage by deploying what Barney (1991) refers to as valuable, unique, non-substitutable, inimitable, and rare resources. This study deems RBV unfit for the examination of many digital SMEs which first start as resource-poor resource-constrained entities. A case for this unsuitability of RBV for SMEs generally was earlier made by Li (2016). As argued earlier, many digital SMEs (even those that developed into mega businesses such as Google or Facebook) were initially SMEs with ordinary and minuscule resources. The success of the enterprise then was mostly contingent upon the entrepreneur's motivation and his/her ability for successful resource recombination. The RBV framework is also not always capable of offering explanations as to how digital SMEs stretch their limited resources to develop dynamic capabilities that can withstand competitive assaults from the myriads of players in the crowded digital business environment. RBV is not competent to explain how emerging small digital SMEs do/ can pass market tests for inimitability, substitutability, appropriability, durability and competitive superiority since most such SMEs (as asserted earlier) start with ordinary resources and capabilities that make them vulnerable.

Our third key framework to the discussion is in connection with digital SMEs is the Upper Echelon Theory (UET). As debated in the previous section of this paper, UET views organisational performance in the light of the capabilities and competencies the top managers' harbour (Hambrick, 2007). To make such propositions more robust, more increased causal explanatory research among UET scholars is required (Priem et al., 1999). This is because the applicability of UET to digital SMEs (and many – particularly – new SMEs) is limited. Particularly the vast array of small businesses within the broader SME context do not have sizeable senior management teams (SMT). Such increased causal explanatory research can assist the current study understanding of the mediating variables that characterise the relationship

between digital SME factors and the traits that the entrepreneur-owner possesses. Thus, UET research, to be relevant to digital SMEs and SMEs at large, need not focus on the reality of managerial function, capability and traits but also entrepreneur traits (particularly in a small start-up digital SMEs). Failing to take this shift, UET will continue to be criticised in the context of SMEs because of the paucity of construct validity and explanatory power in this theory (Oppong, 2014; Priem et al., 1999).

The CBV theoretical framework has not escaped critical scrutiny in the literature. As explained in the previous section, the main charges against CBV centre on its lack of clarity in its theoretical positioning, the abstract aspect of the concept of CC and that of self-imposed constraints (Li, 2016). This theoretical standpoint is a recent construction, and perhaps, it is due to this recentness that it reflects better than others the contemporary business environment. Its core argument is that companies can grow and compete using limited proprietary technology, market power, and unique resource (Luo & Child, 2015) appears to resonate well with digital SMEs with who is described by this chapter as entrepreneur spirit. CBV suitable in this chapter's view is suited for the study of SME contexts – and more specifically digital SMEs' – because its position is an acknowledgement that managerial functions and hierarchical structures are not sine qua non conditions for business growth. The phenomenal growth of many contemporary digital businesses that started as a 'one-man or one-woman' band is a testament to this. This research asserts that CBV could become an even more effective analytical, theoretical framework if it could draw on some relevant features of other organisational theories such as the DCV and RBV, that can strengthen its position as the theoretical lens for SME's study.

Extending onto DC, CBV also complements the DCV innovative composition perspective. The composition process of CBV is in itself a firm's DC that is an idiosyncratic, firm-specific capability. It is similar to DC's view of "the firm's ability to integrate, build, and reconfigure internal and external competence to address rapidly changing environments" (Teece et al., 1997). Both DCV and CBV researchers have pointed out that not only should the search for new resources be more innovative, but the usage of existing resources should also be applied in new ways (Koestler, 1964; Penrose & Penrose, 2009; Schumpeter, 1982; Usher, 2013). CBV has much in common with DCV, as Resource Recombination (also known as "Schumpeterian innovation") which is an innovation resulting from the "carrying out [of] new combinations" (Schumpeter, 1982, p. 68), traces its theoretical roots to DCV.

Both RBV and CBV complement the superior strategic resources' possession as an unnecessary condition for a firm's competitive advantage. Although RBV postulates that resources which are inimitable, valuable, non-substitutable, and rare contribute to SCA (Barney, 1991), however, the possession of such resources is not essential. Similarly, CBV does not insist on the possession of such resources as an essential condition for the firm's SCA. Instead, CBV highlights the importance of various generic resources that may produce the temporary competitive edge to firms by using them in an innovative composition. Also, the CBV theory highlights that CBV's composition process is a distinct capability and core competence that is heterogeneous, valuable, and difficult to imitate—similar to the resources of RBV (Barney, 1991).

These four theories, namely DCV, RBV, UET, and CBV as discussed in light of SME success, are related to the concept of internal resources, while SCT and RDT are related to external factors. RDT presents the theory that firms can survive due to their ability to attain and maintain critical resources (Pfeffer & Salancik, 1978). However, it is not possible to test RDT because it consists of several hypotheses (Nienhüser, 2008). RDT does not provide much support to external factors such as uncertainty and scarcity of resources within its environment, which ultimately affects strategic decision-making. In cases of uncertainties, the application of the RTD theory does not provide support to decision-makers on

how to control these external factors. However, it does have implications for factors including production strategies, organisations' optimal divisional structure, employees and board members' recruitment, contract structure, organisation's external links, and some other aspects of organisation's strategy. In this regard, RDT is not successful in providing a sense of rationality for the organisation.

Similar to RBV, SCT is static, ineffectual in managing organisational adaptation and changes (Galunic & Eisenhardt, 1994) and unable to take into account how organisations change from one "Fit" model to another over time. Additionally, the SCT that has been widely used in existing literature constitutes the core concept of "Fit." This suggests that superior organisational performance depends on the proper alignment of external and internal organisational factors (Linton, 2014). However, the theory's assumption that "Fit" results in high performance is only valid by definition and cannot be tested (Miles, 2012).

CRITICAL PERSPECTIVES ON THE SIX THEORIES COVERED

Dynamic Capability (DCV) Theory

Teece et al. (1997) characterised "dynamic capability" (DC) as the ability of a company to frame and reframe internal and external competencies in order to cope with unpredictable environmental events. Teece and Pisano (1994) noted dynamic capabilities (e.g. timely innovation, effective deployment of the organisation's internal and external competencies) as determinants to firms' competitiveness.

For Teece et al. (1997), DCV helps to grasp the way in which dynamic capabilities aid companies in establishing and sustaining competitiveness in a fiercely thought market place (Teece, 2007), placing dynamic capabilities at the centre of the companies' achievements. DVC places capabilities and competencies at the core of management activities and as asset-dependent.

Protagonists of the DCV framework stress that the meaning assigned to "dynamic capabilities" in DCV is blurred and has inconsistencies (Arend & Bromiley, 2009; Zahra et al., 2006). Owing to the difficulties in operationalising the definition proposed (Eisenhardt and Martin 2000). Further limitations were found by Arend and Bromiley (2009) that the inability of a company to adapt to certain circumstances is not synonymous of lacking dynamic capabilities.

Resource-Based View (RBV) Theory

RBV has two fundamental claims. The first argues that firms' differences lie in resource capabilities; the second of RBV's claim is that companies' resources are not always transferable. RBV is thus mainly concerned with differences in companies' performance in relation with the resources and how they can maintain their competitive advantage in harshly competitive environments (Barney, 1991; Hoopes et al., 2003; Peteraf & Barney, 2003; Wernerfelt, 1984). When other companies in a firm's market falter and cannot beat it, then sustainable competitive advantage (SCA) emerges as sustainable. It, therefore, is the result of rarity, inimitability, non-substitutability and value of the firm's assets and capabilities (Barney, 1991).

The RBV is not without criticisms. These are primarily linked to the model's lack of clarity (Connor, 2002; Miller, 2003) about what it categorises as the uniqueness of resources to provide more guidance about their effective deployment. Taking other critical perspectives, other researchers (Lockett et al., 2009; Miles, 2012; Priem & Butler, 2001) contend that the elements of the RBV are repetitive and lacks

consideration for organisational contextual and firms' strategic capabilities and intents factors. More critically, Fiol (2001) that SCAs are unattainable Due to the evolving nature of business realities, and advocates that it is more realistic for firms to focus on developing temporary competitive advantage for a given market condition. Miles (2012) and Armstrong and Shimizu (2007) support this view and add that the relatively thin empirical evidence at this study's disposal is inadequate to claim that sustained competitive advantage is achievable through the elements of the RBV. Thus, it is claimed (Li, 2016) that there are other factors outside of the RBV elements that could lead to firms' (especially in the highly volatile digital SME context) competitive advantage.

Upper Echelon Theory (UET)

The model claims that the personality, values and experiences of managers exert a significant impact on how they view and assess organisational and business reality (Hambrick & Mason, 1984). The UET framework proposes that managerial decisions have a robust individual basis, meaning that such decisions depend on the manager's view of the world. For Hambrick (2007) bounded rationality is the foundation of the Upper Echelon Theory, establishing that complexity is not necessarily an impediment to a robust assessment and prediction. S company, therefore, reflects its top echelon and their insights and flaws (Hambrick, 2007).

Although the Upper Echelon Theory emphasises the crucial place of top management in predicting firm performance, UET theory is not exempt from criticisms. Most critiques (Oppong, 2014; Priem et al., 1999) centre their reproach on the absence of full explanation, constructive validity and prescription practicality in the UET framework. The theory does not examine sufficiently the place demographics occupies in the performance of companies and their on-going strategic formulation (Oppong, 2014; Priem et al., 1999). This is a limitation because the study of companies' digitisation in the i-era cannot be divorced from generational considerations since it is well documented that there are generational differences in the preferences of customers that SMEs target as they go online (Mahmoud, Fuxman, et al., 2020; Mahmoud, Grigoriou, et al., 2020; Mahmoud, Reisel, Fuxman, et al., 2020; Mahmoud, Reisel, Grigoriou, et al., 2020). Other authors (Barrick et al., 2007; Ilgen et al., 2005; Smith et al., 1994) consider UET to be a little elaborate framework as it blurs key mediating and moderating elements.

The Strategic Contingency Theory (SCT)

The notion of 'Fit' is at the centre of the SCT theory. It postulates that organisational performance is a result of the congruence between the company's key characteristics (goals, demands, needs, and structures) and contingent factors in its environment. This view is mainly well supported among contingency-based researchers such as Steiner (1979), Hofer (1990) and Ginsberg and Venkatraman (1985). They view a firm's resources in conjunction with environmental factors as possible avenues for strategic formulation (Hofer, 1990; Lawrence & Lorsch, 1967), making contingency central to the firm's operation.

Many authors (Drazin & Van de Ven, 1985; Nadler & Tushman, 1980; Umanath, 2003) "Fit" is an alignment between the firm's resources and competencies and environmental factors (Venkatraman & Camillus, 1984) which deliver performance outcomes.

Many authors (Miles, 2012; Perrow, 1979; Schreyögg, 1980) reproach SCT the deterministic stance that it takes. This essential criticism is rooted in the view that in the SCT framework, contingencies determine the organisation attitudes and choices, assuming that most first approach to business reality

is essentially reactive (Miles, 2012). The opponents of SCT framework assert that managerial autonomy is the actual term contradictory to SCT's premise. For instance, strategic choices have been offered as a middle ground to give freedom to managers in their decision-making activities within the contingency framework (Child, 1972).

Resource Dependence Theory (RDT)

The RDT theory provides directions about how to the external constraints facing organisations. Its founders' Pfeffer and Salancik (1978) profess the company's ability to survive by minimising uncertainty and dependency. Significantly, they contend that, in order to understand companies' behavioural approaches, it is crucial to examine their ecology. The RDT theory, in this perspective, comprises various hypotheses, e.g. the need for interaction between firms, it is possible each company to compete with rivals, etc. These interactions signify interdependence between in the competitive market. Nevertheless, at the same time, firms can sustain competition more effectively by reducing their level of dependency on other actors (Delke, 2015; Nienhüser, 2008) and maximise the exploitation of various other on which they are also dependent is critical for competitive advantage (Nienhüser, 2008).

However, critics such as Casciaro and Piskorski (2005), see many obscurities in RDT theorisation. Specifically, they criticise the notion of constrained absorption inherent in the model. It suggests that companies which labour to minimise uncertainty cannot achieve that; these perceptions are confounded with the predictions of the RDT framework (Casciaro & Piskorski, 2005). Delke (2015), more critically, raises RDT's general constructs and assumptions which are not always justified and do not provide clear rationale to substantiate the reason why companies political nature is emphasised in contrast with the economic rationale (Nienhüser, 2008). This raises doubts as to whether the RDT theory was sufficiently probed (Pfeffer & Salancik, 2003).

A Composition-Based View of Firm Growth (CBV)

Luo and Child's (2015) CBV theory postulates that company growth is achievable in the absence of resource advantage, basic technology and market power. This theoretical framework contends that a significant aspect of company development rests on the ordinary firm type which is concerned with common resources. This means that the company can be in a position derive heightened outcomes through the [1] effective and creative deployment of existing open resources, and [2] integration of capabilities that are geared at enhancing the critical price-value ratio for many of their consumers. Ordinary firm types possess basic resources and often do not have strategic assets in the form of too technologies as well as brand image. Numbers of SMEs in the advanced world in in the emerging world have these characteristics (Chesbrough, 2007). The authors of the theory have since revisited their standpoint and view ordinary firms' competitive strategies as lead those of established competitors.

The Composition-Based View theory, thus, establishes that companies can grow and develop competitive advantage by obtaining basic resources that they can find in the marketplace and mobilise them for a timely response to market trends.

The meaning of "ordinary resources" in this context centres on generic assets and not singular to a firm. These can be traded copied and acquired easily, industry partners. In turn, "composition" refers to identifying, configuring and integrating various forms of resources (and means of competition) for the attainment of competitive advantage, e.g. higher price-value, more offerings, and speedy response

to market fluctuations. Companies that rely on CBV are better at the use of the low-cost new designs for timely responses to market dynamics of the market. CBV theory emphasises the lack of uniqueness in SMEs' resources, thus encouraging them to seek opportunities through the effective deployment of common resources which the market offers more readily (Chittoor et al., 2009).

However, the CBV theory was rejected owing to its excessive accent on Chinese SMEs (Burton, 2015), and its emphasis on structural resilience, use of low-cost resources, entrepreneurial drive, ambidexterity advantage of the firm, bricolage, harmony and yin-yang perspective. As Burton (2015) claimed, these CBV elements are not novel and seldom reflect an expression of creative composition. Low-cost approaches are not valid assumptions for all companies and ambidexterity is also deemed to be an answer for intricate management issues (Burton, 2015; Burton et al., 2020). These authors also view effective culture and entrepreneurial drive as compulsory for companies across the board. Further criticism of the CBV likens it to a 'survival-of-the-fittest' approach which enables flexible firms to crush the rest to survive in a fluctuating business environment. Such an approach for Burton (2015), is tactics geared at short-term gains as opposed to long terms strategic perspective.

Other critics, Volberda and Karali (2015), believe that using compositional capabilities (CCs) in conjunction with ordinary resources is within the scope of the RBV framework, making CBV rather an extension of RBV as opposed to being viewed as a totally separate theorisation. Top management is often tasked with blending basic resources effectively with the intent of gaining competitive advantage. In this perspective, CCs stand as unique subsets in the RBV theory and ought to be categorised as DCs because the positive use of compositional capabilities as core competencies. To ascertain this more robustly, Volberda and Karali (2015) advocate for more research about compositional capabilities in a variety of situations.

Li (2016) identified three additional limitations of the CBV theory. Li argues that the key perspective of CBV lacks clarity. The novelty in the CBV theory is also questionable as is the question about its applicability for all resource-constrained companies. The speculative nature of CCs blurs CBV's singularity.

SOLUTIONS AND RECOMMENDATIONS

Our paper started with the aim of developing a systematic review of some theoretical approaches used to analyse the success of small and medium-sized enterprises (SMEs). The current study critically considered the DCV, RBV, UET, SCT, RDT and CBV. The derived analysis shows that these theoretical perspectives are currently used by researchers to attempt to SME success, however, they attract much criticism due to their shortcomings. These shortcomings, the chapter has demonstrated, are more accrued when endeavouring to apply the theories to digital SMEs is the many criticisms persist owing to the fact that the theoretical frameworks examined in this study are little testable; their use largely only has reasonable success with the core concepts, e.g. top management capabilities, organisational structure, ecology, etc. They ignore (or are little competent for analysing business realities outside of these traditional areas in the field or organisational studies. Areas such as the study of small digital businesses that may not have an extensive managerial function are outside the scope of these popular theories. Because these frameworks, to explain business success, emphasise 'unique, valuable, and rare resources' SMEs and digital SMEs, particularly, that do not possess them at the initial stage (and sometimes for a protracted length of time) could be overlooked in critical academic research, therefore limiting the understanding of this vast domain. SMEs can possess resources that are easily available within the business environ-

ment - therefore not perceived as unique, valuable or rare – but there may be an entrepreneur spirit that often make them work. With the tremendous success in the past two decades of many digital SMES, an understanding of this dynamic entrepreneur spirit is now timely.

Miles (2012) considered that writing a critique of existing literature/theories is one of the ways to contribute to organization and management theory. In line with this, current research considers that the review and critique of understudy theories could be considered as one of the contributions to the existing literature in entrepreneurship's theories because these theories have been commonly used by many studies relevant to entrepreneurship field while studying the context of small, medium, or large size businesses. The review and critique of these theories would provide useful insights to the future researchers to select and use the most appropriate theory in their studies while studying the SMEs' business success.

By proposing CBV over other theories, it is aimed at contributing towards:

- 1) Luo and Child (2015, p. 405) state “an intriguing area for future research lies in the underlying processes and systems by which compositional capabilities are established”, hence CBV theory can help in establishing the sequential procedures and explanation of how the managers of the firms convert ordinary resources to extraordinary to survive in the market.
- 2) In addition to procedures, these insights could be used to offer explanations on the “Survival Concept” apart from only relying on traditional good management practices.
- 3) After gaining such insights, hypotheses can be developed, and data could be gathered to validate and refine the theories.

Hence, with the help of these steps, this chapter can explore the underspecified and underlying managerial procedures that would assist the firms for their survivability.

As mentioned earlier that SMEs businesses mostly deal with ordinary types of resources to operate their businesses and do not deal with unique or rare types of resources. Since CBV emphasizes on ordinary types of firm's resources, thus, it provides more useful insights to study the context of SMEs' businesses. Thus, by reviewing and comparing the existing organizational theories with CBV, this study founds the greater relevancy of CBV to study the ordinary types of firm's resources and thus, this study does contribute to the current literature by recommending CBV for the future researchers while studying the SMEs' resources under various contexts. This is because, in line with Luo and Child (2015), this study does believe that CBV is the most appropriate theory to study the context of SME or small businesses in any context because these types of the businesses deal with the ordinary resources for their survival and to gain the temporary competitive advantage.

FUTURE RESEARCH DIRECTIONS

The main limitation of this study is that it reviewed and criticized only six theories and did not review and critique some other grand theories such as Absorptive Capacity (AC), Knowledge-Based View (KBV), and Resource Management View (RMV) that have also been used while studying the predictors of SMEs under various contexts.

Although the review, as well as the summary of existing theoretical work, have a great value in the field of management and organization theory (LePine & King, 2010; Miles, 2012). However, the simple review of existing studies is not enough to get the work published (Kilduff, 2007). The future researchers

can maximize the potential contribution of their review's literature by clarifying or challenging interrelationship in the theories, addressing the shortcomings for the theories, identifying theoretical problems, and critiquing as well as highlighting relationships among constructs in the theories.

CBV appears to be the most appropriate theory to predict the success of SMEs. This is because the theory claims that small or ordinary firms can capitalise on ordinary and accessible resources to create their niche products. Therefore, this paper suggests that future research should employ the CBV theory to support the constructs of their research framework. In connection with this, further empirical research is needed to understand the development and decline process of SMEs—especially regarding how SMEs start their business, achieve success, sustain their success, and how and why they decline. Researchers across the field of SMEs, entrepreneurship, manufacturing, and innovation should, therefore, conduct joint research to gain wider knowledge on SMEs' competitive advantage.

Table 1. Sources of data

Name of database	Database website
SAGE	http://jom.sagepub.com/
Wiley Online Library	https://onlinelibrary.wiley.com/
JSTOR	http://links.jstor.org/
Elsevier	https://www.sciencedirect.com/
Google Scholar	https://scholar.google.com/
Emerald	emeraldinsight.com
Academy of Management	https://journals.aom.org/
John Wiley & Sons	https://eu.wiley.com/WileyCDA/
Cambridge University Press	https://www.cambridge.org/
ProQuest	https://search.proquest.com/
InformaPubsOnLine	https://pubsonline.informs.org/
Wiley InterScience	www.interscience.wiley.com

Source. An output of the current study

Table 2. The strings utilised to obtain the literature

Name of database
Dynamic Capability View's (DCV) assumptions and criticisms
Resource-Based View's (RBV) assumptions and criticisms
Upper Echelon Theory's (UET) assumptions and criticisms
Strategic Contingency Theory's (SCT) assumptions and criticisms
Resource Dependence Theory's (RDT) assumptions and criticisms
Composition-Based View of Firm Growth's (CBV) assumptions and criticisms

Source. An output of the current study

The future researchers are recommended to use CBV while studying the common resources as the predictor of SMEs' business success, on the other hand, they can also integrate CBV with other grand theories including Strategic Contingency Theory (SCT) and Resource Dependence Theory (RDT) while studying the internal as well as external general factors/resources of SMEs simultaneously in order to predict their success. Researchers can do so by looking for similar constructs in line with the approaches in one or more grand theories, then looking for the ways to integrate these theories into a unified and new approach to explain a certain phenomenon.

Table 3. List of Abbreviations

<i>AC</i>	Absorptive Capacity
<i>CBV</i>	Composition-Based View of Firm Growth
<i>CC</i>	Compositional capabilities
<i>DC</i>	Dynamic Capabilities
<i>DCV</i>	Dynamic Capability View
<i>JSTOR</i>	Journal Storage
<i>KBV</i>	Knowledge-Based View
<i>OECD</i>	Organization for Economic Cooperation and Development
<i>RBV</i>	Resource-Based View
<i>RDT</i>	Resource Dependence Theory
<i>RMV</i>	Resource Management View
<i>SCA</i>	Sustainable competitive advantage
<i>SCT</i>	Strategic Contingency Theory
<i>SME</i>	Small and Medium-Sized Enterprise
<i>UET</i>	Upper Echelon Theory
<i>VRIO</i>	Valuable, Rare Inimitable, Organized

Source. An output of the current study

CONCLUSION

The findings of this research propose the application of CBV theory for the success of SMEs as compared to other theories. And since the focus of CBV is “firms with ordinary resources can establish a strong position in their competition by creatively assembling and integrating the open and generic resources they possess or purchase; that is, they are astute in distinctively identifying, leveraging, and combining ordinary resources, external and internal, to create a competitive advantage” (Luo & Child, 2015, pp. 381). It provides insights into how managers can explore the sequential process of reconfiguring ordinary resources and offer explanations on the “Survival Concept” apart from only relying on traditional good management practices. It offers insights into hypotheses development towards data collection and refinement of theories.

REFERENCES

- Akingbola, K. (2013). A model of strategic nonprofit human resource management. *Voluntas*, 24(1), 214–240. doi:10.1007/11266-012-9286-9
- Arend, R. J., & Bromiley, P. (2009). *Assessing the dynamic capabilities view: spare change, everyone?* Sage Publications.
- Armstrong, C. E., & Shimizu, K. (2007). A review of approaches to empirical research on the resource-based view of the firm. *Journal of Management*, 33(6), 959–986. doi:10.1177/0149206307307645
- Arosa, B., Iturralde, T., & Maseda, A. (2013). The board structure and firm performance in SMEs: Evidence from Spain. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 19(3), 127–135. doi:10.1016/j.iedee.2012.12.003
- Ayuso, S., & Navarrete-Báez, F. E. (2018). How does entrepreneurial and international orientation influence SMEs' commitment to sustainable development? Empirical evidence from Spain and Mexico. *Corporate Social Responsibility and Environmental Management*, 25(1), 80–94. doi:10.1002/csr.1441
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. doi:10.1177/014920639101700108
- Barrick, M. R., Bradley, B. H., Kristof-Brown, A. L., & Colbert, A. E. (2007). The moderating role of top management team interdependence: Implications for real teams and working groups. *Academy of Management Journal*, 50(3), 544–557. doi:10.5465/amj.2007.25525781
- Bruneel, J., & De Cock, R. (2016). Entry mode research and SMEs: A review and future research agenda. *Journal of Small Business Management*, 54, 135–167. doi:10.1111/jsbm.12291
- Burton, R. M. (2015). Extraordinary Survival from Ordinary Resources—How So? *Management and Organization Review*, 11(3), 413–417. doi:10.1017/mor.2015.38
- Burton, R. M., Obel, B., & Håkonsson, D. D. (2020). *Organizational design*. Cambridge University Press. doi:10.1017/9781108681162
- Casciaro, T., & Piskorski, M. J. (2005). Power imbalance, mutual dependence, and constraint absorption: A closer look at resource dependence theory. *Administrative Science Quarterly*, 50(2), 167–199. doi:10.2189/asqu.2005.50.2.167
- Chesbrough, H. W. (2007). Why companies should have open business models. *MIT Sloan Management Review*, 48(2), 22.
- Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice. *Sociology*, 6(1), 1–22.
- Chittoor, R., Sarkar, M. B., Ray, S., & Aulakh, P. S. (2009). Third-world copycats to emerging multinationals: Institutional changes and organizational transformation in the Indian pharmaceutical industry. *Organization Science*, 20(1), 187–205. doi:10.1287/orsc.1080.0377

- Collins, J. A., & Fauser, B. C. (2005, March-April). Balancing the strengths of systematic and narrative reviews. *Human Reproduction Update*, 11(2), 103–104. doi:10.1093/humupd/dmh058 PMID:15618290
- Connor, T. (2002). The resource-based view of strategy and its value to practising managers. *Strategic Change*, 11(6), 307–316. doi:10.1002/jsc.593
- Delke, V. F. (2015). *The Resource Dependence Theory: Assessment and evaluation as a contributing theory for supply management*. Academic Press.
- Dochy, F. (2006). A guide for writing scholarly articles or reviews for the Educational Research Review. *Educational Research Review*, 4(1-2), 1–21. doi:10.1016/j.edurev.2006.02.001
- Drazin, R., & Van de Ven, A. H. (1985). Alternative forms of fit in contingency theory. *Administrative Science Quarterly*, 30(4), 514–539. doi:10.2307/2392695
- Europäische, K., & Equal Opportunities Unit, E. (2005). *The new SME definition: User guide and model declaration*. Office for Official Publications of the European Communities.
- Fiol, C. M. (2001). Revisiting an identity-based view of sustainable competitive advantage. *Journal of Management*, 27(6), 691–699. doi:10.1177/014920630102700606
- Galunic, D. C., & Eisenhardt, K. M. (1994). Renewing the strategy-structure-performance paradigm. *Research in Organizational Behavior*, 16, 215–215.
- Ginsberg, A., & Venkatraman, N. (1985). Contingency perspectives of organizational strategy: A critical review of the empirical research. *Academy of Management Review*, 10(3), 421–434. doi:10.5465/amr.1985.4278950
- Hack-Polay, D. (2020). Are graduates as good as they think? A discussion of overconfidence among graduates and its impact on employability. *Education + Training*. Advance online publication. doi:10.1108/ET-10-2018-0213
- Hambrick, D. C. (2007). *Upper echelons theory: An update*. Academy of Management Briarcliff Manor.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206. doi:10.5465/amr.1984.4277628
- Hofer, C. W. (1990). Toward a contingency theory of business strategy. In *Strategische Unternehmensplanung/Strategische Unternehmensführung* (pp. 151–175). Springer. doi:10.1007/978-3-662-41484-2_7
- Hollender, L., Zapkau, F. B., & Schwens, C. (2017). SME foreign market entry mode choice and foreign venture performance: The moderating effect of international experience and product adaptation. *International Business Review*, 26(2), 250–263. doi:10.1016/j.ibusrev.2016.07.003
- Hoopes, D. G., Madsen, T. L., & Walker, G. (2003). Guest editors' introduction to the special issue: Why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24(10), 889–902. doi:10.1002/mj.356
- Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology*, 56(1), 517–543. doi:10.1146/annurev.psych.56.091103.070250 PMID:15709945

Kilduff, M. (2007). *Editor's comments: The top ten reasons why your paper might not be sent out for review*. Academic Press.

Koestler, A. (1964). *The act of creation*. Academic Press.

Korsakiene, R., & Diskiene, D. (2015). *Personality traits of managers and success of firms: a case of Lithuanian SMEs*. Academic Press.

Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12(1), 1–47. doi:10.2307/2391211

LePine, J. A., & King, A. W. (2010). Editors' comments: Developing novel theoretical insight from reviews of existing theory and research. *Academy of Management Journal*.

Li, X. (2016). *Compositional advantage and strategy: understanding how resource-poor firms survive and thrive*. Academic Press.

Linton, G. (2014). *Contingency theory in entrepreneurship research*. Academic Press.

Lockett, A., Thompson, S., & Morgenstern, U. (2009). The development of the resource-based view of the firm: A critical appraisal. *International Journal of Management Reviews*, 11(1), 9–28. doi:10.1111/j.1468-2370.2008.00252.x

Luo, Y., & Bu, J. (2018). Contextualizing international strategy by emerging market firms: A composition-based approach. *Journal of World Business*, 53(3), 337–355. doi:10.1016/j.jwb.2017.01.007

Luo, Y., & Child, J. (2015). A composition-based view of firm growth. *Management and Organization Review*, 11(3), 379–411. doi:10.1017/mor.2015.29

Mahmoud, A. B., Fuxman, L., Mohr, I., Reisel, W. D., & Grigoriou, N. (2020). “We aren’t your reincarnation!” workplace motivation across X, Y and Z generations. *International Journal of Manpower*. doi:10.1108/IJM-09-2019-0448

Mahmoud, A. B., Grigoriou, N., Fuxman, L., Reisel, W. D., Hack-Polay, D., & Mohr, I. (2020). A generational study of employees’ customer orientation: A motivational viewpoint in pandemic time. *Journal of Strategic Marketing*, 1–18. Advance online publication. doi:10.1080/0965254X.2020.1844785

Mahmoud, A. B., Reisel, W. D., Fuxman, L., & Mohr, I. (2020). A Motivational Standpoint of Job Insecurity Effects on Organisational Citizenship Behaviours: A Generational Study. *Scandinavian Journal of Psychology*, sjop.12689. Advance online publication. doi:10.1111/jop.12689 PMID:33156544

Mahmoud, A. B., Reisel, W. D., Grigoriou, N., Fuxman, L., & Mohr, I. (2020). The reincarnation of work motivation: Millennials vs older generations. *International Sociology*, 35(4), 393–414. doi:10.1177/0268580920912970

Mesquita, L., & Lazzarini, S. (2008). Horizontal and Vertical Relationships in Developing Economies: Implications for the SMEs Access to Global Markets. *Academy of Management Journal*, 51(2), 359–380. doi:10.5465/amj.2008.31767280

Miles, J. A. (2012). *Management and organization theory: A Jossey-Bass reader* (Vol. 9). John Wiley & Sons.

- Miller, D. (2003). An asymmetry-based view of advantage: Towards an attainable sustainability. *Strategic Management Journal*, 24(10), 961–976. doi:10.1002/mj.316
- Nadler, D. A., & Tushman, M. L. (1980). A model for diagnosing organizational behavior. *Organizational Dynamics*, 9(2), 35–51. doi:10.1016/0090-2616(80)90039-X
- Nienhüser, W. (2008). Resource dependence theory-How well does it explain behavior of organizations? *Management Revue*, 9-32.
- OECD. (2019). *OECD SME and Entrepreneurship Outlook 2019*. OECD Publishing., doi:10.1787/34907e9c-
- Oppong, S. (2014). Upper echelons theory revisited: The need for a change from causal description to casual explanation. *Management*, 19(2), 169–183.
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Perrow, C. (1979). *Organizational theory in a society of organizations*. Ecole Nationale d'Administration Publique.
- Peteraf, M. A., & Barney, J. B. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24(4), 309–323. doi:10.1002/mde.1126
- Pfeffer, J., & Salancik, G. R. (1978). The external control of organisations. In *A Resource: Dependence Perspective*. New York: Harper & Row.
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford University Press.
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based “view” a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22–40.
- Priem, R. L., Lyon, D. W., & Dess, G. G. (1999). Inherent limitations of demographic proxies in top management team heterogeneity research. *Journal of Management*, 25(6), 935–953. doi:10.1177/014920639902500607
- Rakićević, Z., Omerbegović-Bijelović, J., & Lečić-Cvetković, D. (2016). A model for effective planning of SME support services. *Evaluation and Program Planning*, 54, 30–40. doi:10.1016/j.evalprogplan.2015.09.004 PMID:26479837
- Schreyögg, G. (1980). Contingency and choice in organization theory. *Organization Studies*, 1(4), 305–326. doi:10.1177/017084068000100401
- Schumpeter, J. A. (1982). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle (1912/1934)*. Transaction Publishers.
- Shujahat, M., Hussain, S., Javed, S., Malik, M. I., Thurasamy, R., & Ali, J. (2017). Strategic management model with lens of knowledge management and competitive intelligence. *VINE Journal of Information and Knowledge Management Systems*, 47(1), 55–93. doi:10.1108/VJKMS-06-2016-0035

- Smith, K. G., Smith, K. A., Olian, J. D., Sims, H. P. Jr, O'Bannon, D. P., & Scully, J. A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 39(3), 412–438. doi:10.2307/2393297
- Steiner, G. A. (1979). Contingency theories of strategy and strategic management. *Strategic management: A new view of business policy and planning*, 405–416.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. doi:10.1002/mj.640
- Teece, D. J., & Pisano, G. (1994). The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3(3), 537–556. doi:10.1093/icc/3.3.537-a
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. doi:10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z
- Umanath, N. S. (2003). The concept of contingency beyond “It depends”: Illustrations from IS research stream. *Information & Management*, 40(6), 551–562. doi:10.1016/S0378-7206(02)00080-0
- Usher, A. P. (2013). *A History of mechanical inventions* (Revised edition). Courier Corporation.
- Venkatraman, N., & Camillus, J. C. (1984). Exploring the concept of “fit” in strategic management. *Academy of Management Review*, 9(3), 513–525.
- Volberda, H. W., & Karali, E. (2015). Reframing the compositional capability: A resource-based view on ‘a composition-based view of firm growth. *Management and Organization Review*, 11(3), 419–426. doi:10.1017/mor.2015.39
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. doi:10.1002/mj.4250050207
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955. doi:10.1111/j.1467-6486.2006.00616.x
- Zhou, W., Chong, A. Y. L., Zhen, C., & Bao, H. (2018). E-supply chain integration adoption: Examination of buyer–supplier relationships. *Journal of Computer Information Systems*, 58(1), 58–65. doi:10.1080/08874417.2016.1189304

ADDITIONAL READING

- Al Abdulrazak, R. M., & Razak, S. A. (2020). SMES and market growth. *Entrepreneurship Marketing: Principles and Practice of SME Marketing*, 387.
- Crupi, A., Del Sarto, N., Di Minin, A., Gregori, G. L., Lepore, D., Marinelli, L., & Spigarelli, F. (2020). The digital transformation of SMEs—a new knowledge broker called the digital innovation hub. *Journal of Knowledge Management*, 24(6), 1263–1288. doi:10.1108/JKM-11-2019-0623

Dethine, B., Enjolras, M., & Monticolo, D. (2020). Digitalization and SMEs' Export Management: Impacts on Resources and Capabilities. *Technology Innovation Management Review*, 10(4), 18–34. doi:10.22215/timreview/1344

Henderson, D. (2020). Demand-side broadband policy in the context of digital transformation: An examination of SME digital advisory policies in Wales. *Telecommunications Policy*, 44(9), 102024. doi:10.1016/j.telpol.2020.102024 PMID:32834405

Hervé, A., Schmitt, C., & Baldegger, R. (2020). Digitalization, Entrepreneurial Orientation and Internationalization of Micro-, Small-and Medium-Sized Enterprises. *Technology Innovation Management Review*, 10(4), 5–17. doi:10.22215/timreview/1343

Isensee, C., Teuteberg, F., Griesse, K.-M., & Topi, C. (2020). The relationship between organizational culture, sustainability, and digitalization in SMEs: A systematic review. *Journal of Cleaner Production*, 275, 122944. doi:10.1016/j.jclepro.2020.122944

Matt, D. T., Modrák, V., & Zsifkovits, H. (2020). *Industry 4.0 for SMEs: Challenges, Opportunities and Requirements*. Springer Nature. doi:10.1007/978-3-030-25425-4

Sampath, P. G. (2020). The Role of Hubs in Industry 4.0. *The Oxford Handbook of Industrial Hubs and Economic Development*, 262.

KEY TERMS AND DEFINITIONS

Composition-Based View of Firm Growth (CBV): It suggests that company growth is achievable in the absence of resource advantage, basic technology and market power.

Digital SME: A small or medium-sized enterprise that undergoes digital transformation and adopt an electronic commerce approach to its operations.

Dynamic Capability View (DCV): The ability of a company to frame and reframe internal and external competencies in order to cope with unpredictable environmental events.

Resource Dependence Theory (RDT): It provides directions about how to the external constraints facing organisations.

Resource-Based View (RBV): It has two fundamental claims. The first argues that firms' differences lie in the resource capabilities; the second of RBV's claim is that companies' resources are not always transferable.:

Strategic Contingency Theory (SCT): It postulates that organisational performance is a result of the congruence between the company's key characteristics (goals, demands, needs, and structures) and contingent factors in its environment.

Upper Echelon Theory (UET): the personality, values and experiences of managers exert significant impact on how they view and assess organisational and business reality.

Chapter 10

Internet of Things in Online Business: Towards a Conceptual Framework of Online Customer Behavior

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ABSTRACT

Online business, just like other industries, has adopted advanced technology for business performance. Hence, the technology of internet of things (IoT) has been implemented in recent years. IoT acts as a business ecosystem by interconnecting all physical objects and systems to execute tasks efficiently. However, the extent to which customers understand and appreciated this emerging technology is understudied. The purpose of this chapter is therefore to understand the customer acceptance as well as the gratification gained and sought by them via the use of IoT technology. Based on the uses and gratification theory, this study focused on the antecedents in shaping the attitude of online consumers towards IoT applications. Furthermore, it also addresses the willingness of consumers in becoming more knowledgeable of product with the support of IoT technology.

INTRODUCTION

Internet of Things (IoT) in many aspects an unstoppable technology that is transforming many industries significantly. It is one of the major technologies under the fourth industrial revolution, consist of cyber-physical systems, cloud computing, additive production, cognitive computing, and other technological innovations. IoT is defined as the networked system that connects physical devices which serve as information sensor with applications within the Internet (Gubbi, Buyya, Marusic, & Palaniswami, 2013). The interoperability of IoT enables the collection and sharing of data. The Internet of Things (IoT) has introduced evolution on how modern information and communication technologies communicate with physical objects. In a nutshell, IoT is a disruptive digital technologies that changing the way of life for customers and businesses (Murthy & Kumar, 2015).

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The fast-emerging IoT disrupts the way business operates, and this includes its role in providing efficient execution of electronic commerce. With the rapid IoT adoption, business firms are investing heavily in intelligent disruptive technologies to increase productivity, innovate old ways and improve cost efficiencies into all business processes, knowledge flows, and information gathering (Murthy & Kumar, 2015). However, business firms are at the initial phase of the new digital transformation development of IoT (Mendonça & Andrade, 2018). Companies have invested to recognize how Industry 4.0 technologies can be fully exploited to enhance their operations and also providing more value to the customers. However, in particular, how well the consumers know about this emerging technology? Hence, this study aims to examine the readiness and capabilities of online customers in using IoT applications.

BACKGROUND

About Internet of Things

The advent of IoT has influenced the online business to fit into new business changes. Business firms strive to stay competitive and serving customers better by taking advantage of the deployment of IoT in the connected digital market. With higher Internet connectivity, customers are depending on their devices to link to the business systems more frequently than ever before (Murthy & Kumar, 2015). Both customers and businesses are connected with a plethora of devices to a larger extent on a real-time basis (Pflaum & Gölzer, 2018). Customers are becoming more connected and getting familiar with the use of the mobile app (Ho, 2020). They are making contact and communicate with firms for all kinds of business-related matters, ranging from searching products, purchase transactions, customer support, etc. Customers are becoming well versed and using more physical devices that could be linked under IoT technology. For instance, the tracking of the product delivery process became easily traceable with the assistance of IoT sensors and RFID tags. The products' whereabouts and delivery lead time has been more accurate. Similarly, the customers were able to enjoy the benefits of getting access to the exact expected arrival time.

The inclusion of IoT technology into online business is on the verge. A list of current studies has validated that electronic commerce was one of the main industries disrupted by IoT (Bhatnagar & Kumra, 2020; Fu et al., 2020; Shang, Zhang, & Chen, 2012). While the use of IoT in online business is set forth for continued growth, the attitude and perception of customers towards its usefulness need to be taken care of. Online businesses have recognized the change in customer needs. To stay abreast of technology, online business has revamped its procedures and process with the advancement of IoT technology.

Use of Internet of Things in Business

Businesses have sought insightful understanding of online customers' attitudes to understand further how appreciative of customers towards the IoT implementation. Therefore, the acceptance of customers towards IoT is critical to evaluate the usefulness of this technology from the customer perspective. It is pure fact that new technology can lead to the effectiveness of business operations. While IoT is providing unprecedented benefits, the customers have to adapt to this new change and alter their purchasing patterns and attitude. Hence, there is a need to investigate the influence of IoT on molding consumer behavior while shopping online. The new deployment of technology is replacing the operations in elec-

tronic commerce, such as the instant device connectivity in customer support, and how to integrate and utilize them appropriately.

One of the biggest obstacles in adopting IoT effectively is the lack of knowledge about how appreciative the customers on the fulfillment gained. Over the past few years, many companies have been showing growing interest in IoT, but they are at the primary stages of their digital transformation stages. However, in particular, how well the consumers know about this emerging technology? Hence, we need to understand the attitude and benefits of online customers in using IoT applications. Even though customers' gratifications exert influence on the attitude towards the business applications, it was not investigated and missing in the current literature. A list of studies focused mainly on the effect of the outcome i.e. adoption (Kamble, Gunasekaran, Parekh, & Joshi, 2019), satisfaction level (Jie, Subramanian, Ning, & Edwards, 2015) and functionalities (Gao & Bai, 2014).

Aims and Contributions

The gratification sought and gratification gained are vital to understand customer behavior towards IoT. The features of IoT and its contribution to business performance warrant further investigation. Therefore, the use of (Katz, 1974)'s Uses and gratifications theory serve as the theoretical foundation of this study is appropriate due to its explanatory power in discoursing to customer attitude and behavior (Lien & Cao, 2014) (Ray, Dhir, Bala, & Kaur, 2019). The theory has been extensively used to explain customers' attitudes towards novel technologies e.g. Twitter (Chen, 2011), Snapchat, and Instagram (Phua, Jin, & Kim, 2017) and WeChat (Gan & Li, 2018). Taking the uses and gratifications theory as the theoretical basis and leveraging previous theoretical frameworks, the following research questions are proposed. "What motivates consumers to participate in IoT applications deployed by the online retailers?", and "what gratifications do consumers obtain from their participation in IoT applications?"

Extant studies have recognized how IoT technologies can be used to enhance business operations and to offer value to current and new customers (Balaji & Roy, 2017; Jie et al., 2015; Murthy & Kumar, 2015). Its impact on the online business process is revolutionary. However, how well the consumers appreciate and familiar with this emerging technology? Furthermore, the motivations behind customers in using IoT for attainable gratifications warrant the investigation. Hence, we need to understand the acceptance and gratification gained by using IoT applications. Based on the uses and gratification theory, this study focuses on the antecedents in molding the attitude of consumers towards IoT applications that have not yet been examined by other researchers. Furthermore, it also addresses the willingness of consumers in getting more knowledgeable of product with the support of IoT technology. Hence, this study contributes to the emerging use of IoT technology and the way it is implemented could enhance the attitude and subsequently in delivering product knowledge.

LITERATURE REVIEW

IoT has been progressing steadily with the rapid development of information technologies and communication. It make use of low-cost wireless technology in transmitting information residing in the cloud. Besides, the combination of artificial intelligence and physical devices in developing self-management devices is making IoT more manageable (Manavalan & Jayakrishna, 2019). As a whole, IoT is considered by many as a major disruptive technology in influencing the way businesses are operating online

(Ardito, D'Adda, & Petruzzelli, 2018). This leads to a highly anticipated reduction of the need for manpower and new jobs are being created. Companies were using these physical disruptive technologies to improve productivity and attain cost efficiencies of business processes (Hwang, Lee, Park, & Chang, 2017). Moreover, knowledge flows and information exchange among business stakeholders are fortified (Santoro, Vrontis, Thrassou, & Dezi, 2018). But how companies filter the relevant information from data to decision making from this disruptive technology warrant further investigation.

Theoretical Development

Uses and gratifications theory deduces one's intention of attaining particular gratifications while engage in carry out the behavior (Katz, 1974). The uses and gratification theory identifies the users' social and psychological needs and expectations for novel technologies by recognizing the patterns of consumer consumption (Chen, 2011; Lien & Cao, 2014). There are two main classification of gratifications, i.e. sought gratification and obtained gratification. The anticipated outcome from the usage is called sought gratification, and the obtained gratification is the actual benefits gained from the usage (Katz, 1974). The theory investigates the use of media and the way they were used to achieve the aspired effects (Eginli & Tas, 2018).

Following that, the application of uses and gratification theory has been flourished among other technology-related studies (Bae, 2018; Phua et al., 2017). It can explain the underlying motivations of customers to engage in new technology deployment from behavioral and technological aspects. Due to its explanatory power in identifying both social and psychological needs, the theory has been extensively been used as the underlying framework for understanding novel technologies, for instance, Instagram (Ye, Hashim, Baghirov, & Murphy, 2018). This is because of its predicting power in explaining the reasons why and how individuals gain specific needs in using technological applications. It served as the theoretical basis in understanding the gratifications sought and gained from technological deployment in online business.

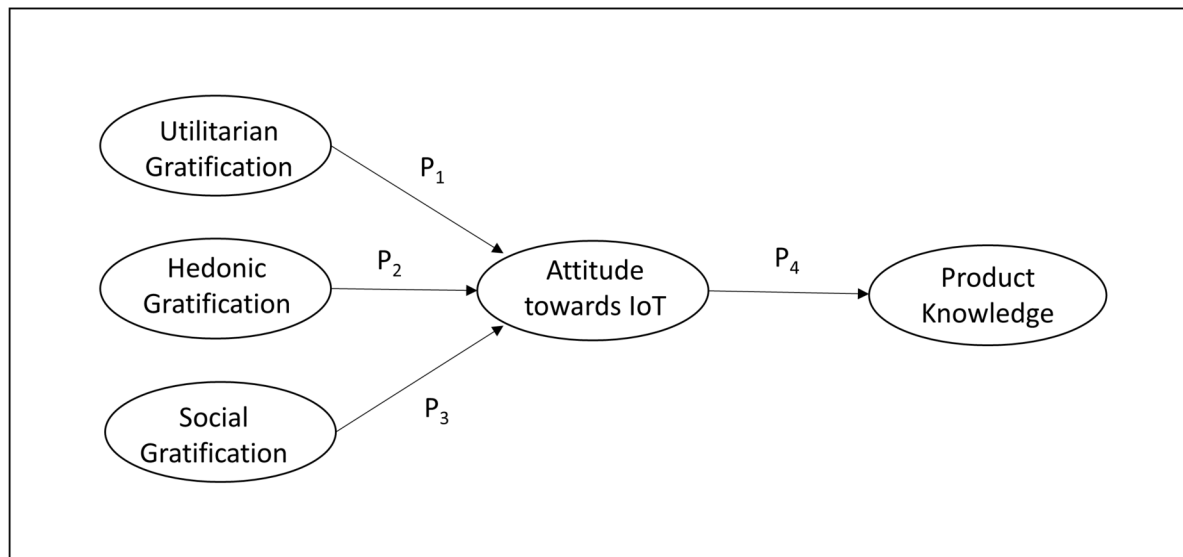
Additionally, gratification blends with the use of new technology to learn more about human behavior. The theory is relevant for this study that revolves around the intention of individuals to share knowledge gratification sought. Furthermore, the underlying rationale on customers' needs and gratification has evolved with the rapid changes of digital tools. The theory has predictive power in understanding the customers' behavior over the influence of technologies used in online business. It focuses on discourse to the two key aspects of the framework, i.e. sought and obtained gratification. Therefore, it is served as the theoretical foundation for this study. The conceptual framework is depicted in Figure 1.

Attitude Toward the Internet of Things

Attitude denotes an individual's beliefs and assessments of the outcomes attained by conducting the behavior (Han, Hwang, & Woods, 2014). If one thinks the outcome is affirmative, the attitude towards conducting certain behavior would be encouraging. On the other hand, If one thinks the outcome is unfavorable, the attitude towards conducting the behavior would be dissentient (Glanz, Rimer, & Viswanath, 2008). Hence, attitude is regulated by the benefits and outcomes achieved after the behavior is displayed. Uses and Gratification Theory deduces the underlying relationship between attitude and performance of the behavior depends on the outcomes of the action. In general, the intention for the act of behavior is regarded as the key antecedent for performing the actual behavior (Cho, 2004). Ho and Rezaei (2018)

established that attitude has a direct and significant influence on the intended behaviors while dealing with social commerce transactions. Therefore, this study postulated that attitude towards IoT served as the outcomes from the behavior performed.

Figure 1. The conceptual framework



Utilitarian Gratification

According to Hirschman and Holbrook (1982)'s utilitarian value refers to the task-centered, rational, and goal-oriented value required to the behavior in completing the tasks. The purpose of customers utilizing IoT technology is driven by a purpose-driven attitude for task completion. In other words, customers would expect to accomplish the task effectively. Typical online business activities consist of acquiring the product information, purchase decision, checkout function, and other related tasks. This is often the case under an online business setting where customers treated utilitarian gratification as vital in prompting them to make the final purchase decision (Ho & Amin, 2019). Hossain et al. (2019) explicated that utilitarian gratification could significantly exert influence on molding the positive attitude in task performance. In many online business settings, customers' feelings of task accomplishment generated a positive attitude.

Table 1. Gratification Obtained of using Internet of Things

Construct	Definition	References
Attitude towards IoT	Individual's beliefs and feelings of the outcomes attained from the use of the Internet of Things (IoT).	Glanz et al., 2008 and Han et al., 2014
Product knowledge	Information about the features, functions, process, and usage of the goods and services offer to the customers.	J. K. Lee & Lee, 2009

Prior studies have confirmed that people would use the technology to learn about the product and services offering by business companies (Lim, Kim, Hur, & Park, 2019; Mariadoss, Milewicz, Lee, & Sahaym, 2014; Yang, 2017). In the realm of mobile app platform, the inclusion of 360 video in online shopping provide new ways in product learning (S. Kim, Baek, & Yoon, 2020). Besides, the relationship between the anticipated benefits of using technology was determined by the consumer attitude towards the new technology. In this study, the customers could expect to purchase products more easily with this highly connected technology. This could have a great impact on how customers behave while using IoT technology.

Customers require experience, expertise, and resources to perform certain behavior while transacting with retailers (Venkatesh, Morris, Davis, & Davis, 2003). Hence, customers could perform the task efficiently if they pose the ability and access the resources. Moreover, the capability of handling IoT technology is imperative in augmenting the utilitarian gratification. Therefore, utilitarian gratification is influencing the attitude to appreciate the benefits provided by IoT implementation. Thus, the following proposition is developed.

Proposition 1:

Utilitarian gratification has a direct and positive effect on the attitude towards IoT

Hedonic Gratification

Hedonic gratification refers to the passion and excitement received during the product/service consumption process. It is defined as the degree of fulfillment and satisfaction over the performance of the behavior (Li, Liu, Xu, Heikkilä, & Van Der Heijden, 2015). The attainment of fun and enjoyable feeling gained while engaging in the online transaction were greater in the highly connected business environment (Ho, 2019). This kind of psychological gratification has been proven as one of the key stimulus and motivates customers for repeat engagement with the companies. Prior research has shown that the element of fun is an important driver for online shopping.

The direct relationship between hedonic motivation and attitude towards the use of technology tools is established in previous studies (Escobar-Rodríguez & Carvajal-Trujillo, 2014; M. J. Kim & Hall, 2019; Won & Kim, 2020). The inclusion of enjoyment component provided by online retailers exerts a strong influence on the purchase intention (Ho & Rezaei, 2018). Similarly, the physical use of mobile devices was also demonstrated as the key driver for customers to engage with sales transactions (Zheng, Men, Yang, & Gong, 2019). Regarding the studies on technology acceptance, hedonic gratifications were closely linked to the performance of online tools (Alalwan, Baabdullah, Rana, Tamilmani, & Dwivedi, 2018).

Tamilmani et al. (2019) highlighted that hedonic motivation was the main antecedent for one to engage in tasks seeking desirable behavioral outcomes. This is consistent with studies in theorizing the emotional elements as the foundation for developing customer cognitive psychology (Park & Ha, 2016). In this study, hedonic gratification sought is predominantly an intrinsic motivation that impacted on customer behavior. Consequently, the hedonic value gained influenced the customers' attitude who anticipate the improved performance of IoT processes. This has led to a positive attitude due to time-saving and easier task benefits provided to the customers. With that, online customers expect hedonic gratification to be part of the online experience for IoT deployment in online commerce. Hence, the proposition follows:

Proposition 2:

Hedonic gratification has a direct and positive effect on the attitude towards IoT

Social Gratification

Social gratifications sought in online shopping are grounded in the need for social and empathetic support from their peers. It is defined as the evaluation of the social pressure during the performance of certain behavior (Ajzen & Fishbein, 2000). An individual would perform a specific behavior because he or she thinks other people, especially those who are closely related, would suggest him or her to behave in such a way (Kaur, Dhir, Chen, Malibari, & Almotairi, 2020). In online shopping, a satisfied customer would recommend products or services that they thought were superior quality to peers. Hence, one's behavior depends on the perceived social gratification generated from the peer influence of the behavior.

The relationship between attitude and social influence were empirically examined in the list of extant studies (N. Kim & Kim, 2018; K. Lee, 2010; Ray et al., 2019). Online customers have shown that their behaviors are driven by social interaction and social support (Baumöl, Hollebeek, & Jung, 2016; Ho & Cheng, 2020). This phenomenon was caused by rapid engagement and commitment to peers in their virtual communities (Phua et al., 2017). Hence, this led to the generation of customer reviews via word of mouth among users in social networks (Pfeffer, Zorbach, & Carley, 2014, Ho, Withanage & Khong 2020).

About the implementation of new technology deployment in electronic commerce, customers adopted the new systems after collective acceptance by a group of people whom they believe important to them (Shaw & Sergueeva, 2019). Moreover, a list of studies on mobile app users further elaborated on the tendency of customers in sharing online shopping experience with others (Bilgihan, Kandampully, & Zhang, 2016; Taylor & Levin, 2014). Since IoT falls into the same category of new technology roll up in online business, the social gratifications sought are expected to have exerted influence in cultivating a favorable attitude. Therefore, we developed the following proposition:

Proposition 3:

Social gratification has a direct and positive effect on the attitude towards IoT

Table 2. Gratifications Sought of Internet of Things Users

Construct	Definition	References
Hedonic gratification	Passion and excitement gained during the product or service consumption process.	Li et al., 2015
Utilitarian gratification	The task-centered, rational, and goal-oriented gratification required to the behavior in completing online shopping tasks.	Hirschman & Holbrook, 1982
Social gratification	The evaluation of the social pressure during the performance of online behavior.	Ajzen & Fishbein, 2000 Kaur et al., 2020

Product Knowledge

Product knowledge refers to the information about the features, functions, process, and usage of the goods and services offer to the customers (J. K. Lee & Lee, 2009). It is advantageous to customers if

they obtain a considerable amount of product knowledge. Previous published work on knowledge sharing has been focus on the learning aspect (Ardichvili 2008; Matzler & Mueller 2011; Eid & Al-Jabir 2016). Customers have a high tendency to share their shopping experience if they enjoyed the goods and services they consumed (Jiang et al. 2014; Liu et al. 2016; Huang et al. 2017). With the popularity of social media that exists in a variety of choices, the importance of electronic word of mouth and online review became the source of information for customers (Hennig-Thurau et al. 2004; Paridon et al. 2006; Jansen et al. 2009). Customer ability to learn for shopping process and product information was dependent upon the knowledge shared by others in the social media space (Halji 2014). Hence, external sources of information generated by customers has been critical in enabling them to be familiar with the products and brands (Zhu and Chang 2015).

The information asymmetric that used to be lean towards resellers have been affected since the arrival of the information era. Hence, customers can be more knowledgeable if they make an effort in learning more. Personal physical devices of customers are connected to the companies' resources in the cloud under the IoT platform. (Wood & Lynch Jr, 2002) deduced that customers would enjoy a rich product experience if they were familiar with products. On the contrary, product unfamiliarity was unfavorable for the customers. Therefore, customers could have learned more about the products, and therefore have a higher likelihood to use the products competently

IoT technology can provide more accurate, convenient, and faster on a real-time basis. With a higher degree of connectivity from customers' devices, product contents are highly accessible. Customers are more comfortable and experience with IoT technology, they could learn about the products more easily. This logic is supported by product-related knowledge obtained from social media was assisting customers to make purchase decisions (Santoro et al., 2018). The relationship between the attitude and product knowledge could be critical during IoT usage. Hence, the following proposition is presented:

Proposition 4:

Attitude towards IoT usage has a direct and positive effect on product knowledge

CONCLUSION

The main objective of this study is to investigate the antecedents in molding the attitude of electronic commerce customers towards IoT applications. Furthermore, it also addresses the willingness of consumers in getting more knowledgeable of product with the support of IoT technology. The contribution of this study is twofold. First, we examined the gratification sought by customers that are influencing the customers' attitude on the usefulness of this emerging technology. This relates to how well online customers appreciate and familiar with this highly connected technology. The three gratifications, i.e. social, hedonic and utilitarian gratifications derived from the uses and gratification theory. Therefore, this study unravels the customers' attitude is caused by the gratification sought that subsequently initiates a change of online purchase behavior.

Second, the underlying theoretical aspect of this study infers the need to emphasize the product knowledge learned by online customers via the extensive use of IoT technology. This missing literature gap was ignored in prior studies. It addresses the willingness of consumers in getting more knowledgeable about the product with the support of new technology deployment. With closer engagement via customers' devices enriched with interactivity features, it is captivating that more product knowledge

can be learned. The provision of making customers well-versed and competent in using products can be attributed to the roll-out of business processes powered by IoT technology. Hence, this study provides useful insights and recommendations to online retailers in evaluating its business strategies based on both gratification sought and gratification obtained. This consideration sheds light on the ever-increasing online customer use of new technology in serving the customer better.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

This study should be discussed and considered based on some limitations. This study focuses on the online customers who are accessing the IoT technology offered by the business firms. It is worthwhile to mention that IoT technology is still at the infancy stage of development. Hence, it is expected the changing rate of technology would bring affect how online business operation. With the expansion of IoT and online business growth, it would be valuable to investigate how it is going to impact on the technology management for electronic commerce platform. Furthermore, as discussed in the study, it would be rational to extend the studies into other parameters of consumer behavior to further strengthen the proposed framework. Therefore, it would be worthwhile to examine other common behavioral factors that affect technology adoption, such as virtual community (Ho & Rajandram, 2016), trust (Alalwan et al., 2018), risk perception (De Kerviler, Demoulin, & Zidda, 2016) are some proposed variables to explore for future research. Besides, self-service and technology controllability are key determinants in influencing the management of business technologies are worth to explore their collaboration with IoT technology (Ahn & Seo, 2018). Therefore, self-service is proposed as a moderator to investigate its relationship with the use of IoT technology.

REFERENCES

- Ahn, J. A., & Seo, S. (2018). Consumer responses to interactive restaurant self-service technology (IRSST): The role of gadget-loving propensity. *International Journal of Hospitality Management*, 74, 109–121. doi:10.1016/j.ijhm.2018.02.020
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European Review of Social Psychology*, 11(1), 1–33. doi:10.1080/14792779943000116
- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society*, 55, 100–110. doi:10.1016/j.techsoc.2018.06.007
- Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in Developing Human Resources*, 10(4), 541–554. doi:10.1177/1523422308319536
- Ardito, L., D'Adda, D., & Petruzzelli, A. M. (2018). Mapping innovation dynamics in the Internet of Things domain: Evidence from patent analysis. *Technological Forecasting and Social Change*, 136, 317–330. doi:10.1016/j.techfore.2017.04.022

- Bae, M. (2018). Understanding the effect of the discrepancy between sought and obtained gratification on social networking site users' satisfaction and continuance intention. *Computers in Human Behavior*, 79, 137–153. doi:10.1016/j.chb.2017.10.026
- Balaji, M. S., & Roy, S. K. (2017). Value co-creation with Internet of things technology in the retail industry. *Journal of Marketing Management*, 33(1–2), 7–31. doi:10.1080/0267257X.2016.1217914
- Baumöl, U., Hollebeek, L., & Jung, R. (2016). Dynamics of customer interaction on social media platforms. *Electronic Markets*, 26(3), 199–202. doi:10.1007/12525-016-0227-0
- Bhatnagar, S., & Kumra, R. (2020). Understanding consumer motivation to share IoT products data. *Journal of Indian Business Research*, 12(1), 5–22. doi:10.1108/JIBR-09-2019-0268
- Bilgihan, A., Kandampully, J., & Zhang, T. C. (2016). Towards a unified customer experience in on-line shopping environments. *International Journal of Quality and Service Sciences*, 8(1), 102–119. doi:10.1108/IJQSS-07-2015-0054
- Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior*, 27(2), 755–762. doi:10.1016/j.chb.2010.10.023
- Cho, J. (2004). Likelihood to abort an online transaction: Influences from cognitive evaluations, attitudes, and behavioral variables. *Information & Management*, 41(7), 827–838. doi:10.1016/j.im.2003.08.013
- De Kerviler, G., Demoulin, N. T. M., & Zidda, P. (2016). Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers? *Journal of Retailing and Consumer Services*, 31, 334–344. doi:10.1016/j.jretconser.2016.04.011
- de Mendonça, C. M. C., & de Andrade, A. M. V. (2018). Dynamic capabilities and their relations with elements of digital transformation in Portugal. *Journal of Information Systems Engineering & Management*, 3(3), 23–31.
- Eginli, A. T., & Tas, N. O. (2018). Interpersonal communication in social networking sites: An investigation in the framework of uses and gratification theory. *Online Journal of Communication and Media Technologies*, 8(2), 81–104.
- Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, 99, 14–27. doi:10.1016/j.compedu.2016.04.007
- Escobar-Rodríguez, T., & Carvajal-Trujillo, E. (2014). Online purchasing tickets for low cost carriers: An application of the unified theory of acceptance and use of technology (UTAUT) model. *Tourism Management*, 43, 70–88. doi:10.1016/j.tourman.2014.01.017
- Fu, H., Manogaran, G., Wu, K., Cao, M., Jiang, S., & Yang, A. (2020). Intelligent decision-making of online shopping behavior based on internet of things. *International Journal of Information Management*, 50, 515–525. doi:10.1016/j.ijinfomgt.2019.03.010
- Gan, C., & Li, H. (2018). Understanding the effects of gratifications on the continuance intention to use WeChat in China: A perspective on uses and gratifications. *Computers in Human Behavior*, 78, 306–315. doi:10.1016/j.chb.2017.10.003

- Gao, L., & Bai, X. (2014). A unified perspective on the factors influencing consumer acceptance of internet of things technology. *Asia Pacific Journal of Marketing and Logistics*, 26(2), 211–231. doi:10.1108/APJML-06-2013-0061
- Glanz, K., Rimer, B. K., & Viswanath, K. (2008). *Health behavior and health education: theory, research, and practice*. John Wiley & Sons.
- Gubbi, J., Buyya, R., Marusic, S., & Palaniswami, M. (2013). Internet of Things (IoT): A vision, architectural elements, and future directions. *Future Generation Computer Systems*, 29(7), 1645–1660. doi:10.1016/j.future.2013.01.010
- Hajli, M. N. (2014). The role of social support on relationship quality and social commerce. *Technological Forecasting and Social Change*, 87, 17–27. doi:10.1016/j.techfore.2014.05.012
- Han, H., Hwang, J., & Woods, D. P. (2014). Choosing virtual–rather than real–leisure activities: An examination of the decision–making process in screen-golf participants. *Asia Pacific Journal of Tourism Research*, 19(4), 428–450. doi:10.1080/10941665.2013.764333
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38–52. doi:10.1002/dir.10073
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, 46(3), 92–101. doi:10.1177/002224298204600314
- Ho, R. C. (2019). The Outcome Expectations of Promocode in Mobile Shopping Apps: An Integrative Behavioral and Social Cognitive Perspective. *Proceedings of the 2019 3rd International Conference on E-Commerce, E-Business and E-Government*, 74–79. 10.1145/3340017.3340028
- Ho, R. C. (2020). *Strategies and Tools for Managing Connected Consumers*. IGI Global. doi:10.4018/978-1-5225-9697-4
- Ho, R. C., & Amin, M. (2019). What Drives the Adoption of Smart Travel Planning Apps? The Relationship between Experiential Consumption and Mobile App Acceptance. *KnE Social Sciences*, 22–41.
- Ho, R. C., & Cheng, R. (2020). The impact of relationship quality and social support on social media users' selling intention. *International Journal of Internet Marketing and Advertising*, 14(4), 433–453. doi:10.1504/IJIMA.2020.111051
- Ho, R. C., & Rajandram, K. V. (2016). The Influence of Social Media Data on Online Purchase: A Study on Relative Advantage of Social Commerce. In *Encyclopedia of E-Commerce Development* (pp. 2039–2050). Implementation, and Management. doi:10.4018/978-1-4666-9787-4.ch145
- Ho, R. C., & Rezaei, S. (2018). Social Media Communication and Consumers Decisions: Analysis of the Antecedents for Intended Apps Purchase. *Journal of Relationship Marketing*, 17(3), 204–228. doi:10.1080/15332667.2018.1492322
- Ho, R. C., Withanage, M. S., & Khong, K. W. (2020). Sentiment drivers of hotel customers: A hybrid approach using unstructured data from online reviews. *Asia-Pacific Journal of Business Administration*, 12(3/4), 237–250. doi:10.1108/APJBA-09-2019-0192

- Hossain, M., Kim, M., & Jahan, N. (2019). Can “Liking” Behavior Lead to Usage Intention on Facebook? Uses and Gratification Theory Perspective. *Sustainability*, 11(4), 1166. doi:10.3390/u11041166
- Huang, J., Zhou, J., Liao, G., Mo, F., & Wang, H. (2017). Investigation of Chinese students’ O2O shopping through multiple devices. *Computers in Human Behavior*, 75, 58–69. doi:10.1016/j.chb.2017.04.050
- Hwang, G., Lee, J., Park, J., & Chang, T.-W. (2017). Developing performance measurement system for Internet of Things and smart factory environment. *International Journal of Production Research*, 55(9), 2590–2602. doi:10.1080/00207543.2016.1245883
- Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A. (2009). Twitter power: Tweets as electronic word of mouth. *Journal of the American Society for Information Science and Technology*, 60(11), 2169–2188. doi:10.1002/asi.21149
- Jiang, G., Ma, F., Shang, J., & Chau, P. Y. (2014). Evolution of knowledge sharing behavior in social commerce: An agent-based computational approach. *Information Sciences*, 278, 250–266. doi:10.1016/j.ins.2014.03.051
- Jie, Y. U., Subramanian, N., Ning, K., & Edwards, D. (2015). Product delivery service provider selection and customer satisfaction in the era of internet of things: A Chinese e-retailers’ perspective. *International Journal of Production Economics*, 159, 104–116. doi:10.1016/j.ijpe.2014.09.031
- Kamble, S. S., Gunasekaran, A., Parekh, H., & Joshi, S. (2019). Modeling the internet of things adoption barriers in food retail supply chains. *Journal of Retailing and Consumer Services*, 48(May), 154–168. doi:10.1016/j.jretconser.2019.02.020
- Katz, E. (1974). Utilization of mass communication by the individual. *The Uses of Mass Communications: Current Perspectives on Gratifications Research*, 19–32.
- Kaur, P., Dhir, A., Chen, S., Malibari, A., & Almotairi, M. (2020). Why do people purchase virtual goods? A uses and gratification (U&G) theory perspective. *Telematics and Informatics*, 101376, 101376. Advance online publication. doi:10.1016/j.tele.2020.101376
- Kim, M. J., & Hall, C. M. (2019). A hedonic motivation model in virtual reality tourism: Comparing visitors and non-visitors. *International Journal of Information Management*, 46, 236–249. doi:10.1016/j.ijinfomgt.2018.11.016
- Kim, N., & Kim, W. (2018). Do your social media lead you to make social deal purchases? Consumer-generated social referrals for sales via social commerce. *International Journal of Information Management*, 39, 38–48. doi:10.1016/j.ijinfomgt.2017.10.006
- Kim, S., Baek, T. H., & Yoon, S. (2020). The effect of 360-degree rotatable product images on purchase intention. *Journal of Retailing and Consumer Services*, 55, 102062. doi:10.1016/j.jretconser.2020.102062
- Lee, J. K., & Lee, W.-N. (2009). Country-of-origin effects on consumer product evaluation and purchase intention: The role of objective versus subjective knowledge. *Journal of International Consumer Marketing*, 21(2), 137–151. doi:10.1080/08961530802153722

- Lee, K. (2010). The green purchase behavior of Hong Kong young consumers: The role of peer influence, local environmental involvement, and concrete environmental knowledge. *Journal of International Consumer Marketing*, 23(1), 21–44. doi:10.1080/08961530.2011.524575
- Li, H., Liu, Y., Xu, X., Heikkilä, J., & Van Der Heijden, H. (2015). Modeling hedonic is continuance through the uses and gratifications theory: An empirical study in online games. *Computers in Human Behavior*, 48, 261–272. doi:10.1016/j.chb.2015.01.053
- Lien, C. H., & Cao, Y. (2014). Examining WeChat users' motivations, trust, attitudes, and positive word-of-mouth: Evidence from China. *Computers in Human Behavior*, 41, 104–111. doi:10.1016/j.chb.2014.08.013
- Lim, S. H., Kim, D. J., Hur, Y., & Park, K. (2019). An empirical study of the impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services. *International Journal of Human-Computer Interaction*, 35(10), 886–898. doi:10.1080/10447318.2018.1507132
- Liu, L., Cheung, C. M., & Lee, M. K. (2016). An empirical investigation of information sharing behavior on social commerce sites. *International Journal of Information Management*, 36(5), 686–699. doi:10.1016/j.ijinfomgt.2016.03.013
- Manavalan, E., & Jayakrishna, K. (2019). A review of Internet of Things (IoT) embedded sustainable supply chain for industry 4.0 requirements. *Computers & Industrial Engineering*, 127, 925–953. doi:10.1016/j.cie.2018.11.030
- Mariadoss, B. J., Milewicz, C., Lee, S., & Sahaym, A. (2014). Salesperson competitive intelligence and performance: The role of product knowledge and sales force automation usage. *Industrial Marketing Management*, 43(1), 136–145. doi:10.1016/j.indmarman.2013.08.005
- Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing—Examining the influence of learning and performance orientation. *Journal of Economic Psychology*, 32(3), 317–329. doi:10.1016/j.joep.2010.12.006
- Murthy, D. N., & Kumar, B. V. (2015). Internet of things (IoT): Is IoT a disruptive technology or a disruptive business model? *Indian Journal of Marketing*, 45(8), 18–27. doi:10.17010/ijom/2015/v45/i8/79915
- Paridon, T. J., Carraher, S., & Carraher, S. C. (2006). The income effect in personal shopping value, consumer self-confidence, and information sharing (word of mouth communication) research. *Academy of Marketing Studies Journal*, 10(2), 107–124.
- Park, J., & Ha, S. (2016). Co-creation of service recovery: Utilitarian and hedonic value and post-recovery responses. *Journal of Retailing and Consumer Services*, 28, 310–316. doi:10.1016/j.jretconser.2015.01.003
- Pfeffer, J., Zorbach, T., & Carley, K. M. (2014). Understanding online firestorms: Negative word-of-mouth dynamics in social media networks. *Journal of Marketing Communications*, 20(1–2), 117–128. doi:10.1080/13527266.2013.797778
- Pflaum, A. A., & Gölzer, P. (2018). The IoT and digital transformation: Toward the data-driven enterprise. *IEEE Pervasive Computing*, 17(1), 87–91. doi:10.1109/MPRV.2018.011591066

Phua, J., Jin, S. V., & Kim, J. J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior*, 72, 115–122. doi:10.1016/j.chb.2017.02.041

Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, 51, 221–230. doi:10.1016/j.jretconser.2019.05.025

Santoro, G., Vrontis, D., Thrassou, A., & Dezi, L. (2018). The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity. *Technological Forecasting and Social Change*, 136, 347–354. doi:10.1016/j.techfore.2017.02.034

Shang, X., Zhang, R., & Chen, Y. (2012). Internet of things (IoT) service architecture and its application in e-commerce. *Journal of Electronic Commerce in Organizations*, 10(3), 44–55. doi:10.4018/jeco.2012070104

Shaw, N., & Sergueeva, K. (2019). The non-monetary benefits of mobile commerce: Extending UTAUT2 with perceived value. *International Journal of Information Management*, 45, 44–55. doi:10.1016/j.ijinfomgt.2018.10.024

Tamilmani, K., Rana, N. P., Prakasam, N., & Dwivedi, Y. K. (2019). The battle of Brain vs. Heart: A literature review and meta-analysis of “hedonic motivation” use in UTAUT2. *International Journal of Information Management*, 46, 222–235. doi:10.1016/j.ijinfomgt.2019.01.008

Taylor, D. G., & Levin, M. (2014). Predicting mobile app usage for purchasing and information-sharing. *International Journal of Retail & Distribution Management*, 42(8), 759–774. doi:10.1108/IJRDM-11-2012-0108

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *Management Information Systems Quarterly*, 27(3), 425–478. doi:10.2307/30036540

Won, J., & Kim, B.-Y. (2020). The effect of consumer motivations on purchase intention of online fashion-sharing platform. *The Journal of Asian Finance, Economics, and Business*, 7(6), 197–207. doi:10.13106/jafeb.2020.vol7.no6.197

Wood, S. L., & Lynch, J. G. Jr. (2002). Prior knowledge and complacency in new product learning. *The Journal of Consumer Research*, 29(3), 416–426. doi:10.1086/344425

Yang, F. X. (2017). Effects of restaurant satisfaction and knowledge sharing motivation on eWOM intentions: The moderating role of technology acceptance factors. *Journal of Hospitality & Tourism Research (Washington, D.C.)*, 41(1), 93–127. doi:10.1177/1096348013515918

Ye, Z., Hashim, N. H., Baghirov, F., & Murphy, J. (2018). Gender differences in Instagram hashtag use. *Journal of Hospitality Marketing & Management*, 27(4), 386–404. doi:10.1080/19368623.2018.1382415

Zheng, X., Men, J., Yang, F., & Gong, X. (2019). Understanding impulse buying in mobile commerce: An investigation into hedonic and utilitarian browsing. *International Journal of Information Management*, 48, 151–160. doi:10.1016/j.ijinfomgt.2019.02.010

Zhu, D. H., & Chang, Y. P. (2015). Effects of interactions and product information on initial purchase intention in product placement in social games: The moderating role of product familiarity. *Journal of Electronic Commerce Research*, 16(1), 22–33.

KEY TERMS AND DEFINITIONS

Attitude Towards IoT: Individual's beliefs and feelings of the outcomes attained from the use of the Internet of Things (IoT).

Hedonic Gratification: The passion and excitement received during the product or service consumption process.

Internet of Things: Networked systems that connect physical devices that serve as information sensors with applications within the Internet.

Online Customer Behavior: The study of the customer behavior and attitude in online business.

Product Knowledge: Information about the features, functions, process, and usage of the goods and services offer to the customers.

Social Gratification: The evaluation of the social pressure during the performance of online behavior.

Utilitarian Gratification: The task-centered, rational, and goal-oriented gratification required to the behavior in completing online shopping tasks.

Chapter 11

Exploratory Investigation Into Globalization and Linkages Among ICTs and Usages Within SMEs Environments in Cambodia

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ABSTRACT

This study examines the association between firm globalization; the embracing of ICT, more specifically the ICT tools; and the firm's performance. Globalization has a tremendous effect on people which leads them to a greater use of ICTs to enable users to navigate and communicate spontaneously to fulfill self-gratification. From the firm's perspective, globalization has differential effects on B2B and B2C e-commerce, though such global firms are more likely to do B2B but less likely to do B2C. The findings imply that ICTs espousal will augment international competitive advantages but not leveling the playing field for firms to compete with global firms in international markets.

INTRODUCTION

We are now witnessing the fourth industrial revolution, ICT (Information and Communications technology) is reshaping the way that we live, work, and communicate (Schwab, 2016). This technology and its transformation have incessantly plugged global challenges such as poverty, inequality, and unemployment which continue to plague nations (Heeks, 2008). ICT broadly includes as electronic technologies used to create, process, gather, distribute, and publish information in the form for example, of audio, data, text, video and images (Beckinsale & Ram, 2006; Kleine, 2015). These technologies include radio, television, mobile devices, personal computers, the Internet and digital communication networks. According to Walsham (2017), the concept of 'ICT for development' (ICT4D) is not new, with research in the field

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began in the early 1980s. It was largely MNCs (Multinational corporations) and other principal development actors who started to advocate for the use of ICTs to address development challenges (Heeks, 2008). Considering this, emphasis was placed on enterprises and civil societies' use and the implementation of these technologies to realize development (Baller, Dutta, & Lanvin, 2016).

ICT enables the edifice of networks and relationships that are used to share information and resources. The augmented information dissemination literally facilitated and enhanced cultural enrichment, social network sites, e-commerce and the firm's performance (Hoq, 2015; Nakasone & Torero, 2016). Moreover, these technologies support the economic growth and communication processes of small businesses (Donner, 2004, 2007), and benefit community members to be prudent in savings and gain financial independence (Chew, Ilavarasan, & Levy, 2010). By enabling SMEs (Small and Medium-sized Enterprises) to conduct business online, ICT eradicates the barriers of geographic constraints associated with e-commerce, may it be B2B or B2C (Mothobi, Schoentgen, & Gillwald, 2017). The ensuing phase of ICT development and the widespread adoption of the Internet by business triggered profound interest for the potential of these new technologies in reduction of many barriers and improvements in business performance.

Conversely, Internet which broadly comprises a web of interconnected computer networks that transmit information through linked devices using Internet protocols (Stair & Reynolds, 2016), is arguably the foremost influencers of the ICT4D paradigm (Heeks, 2008). There is no other technology that can assert such a revolutionary impact on communication and socio-economic development (Breytenbach, De Villiers, & Jordaan, 2012; Ganju, Pavlou, & Banker, 2016; Huaroto, 2012). Hence, the Internet is an indispensable tool that accelerates development and human progress (United Nations, 2011). In developing countries, it was estimated that every ten percent rise in access to broadband connectivity would influence a 1.38 percentage growth in the gross domestic product (GDP) (Toure, 2015). Given the influence of ICT which can permeate socio-economic development has opened up huge investment in ICT4D initiatives in developing countries, particularly those SMEs that are marginalized or lacked equal opportunities to access ICTs. One such initiative that has been implemented globally is electronic inclusion intermediaries (e-IIs). E-IIs are considered one of the most successful ICT4D innovation in developing countries (Aji, Yusop, Ahmad, Azizi, & Jawad, 2016). The focus of e-IIs is to remove the barriers between users and information, and between users and communication resources (Garrido, Sey, Hart, & Santana, 2012a). It can conceivably make ICT more accessible and extend its benefits to users, specifically those who are marginalized (Alao, Lwaga, & Chigona, 2017). The e-IIs proffer physical spaces equipped with desktop computers and Internet connectivity to give equal opportunities for socio-economic development (Garrido, Sey, Hart, & Santana, 2012b; Gomez, 2014; Rissola & Garrido, 2013). Examples of e-IIs include Internet cafés, electronic offices, telecentres – which are also referred to as electronic centers (e-centers), public libraries, community technology centers, and digital hubs.

Globalization presents a unique opportunity for international commerce, yet it is regarded as one of the most contested topics, even the definition of globalization is hotly debated and often contested. Regardless, globalization epitomizes an important transformation of the organization, structures and international commerce. Invariably all business sectors undergo cyclical structural changes from time to time, especially in the tech sector which is based on advanced technologies. The crux of globalization can be characterized by discipline in global market, financial contents and economic network. The market discipline refers not only to goods and products but also to work and capital. The financial contents

refer to the speed of money travels across the borders and the economic networks are founded on the economic information (Totonchi and Kakamanshadi, 2011).

It is no secret that the process of globalization presents fresh challenges as well as opportunities for firms in a way that it can simultaneously extend the geographic reach of their operations while streamlining their operations. Challenges also arise from foreign competitors entering firms' domestic markets, and from domestic competitors reducing their costs through global sourcing, moving production offshore. Compounded by the adoption of ICT, such as the Internet, makes it inexpensive and accessible for firms to extend their markets, manage their operations and coordinate value chains across borders (William et al 2001, Globerman et al 2001). ICT adoption fosters globalization by reducing the cost of transaction and coordination and creating new and expanded markets with economies of scale (Mann et al 2000, Steinfield & Klein 1999).

LITERATURE REVIEW

In the digital era, many SMEs perform almost all their transactions on-line and routinely rely on social media and/or Information Systems for business communications and functions. The affordability and convenience of ready-to-use software applications in the marketplace have greatly reduced the acquisition times of these systems, nevertheless SMEs still must spend significant time and resources in the customization of software packages that best suit their unique requirements. In the customization phase of software implementation can be challenging because the organization must typically rely on a small team of programmer of its IT department and the process involves a great deal of learning.

The number of the Internet users is rising exponentially. According to a report published by the ICT Data and Statistics Division of the International Telecommunications Union, there are over 3 billion users accessing the Internet today, which account to almost 47% of the whole world population. This explosion in the number of the Internet users can be attributed to the infrastructural factors, for example the introduction of broadband technologies and their extensive accessibility and affordability (Sanou 2016). Thanks to the global wide area network that connects computer systems across the world billions of people are online, have access to limitless knowledge and can accumulate, process and store information, with the significant contribution of discoveries as artificial intelligence, Internet of Things, quantum computing etc. Artificial Intelligence or AI has become more popular today thanks to increased data volumes, advanced algorithms, and improvements in computing power and storage. It offers virtual assistance, using of translation programs, software for trading and investment promotion in the area of e-commerce. Over the recent years AI has recorded an impressive progress in the last years due to tremendous development of computer power and volume of data and information. Insofar as the main winners of the fourth industrial revolution have been the consumers who benefited by the digital world that has brought new products and services.

In today's competitive landscape, being able to interact with the customers in two ways communication channels has many advantages. Although there are many challenges such as mobile network coverage and evolving technologies. Most of these challenges could be avoided by employing a data management plan that includes the implementation of a CRM (Customer Relationship Management) system. Additionally, such a plan requires long-term commitment and large initial investment. To compete successfully

in today's digital environment, it has become indispensable for marketers to adapt and restructure their businesses in utilizing the Web 2.0 technology and social media. The amalgamation of Web 2.0 technology and marketing practice resulted in the adaptation of what is known as marketing 2.0. Marketing 2.0 refers to the new generation of marketing ideas emerging from the digital era vis the usage of Web 2.0 technology and the interactive capabilities it provides for the purpose of opening interactive communication channels between consumers and businesses. It is unsurprising that the massive number of Internet users has driven technology and inspire innovations in the area of ICTs and collaboration applications in a manner which drive demand into unprecedented level vis B2B and B2C e-commerce.

One important tendency that attracts Internet users is the communication and collaboration applications. Application developers concede the growing demand of this type of applications by flooding the market with a wide range of communication and collaborations applications, which is known as Web 2.0, or commonly known 'Social Media'.

Arguably, the business environment of SMEs in the developing economies of SEA (Southeast Asia) has been shifting in a draconian way with the emergence of globalization. Technological advancement in logistics and distribution channels allows nearly every business to trade and cooperate globally. Customers now have a real chance to access global markets for the best offer.

Developing countries like Cambodia have seen an increased uptake of mobile devices, which are also used to access the Internet (GSMA, 2016). This has increased the opportunities for e-IIs to communicate with community members and create awareness. Indeed, social media, which are accessed mostly through mobile devices, have made communication more efficient and reliable, faster, relatively cheaper, and more accessible for people with limited skills and resources (Mbatha, 2016; Melissa, Hamidati, & Saraswati, 2015). The use of social media has become increasingly popular among individual users and organizations for communication with community members fostering rapid and ease of business transactions (United Nations, 2014).

Access to ICT is still a challenge for many marginalized community members in Cambodia. Although e-IIs are important ways in bridging the digital divide, having access to ICT alone does not assure their meaningful use by community members but it must be relatable and useful in their everyday life, not to mention they need to possess the digital skills to use them. Social media possess the capability to facilitate information sharing, the building of networks, and the establishment of social relationships. They also facilitated the creation of online businesses that generate income and give rise to acts of activism for improved quality of life. Given that the online market is borderless since the internet-based technology operate business activities and transactions in the virtual space is a true global system. However, in doing business it is never about technology alone but also the interfacing of people and collaboration. The amalgamation of ICT indeed facilitated e-commerce, resulting in rapid business transactions and new e-business models. The use of ICT in commerce has transformed the nature of information sharing, maintaining social relations and conducting transactions.

Parenthetically, the globalization of economic activity is a twin edged sword on SMEs. Insofar as it beckons new opportunities for expansion and growth by taking advantage of international market potentials; it also brings about hyper competition with foreign enterprises. Consequently, local SMEs are unlikely to compete successfully in their present form without improving quality, cost competitiveness and management practices (Erdal & Burcu, 2014).

RESEARCH OBJECTIVES (RO)

The key objectives of this study are:

- To identify the association between firm globalization, the embracing of a set of ICTs, more specifically the social network sites, e-commerce and the firm's performance.
- To investigate the impact of globalization on people which leads them to a greater use of ICTs and permit users to navigate and communicate spontaneously to fulfil self-gratification.
- To explore the effects on B2B and B2C e-commerce resulting from globalization, though, such global firms are more likely to do B2B but less likely to do B2C.

Research Questions (RQ)

To achieve the above-mentioned research objectives, this study was guided by two exploratory research questions that asked:

- What is the impact of ICTs on business intelligence?
- What is the impact of e-commerce on factors that affect business intelligence?

Study Hypotheses

The study is based on the following four hypotheses:

Hypothesis One: There is an impact on business intelligence of e-commerce.

Hypothesis Two: There is an impact of internal control on business intelligence of e-commerce.

Hypothesis Three: There is an impact of data evidences and information on business intelligence of e-commerce.

Hypothesis Four: There is an impact of management reports on business intelligence of e-commerce.

METHODOLOGY AND DATA COLLECTION

The research design underpins the analytical identification of the environment boundaries and relevant variables. The design rest on the selection and application of data collection techniques, namely interviews, focus group discussions, non-participant observations, document and social media account reviews, including thematic analysis methods (Meyer, 2001). This study is interpretive in nature, primarily aimed to appreciate the realities of the research context from the viewpoint of SMEs and the community members who experience these realities (Creswell, 2003; Walsham & Sahay, 2006). In order to achieve the study objectives, a questionnaire was designed and distributed over a sample of 45 respondents who are practitioners and professionals in the business community (see Table 1 on sample distribution according to study variables).

Primary Data

A questionnaire was designed to collect the field study data. The questionnaire includes general information data related to respondent, to gain an overview of the landscape of the e-commerce, particularly the different types of SMEs, their ownership models, the services provided, and how they communicate. This was necessary because not much is known or documented about the different SMEs models that exist in Cambodia and their e-inclusion approaches, including how they communicate for e-commerce and social development. The data collection methods included interviews (face-to-face and telephonic), focus group discussions, and non-participant observations.

Secondary Data

The study used the descriptive methodology through using the literature review related to business topics and its intelligence in e-commerce in addition to previous studies review. The study also used the survey methodology through using the questionnaire which was designed for the purposes of this study to data collection in order to conclude some results through the sample's responses, hypotheses testing, and providing a set of recommendation.

Table 1. Sample distribution according to study variables

Variable	Variable levels	Frequency	Percentage
Gender	Male	30	66.7
	Female	15	33.3
Education	Diploma	30	66.6
	Degree	8	17.8
	Masters	6	13.3
	Doctorate	1	2.2
Age	Less than 30 years	22	48.9
	31 – 40 years	14	31.1
	41 – 50 years	4	8.9
	Over 51 years	5	11.1
Experience	Less than 5 years	19	42.2
	5 – 10 years	18	40.0
	10 – 15 years	8	17.8
	Over 15 years	0	0
Job Title	Owner	20	44.4
	Finance Manager	10	22.2
	Sales Manager	7	15.6
	HR/Admin Manager	8	17.8

Research Sample

A random sample was selected from study population of 60 SMEs. A total of 60 questionnaires were distributed but 45 (or 75%) were collected. Table (1) shows the study sample distribution according to study variables.

Study Instrument

A questionnaire was developed after reviewing the literature review from various references which deal with research topic and related to the study objectives. The questionnaire consisted of 25 questions. Likert scale with five options: Strongly agree= 5, agree= 4, natural =3, disagree =2 and strongly disagree= 1 was used.

The study instrument consisted of three parts as follows:

Part One: This part deals with company's employee's information such as (sex, education, age, experience and job).

Part Two: This part deals with business and its intelligence in e-commerce.

Part Three: This part measures the B2B e-commerce adoption.

ANALYSIS AND DISCUSSION

The Potential of E-Commerce for SMEs in a Globalized Business Environment

E-commerce is a fascinating phenomenon as observed in this study, where it can generate impactful outcomes in an overall business strategy. Fundamentally, it can be deployed in three distinct roles and functions. Firstly, e-commerce can be engaged as a marketing tool, essentially creating brand equity or reinforcing image. Additionally, generate demand or as a product information provider for bricks-and-mortar stores. Moreover Xue et al. (2016) reiterate that cross-border B2B e-commerce as a conceivable major marketing channel of traditional (offline) foreign trade enterprises. Secondly, on a broad scale, data analytics technologies and techniques provide e-commerce a means to analyze data sets and draw conclusions about them which help organizations make informed business decisions vis-à-vis gathering information about consumer preferences and examining the overall picture of a market for further expansion. Thirdly, e-commerce can act as a sales channel, in reaching global customers (e.g. individuals, businesses, governments) to distribute its products or services to the market, typically by segmenting sales operations to focus on different selling vessels. For instance, a company might implement a channel sales strategy to sell a product via in-house sales teams, dealers, retailers, affiliates, or direct marketing. In the same vein, e-commerce can be a pure digital play or be complement to the traditional business (click-and mortar business) can enable transactions in relations B2B, B2C, B2G and others. Each of those forms of e-commerce has its own specific nature and it is reasonable to analyze them separately. It offers various business benefits, including:

- New revenue stream opportunities
- More effective and efficient marketing

- Enhanced customer service
- Improved operational efficiency
- Sustainable competitive advantages over rivals

Hypothesis Testing 1

The results of hypothesis 1 indicate that there is an impact of knowledge and technical skills on business intelligence in e-commerce. This can be seen in Table 2 with means, standard deviations and ranking. So, it can be concluded that hypothesis 1 there is an impact of knowledge and technical skills on business intelligence in e-commerce.

Table 2. Means, standard deviations, ranking of business intelligence in e-commerce.

SN	Question	Mean	S. Deviation	Ranking
1	Staff has good knowledge of ICT and social media	3.7556	1.3677	3
2	Business activity has an impact on financial statements in e-commerce	3.7556	1.3677	3
3	Technical skills have an impact on employees in developing business intelligence in e-commerce	3.9111	1.2937	2
4	Staff has knowledge in Internet work and e-commerce programs	3.7111	1.3919	4
5	Staff fully engaged in e-commerce and social media	3.9333	1.2863	1
Grand Mean		3.9	1.3	-

Regardless, there is still early period of commercial implementation of ICT in businesses in Cambodia, which can be compared with the first phase of Gartner's hype cycle (Fenn et al., 2013) when the effects of new technology are regarded as glorified. There is this assumption that if the business is carried out online and the world is a global marketplace (websites are accessible in other countries), so SMEs automatically engage markets and customers around the world and finally transboundary trade has been the norm from now on. The empirical studies support the argument that the opening of markets to trade and foreign investment leads local firms to invest in ICT and to remain competitive (Totonchi & Kakamanshadi, 2011). Globalization has given the impetus for local firms to adopt specific ICT and e-commerce in order to compete and thrive on the world stage. Furthermore, the augmented private financial investment, hotel and tourism expansion are economic and financial manifestations of globalization.

It is noteworthy that the literature provides some explanation of the mutual relationships between globalization and e-commerce diffusion as well indicate that B2B and B2C e-commerce have quite different nature as regards their potentials for going global (Xue et al. 2016, Kraemer et al. 2005). Their findings that globalization of B2C e-commerce is fundamentally hindered has implications for further research in this area. Hence, two questions are brought to the for (i) What impedes and spurs B2C e-commerce globalization, (ii) How the limitations should be addressed or what could be done to boost B2C e-commerce global expansion?

Hypothesis Testing 2

The results of hypothesis 2 state that there is an impact of internal control on business intelligence of e-commerce. This can be seen in Table 3 with means, standard deviations and ranking. So, it can be concluded from hypothesis 2 that there is an impact of internal control on business intelligence of e-commerce.

Table 3. Means, standard deviations, ranking of internal control on business intelligence of e-commerce.

SN	Question	Mean	S. Deviation	Ranking
6	The manager can evaluate electronic auditing	4.0222	1.1772	1
7	The ability to achieve business intelligence measures timing and nature	3.5333	1.4078	6
8	The ability to understand the risks upon practicing financial statements in e-commerce	3.9333	1.2505	3
9	The ability of determination required business intelligence measures extent in e-commerce environment	3.7111	1.3588	5
10	The manager needs to attend courses to increase his information about e-commerce	3.7556	1.3677	4
11	There is a need to attend qualification and training programs on business intelligence methods of e-commerce operations	3.9556	1.2961	2
Grand Mean		3.9	1.3	-

It is crystal clear that SMEs play central roles in creating employment in Cambodia and economic development. The impact on the new business environment brought about by globalization is particularly important for SMEs. The study shows that if SMEs can use the potential of e-commerce to handle the difficulties of the new business environment. The study also contributes to understanding of the internet as a medium for commercial use. The respondents in the study embrace e-commerce largely to invent new ways of creating value-added, new services and new business models, to develop e-commerce strategies geared to expanding their business, often internationally, and increasing their effectiveness and enter into e-partnerships with large firms which are their customers or suppliers. The entire workflow in an e-commerce model is automated and streamlined in order to avoid mistakes and eliminate paperwork (Romano 2001). One respondent (R40) revealed that e-commerce is a convenient way of trade communication and increasingly firms have now realized the ease and efficient approach of e-commerce; and highly global firms in Cambodia are implementing this process.

According to three respondents (R19, R25 and R28), “e-commerce smoothens the sales aspect of e-business. Typically, our firms facilitate the financing and payments aspect. In our e-commerce transactions, we also include the exchange of goods and services between four broad categories over the Internet. This can happen between B2C, B2B, intra-companies, and B2G”. Another respondent (R31) commented that “in our e-commerce, it encompasses any commercial activity that takes place directly between a business, our partners or our customers through a combination of computing and communications technologies. It considers sales, marketing, communications, service, and workflow”. One respondent (R5) reported that “globalization has differential effects on B2B and B2C e-commerce, however local firms

are more likely to do B2B but unlikely to do B2C”. Understandably this can be attributed to the fact that e-commerce does not level the playing field in the global markets, but it facilitates robust competition among rivals. Local SMEs must find a way to compete successfully by identifying valuable resources that put them at a competitive advantage in their home markets.

Hypothesis Testing 3

The results of hypothesis 3 state that there is an impact of data evidences and information on business intelligence of e-commerce. This can be seen in Table 4 with means, standard deviations and ranking. So, it can be concluded that hypothesis 3 there is an impact of data evidences and information on business intelligence of e-commerce.

Table 4. Means, standard deviations, ranking of data evidences and information on business intelligence of e-commerce.

SN	Question	Mean	S. Deviation	Ranking
12	The importance to read the issues regarding the business intelligence of e-commerce transactions	4.0222	1.3477	1
13	Reviewing the issues related to internal auditing issued by international professional organizations	3.5333	1.2760	2
14	There is no difficulty in auditing internal measures for companies who are practicing e-commerce	3.9333	1.3585	3
15	Reviewing issue regarding business intelligence in e-commerce	3.7111	1.1160	6
16	Manager has adequate skills to perform Trust affirmation services through the Internet	3.7556	1.3633	5
17	There is a visibility of issues reading related to business intelligence in e-commerce	3.9556	1.2760	2
18	Manager has enough skills to perform auditing information system security	4.0222	1.1246	1
19	The manager can review all information in data base	3.5333	1.2358	7
20	The manager is permitted to access information through the net	3.8889	1.3521	4
Grand Mean		3.8	1.3	-

Despite its benefits, according to the respondents (R3-6, R8, 16-18, R20, R29, R31&36, R38, R40, R43-45), “there are several technical and non-technical constraints related with internet-based electronic commerce”. The SMEs in the study report that their primary issue limiting their operation in electronic platforms is that their goods or services are not suitable to e-marketing. Moreover, assessment based on firm size shows that secondary problems for the enterprises in all sizes are the problems associated to logistics and payments. The issues related to data protection and legal framework in Cambodia are the current problems that hinder the firms getting into e-commerce.

Business intelligence is inseparably linked with economic and societal forces as business intelligence can support two domains namely promoting equitable growth and the improvement of the quality of life.

What is apparent in Cambodia is that business intelligence is shoring up new economic growth opportunities, at the same time promoting exclusivity and inequality through job losses. However, this study presented some challenges and opportunities identified with SMEs in Cambodia. Findings in this study reveal that, challenges were inherent in the initial phase especially the perceived loss of jobs despite the numerous attempts of change management strategies for instance company strategy re-alignment, employee involvement, cultivating trust and interpersonal relationships and social support in work. The study further reveals that, the tactical application of motivational and change theories is gratifying in the bid to embrace ICT.

It is unsurprising that globalization and e-commerce are anticipated to change economic structure of Cambodia. In literature the new structure is generally referred as Digital Economy (Milenkovski et al., 2019). E-commerce not only reduces communication costs, but also increases flexibility in locating activities. Research posits that internet technology has led to an increase in international trade (Meltzer, 2016) and international trade in Cambodia will increase over time, with one hypothesized caused using technologies. Nevertheless, e-commerce is a nebulous term used to describe business sales transactions mediated by the Internet or other computer networks rather than through direct interaction between humans.

Hypothesis Testing 4

The results of hypothesis 4 state that there is an impact of management reports on business intelligence of e-commerce. This can be seen in Table 5 with means, standard deviations and ranking. So, it can be concluded that hypothesis 4 there is an impact of management reports on business intelligence of e-commerce.

Table 5. Means, standard deviations, and ranking of management reports on business intelligence of e-commerce.

SN	Question	Mean	S. Deviation	Ranking
21	There is a guarantee to keep right records according to suitable methods	3.8444	1.2961 2	2
22	The management is capable to deal with business intelligence in e-commerce	3.7556	1.3843	5
23	Business Intelligence requires manager special skills	3.8000	1.2721	3
24	There is a need to understand business intelligence in different managerial level	4.0667	1.1560	1
25	There is a confidentiality in current information through e-commerce	3.8000	1.2898	3
Grand Mean		3.8	1.2	-

In embracing ICT, nine respondents (or 20%) suggest that even after their best efforts of OD (organizational development) which included Lewin's theory, Kotter's theory, McClelland's Acquired Needs theory, Maslow's hierarchy of needs and above all Vroom's Expectancy Theory, it will necessitate a gradual phase-in approach. Evocatively, they knew that both motivation and communications are imperative factors for a smooth transformation embracement in this context. Nonetheless, the study reveals that

good change planning alone is insufficient, and it also suggest that positive experience must be shared among those who participated in the OD change. One respondent (R15) advocated that “principles of emotional intelligence, transactional leadership, and use of feedback surveys after training should always be applied as important vehicles for easy and smooth transformation”.

Another respondent (R6) recommended “the pre-emptive manager can run a feedback questionnaire survey immediately after the formal project closure vis-à-vis face-to-face meeting as some staff may not have been vocal enough to voice their true views due to lack of an open dialogic communication”. “In keeping records of the past lessons learnt or current project, it can be a valuable manual for future projects to circumvent similar slip-ups” echoed by one respondent (R5).

The hypothesis testing results are summarized in the table below:

Table 6. Outcome of the hypothesis testing results.

	Issue	Outcome
Hypothesis One	There is an impact on business intelligence of e-commerce.	It can be concluded that hypothesis 1 there is an impact of knowledge and technical skills on business intelligence in e-commerce.
Hypothesis Two	There is an impact of internal control on business intelligence of e-commerce.	It can be concluded from hypothesis 2 that there is an impact of internal control on business intelligence of e-commerce.
Hypothesis Three	There is an impact of data evidences and information on business intelligence of e-commerce.	It can be concluded that hypothesis 3 there is an impact of data evidences and information on business intelligence of e-commerce.
Hypothesis Four	There is an impact of management reports on business intelligence of e-commerce.	It can be concluded that hypothesis 4 there is an impact of management reports on business intelligence of e-commerce.

Further research should explore any distinct heterogeneous factors that may be vital or inhibitions for embracing ICT from digitalization milieu.

CONCLUSION

This study endeavored to review the connection between globalization and the adoption of a particular set of ICTs, namely the Internet and electronic commerce, within SMEs environment in Cambodia. This study surveyed the impacts of globalization on e-commerce and SMEs performance as the process of globalization has preceded the adoption of the Internet and e-commerce in time. This study illustrated the connection between globalization and e-commerce.

The findings inferred that e-commerce would augment international competitive advantages but not leveling the playing field for firms to compete with global firms in international markets. Hence, it would be crucial for local SMEs to find a way to create their own competitive advantage in home markets which could include local market knowledge, discernable brand names, distribution channels and service infrastructure. These strengths are not easily replicable for global firms. Conversely, if local Cambodian SMEs wish to enlarge their global reach, then the propensity to do so is by espousing B2B

e-commerce vis to launch into the global production networks for multinational corporations than by trying to sell directly to foreign consumers vis B2C.

Finally, SMEs do experience inherent barriers to their performance vis-a-vis e-commerce global expansion, as a result of both internal and external factors. The study uncovered that internal development issues of SME's which include:

- the challenges of OD efforts in embracing ICT by workers to fortify objectives and targets to be met to improve the performance.
- lack of awareness about e-commerce and e-commerce business models.
- lack of knowledge of e-commerce, trust and confidence problems.
- legal and regulatory framework, poor information infrastructure access.
- security issues and high costs.

Although SMEs can handle some of the hindrances by the changing business environment, the ones such as legal and regulatory framework, poor information infrastructure access and high costs cannot be resolved by the efforts of SMEs easily.

REFERENCES

- Aji, Z. M., Yusop, N. I., Ahmad, F., Azizi, A. A., & Jawad, Z. M. (2016). Conceptual model of technological change on telecentre effectiveness. *Computer and Information Science*, 9(2), 10–18. doi:10.5539/cis.v9n2p10
- Alao, A., Lwaga, T. E., & Chigona, W. (2017). Telecentres use in rural communities and women empowerment: Case of Western Cape. *IFIP Advances in Information and Communication Technology*, 504, 119–134. doi:10.1007/978-3-319-59111-7_11
- Baller, S., Dutta, S., & Lanvin, B. (2016). *The global information technology report 2016*. Geneva, Switzerland: World Economic Forum.
- Beckinsale, M., & Ram, M. (2006). Delivering ICT to ethnic minority businesses: An action-research approach. *Environment and Planning. C, Government & Policy*, 24(6), 847–867. doi:10.1068/c0559
- Breytenbach, J., De Villiers, C., & Jordaan, M. (2012). Communities in control of their own integrated technology development processes. *Information Technology for Development*, 19(2), 1–18.
- Chew, H. E., Ilavarasan, P. V., & Levy, M. R. (2010). The economic impact of information and communication technologies (ICTs) on microenterprises in the context of development. *The Electronic Journal on Information Systems in Developing Countries*, 44(1), 1–19. doi:10.1002/j.1681-4835.2010.tb00316.x
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). SAGE Publications.
- Donner, J. (2004). Microentrepreneurs and mobiles: An exploration of the uses of mobile phones by small business owners in Rwanda. *Information Technologies and International Development*, 2(1), 1–21. doi:10.1162/1544752043971198

- Donner, J. (2007). Customer acquisition among small and informal businesses in urban India: Comparing face-to-face and mediated channels. *The Electronic Journal on Information Systems in Developing Countries*, 1(3), 1–16. doi:10.1002/j.1681-4835.2007.tb00222.x
- Erdal, A., & Burcu, S. (2014). The Relationship between Globalization and E-commerce: Turkish Case. *Procedia: Social and Behavioral Sciences*, 150, 1267–1276. doi:10.1016/j.sbspro.2014.09.143
- Fenn, J., Raskino, M., & Burton, B. (2013). *Understanding Gartner's Hype Cycles*. Gartner.
- Ganju, K. K., Pavlou, P. A., & Banker, R. D. (2016). Does information and communication technology lead to the well-being of nations? A country-level empirical investigation. *Management Information Systems Quarterly*, 40(2), 417–430. doi:10.25300/MISQ/2016/40.2.07
- Garrido, M., Sey, A., Hart, T., & Santana, L. (2012a). *Literature review of how telecentres operate and have an impact on eInclusion*. JRC Scientific and Technical Reports. European Union.
- Garrido, M., Sey, A., Hart, T., & Santana, L. (2012b). *Exploratory study on explanations and theories of how telecentres and other community-based eInclusion actors operate and have an impact on digital and social inclusion policy goals*. JRC Working Papers. Seville, Spain: European Union.
- Globerman, S., Roehl, T. W., & Standifird, S. (2001). Globalization and Electronic Commerce: Inferences from Retail Brokering. *Journal of International Business Studies*, 32(4), 749–768. doi:10.1057/palgrave.jibs.8490993
- Gomez, R. (2014). When you do not have a computer: Public-access computing in developing countries. *Information Technology for Development*, 20(3), 274–291. doi:10.1080/02681102.2012.751573
- GSMA. (2016). *The mobile economy 2016*. Adweek. GSMA.
- Heeks, R. (2008). ICT4D 2.0: The next phase of applying ICT for international development. *Computer*, 41(6), 26–31. doi:10.1109/MC.2008.192
- Hoq, K. M. G. (2015). Rural library and information services, their success, failure and sustainability: A literature review. *Information Development*, 31(3), 294–310. doi:10.1177/0266666913515693
- Huaroto, C. (2012). Use of the Internet and productivity of microbusinesses: Evidence from the Peruvian case (2007–2010). *Information Technologies and International Development*, 8(4), 113–128.
- Kleine, D. (2015). ICT4D. In R. Mansell & P. Hwa Ang (Eds.), *The international encyclopedia of digital communication and society* (pp. 315–323). Wiley-Blackwell. doi:10.1002/9781118767771.wbiedcs161
- Kraemer, K. L., Gibbs, J. L., & Dedrick, J. (2005). Impacts of Globalization on ECommerce Use and Firm Performance: A Cross-Country Investigation. *The Information Society*, 21(5), 323–340. doi:10.1080/01972240500253350
- Mann, C., Sue, L., Eckert, E., & Knight, S. C. (2000). *Global Electronic Commerce: A Policy Primer*. Institute for International Economics.
- Mbatha, B. (2016). Pushing the agenda of the information society: ICT diffusion in selected multipurpose community telecentres in South Africa. *Information Development*, 32(4), 937–952. doi:10.1177/0266666915575544

- Melissa, E., Hamidati, A., & Saraswati, M. S. (2015). The Internet and Indonesian women entrepreneurs: Examining the impact of social media on women empowerment. In A. Chib, J. May, & R. Barrantes (Eds.), *Impact of information society research in the Global South* (pp. 203–222). Springer. doi:10.1007/978-981-287-381-1_11
- Meltzer, J. P. (2016). *Maximizing the Opportunities of the Internet for International Trade*. ICTSD and World Economic Forum.
- Meyer, C. (2001). A case in case study methodology. *Field Methods*, 13(4), 329–352. doi:10.1177/1525822X0101300402
- Milenkovski, B., Markovska, M., & Asani, A. (2019). Digital Economy – Present and Future Trends. *Knowledge International Journal*, 30(6), 1651–1653. doi:10.35120/kij30061651M
- Mothobi, O., Schoentgen, A., & Gillwald, A. (2017). *What is the state of microwork in Africa? A view from seven countries*. Research ICT Africa.
- Nakasone, E., & Torero, M. (2016). A text message away: ICTs as a tool to improve food security. *AGEC Agricultural Economics*, 47(S1), 49–59. doi:10.1111/agec.12314
- Rissola, G., & Garrido, M. (2013). *Survey on eInclusion actors in the EU27*. European Commission.
- Romano, F. (2001). *E-business. Paramus*. National Association for Printing Leadership, Pocket University Series.
- Sanou, B. (2016). ICT Facts and Figures 2016. International Telecommunications Union - ICT Data and Statistics Division.
- Schwab, K. (2016). *The fourth industrial revolution: what it means, how to respond*. World Economic Forum.
- Stair, R. M., & Reynolds, G. W. (2016). *Principles of information systems* (13th ed.). Cengage Learning.
- Steinfeld, C., & Klein, S. (1999). Local vs. Global Issues in Electronic Commerce. *Journal of Electronic Markets*, 9(1-2), 45–50. doi:10.1080/101967899359238
- Totonchi, J., & Kakamanshadi, G. (2011). Globalization and E-Commerce. In *2011 2nd International Conference on Networking and Information Technology*. IACSIT Press.
- Toure, H. (2015). Foreword. In K. Andreasson (Ed.), *Digital divides: The new challenges and opportunities of e-inclusion* (pp. ix–x). CRC Press.
- United Nations. (2011). *Report of the special rapporteur on the promotion and protection of the right to freedom of opinion and expression*. United Nations.
- Walsham, G. (2017). ICT4D research: Reflections on history and future agenda. *Information Technology for Development*, 23(1), 1–24. doi:10.1080/02681102.2016.1246406
- Walsham, G., & Sahay, S. (2006). Research on information systems in developing countries: Current landscape and future prospects. *Information Technology for Development*, 12(1), 7–24. doi:10.1002/itdj.20020

William, A. R. T., Dale, B. G., Visser, R. L., & Van der Wiele, T. (2001). B2B, Old Economy Businesses and the Role of Quality: Part 1 – The Simple Alternative. *Journal of Measuring Business Excellence*, 5(2), 39–44. doi:10.1108/13683040110403925

Xue, W., Li, D., & Pei, Y. (2016). The Development and Current of Cross-border Ecommerce. *Proceedings of Wuhan International Conference on e-Business*, 130-138.

KEY TERMS AND DEFINITIONS

Artificial Intelligence: The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

B2B: It is shorthand for business to business. The products and services of the business are marketed to other businesses.

B2C: It is shorthand for business to consumer. It is the process of selling products and services directly between a business and consumers who are the end-users of its products or services.

Business Intelligence: It is a combination of processes, products, and technologies that have the ability in supporting organization, and can have a direct key role in data management by storing, and analyzing the data collected from internal and external sources, and on decision making by creating knowledge, and finally on Business Performance management.

Customer Relationship Management (CRM): It is one of many different approaches that allow a company to manage and analyze its own interactions with its past, current and potential customers. It uses data analysis about customers' history with a company to improve business relationships with customers, specifically focusing on customer retention and ultimately driving sales growth.

E-Commerce: It also known as electronic commerce or internet commerce, it refers to the buying and selling of goods or services using the internet, and the transfer of money and data to execute these transactions. E-commerce is often used to refer to the sale of physical products online, but it can also describe any kind of commercial transaction that is facilitated through the internet.

Electronic Inclusion Intermediaries: Electronic inclusion intermediaries (e-IIs) are physical spaces equipped with desktop computers and Internet connectivity to give equal opportunities for socio-economic development which are also referred to as electronic centers (e-centers), public libraries, community technology centers, and digital hubs.

ICT4D: Information and Communications Technology for Development is the practice of utilizing technology to assist poor and marginalized people in developing communities.

Information and Communications Technology: A broader term for Information Technology (IT), which refers to all communication technologies, including the internet, wireless networks, cell phones, computers, software, middleware, video-conferencing, social networking, and other media applications and services.

Marketing 2.0: It refers to the new generation of marketing ideas emerging from the Internet era. The expression became popular in 2005 along with the idea of Web 2.0. It is a buzzword that forms part of the business jargon of corporate work environments pertaining to new means of marketing.

Organizational Development: It can be defined as an objective-based methodology used to initiate a change of systems in an entity.

Small and Medium-Sized Enterprises: Small and medium-sized enterprises (SMEs) are non-subsidary, independent firms which employ fewer than a given number of employees. Small firms are generally those with fewer than 50 employees, while micro-enterprises have at most 10, or in some cases 5, workers.

Social Media: It is computer-based technology that facilitates the sharing of ideas, thoughts, and information through the building of virtual networks and communities. Users engage with social media via computer, tablet or smartphone via web-based software or web application, often utilizing it for messaging.

Web 2.0: The second stage of development of the Internet, characterized especially by the change from static web pages to dynamic or user-generated content and the growth of social media.

Chapter 12

Impact of Information and Communication Readiness on the Tourism Industry: A Dynamic GMM Approach

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ABSTRACT

This study examines the impact of ICT readiness on the tourism industry and how it leads to growing competitiveness by deploying three-panel data analysis techniques (pooled OLS, fixed effects, dynamic GMM) with 177 nations for the period 2011 to 2019. ICT readiness is gauged using the World Economic Forum's Travel and Tourism Competitiveness Index, whereas tourism's contribution towards economic progress is gauged by overall international traveler arrival. The observations indicate that ICT readiness causes a statistically significant effect on tourism's role in economic progress. Tourism policy effects and guidelines for future works are discussed as well.

INTRODUCTION

Tourism is a concept involving various aspects and it has emerged as a main industry in the global economy (Aramendia-Muneta & Ollo-Lopez, 2013; Mazzola, Pizzuto & Ruggieri, 2019; Suhel & Bashir 2018). Indeed, its significance is growing continuously. For the past two years, a 4% annual growth rate has been recorded in the tourism sector as 300 million more tourists travelled internationally during 2008 to 2019 (UNWTO, 2019). The travel and tourism sector contributes significantly to the GDP, exports and employment as against other main industries (WTTC, 2019). In 2016, the sector's contribution to global GDP was almost 10.2% and its growth patterns and outlooks mostly exceeded that of other main

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industries (Crotti & Misrahi, 2015, 2017). According to the World Travel and Tourism Council (WTTC), tourism is the centre piece of fostering the development scheme of nations as the sector's significance prompted the National Tourism Organizations (NTOs) to spend more than US\$ 4 billion annually during 2008 to 2019 on marketing and advertising programs. Hence, governments worldwide should think about inclining towards policies for bolstering the development of the industry, enabling their respective nations to reap a broader suite of advantages in the whole economy.

The tourism industry is one of the initial services sectors to espouse and utilise information and communication technology (ICT) for endorsing its services (Adeola & Evans, 2020). Today, ICT has profoundly impacted the manner in which business is carried out and entities compete (Porter, 2001). Conventionally, the travel distribution function has been executed by outbound tour operators, travel agencies, and inbound travel managers or handling agencies (Buhalis & Laws, 2001, 2008). However, advancements in internet and electronic commerce in the late 1990s and the advent of tourism as one of the main Business to Consumers (B2C) and Business to Business (B2B) applications have altered the situation quickly (O'Connor, 1999; Smith et al., 1998). Internet has emerged as a key tool and one which is extensively employed by the tourism industry. ICT allows tourists to access dependable and precise information and to make reservations quickly, saving on cost and avoiding inconvenience triggered by orthodox methods (O'Connor, 1999).

Progresses in technology and the needs for an improved lifestyle have fostered an extremely competitive environment at a huge scale for firms, organisations, enterprises, companies, nations, regions, sectors and individuals as a whole. This is also applicable to the travel and tourism sector which has recorded key changes because of several aspects such as technology advancements. Gooroochurn and Sugiyarto (2005) studied determinants of the travel and tourism sector and observed that tourism competitiveness is a blend of eight key determinants: technology, price, social development, environment, openness, human resources, infrastructure and the human tourism indicator. Moreover, technology and the social aspect significantly impact the sector's competitiveness. On one hand, Aramendia-Muneta and Ollo-Lopez (2013) observed that internet and communication technologies (ICTs) deliver new prospects by enhancing output, generating competitive edge, fostering new businesses and enabling new modes of management (Buhalis, 2008; Gruescu, Nanu, & Pirvu, 2009; Ion & Andreea, 2008; Irvine & Anderson, 2008). Conversely, Harvey (2010) emphasised the various facets of society being part of an overall social system as far as political economy is concerned. This shows how governments, by viewing tourism as an instrument and contributor, could affect their nation's development, considering that the general social theory of political economy deals with how politics affects choices in society (Bramwell, 2011). The government's role is essential in tourism planning and development, and thus government involvement is directed through formal establishments like ministries (Nunkoo, 2015; Wang & Bramwell, 2012). Governments make choices for the economy in general, and this comprises the objective development of ICT infrastructures, and also the decision to endorse infrastructural ventures.

The swift advancement of ICT will not reduce in the short term, while the effects observed on several industries may even be better. The tourism and travel sector has witnessed the advantages of the swift advancement in technology over time in several unique ways. Authors and academicians hold different perspectives concerning the beneficial or adverse impacts that may potentially be intangible. It is essential to not hold one view without being clear about the changes creating numerous opportunities as well as roadblocks. Ukpabi and Karjaluoto (2017) indicated that the access and use of tourism-based services had been given a dimension using ICT since a high level of innovation facilitates the providers to offer their customers newer and better ways to consume the services.

Therefore, preparedness to handle ICT-specific changes is a crucial aspect for remaining competitive in the tourism sector since there are numerous benefits like new business development and potential opportunities to have more significant market share. Furthermore, the government provides the policy, issues guidelines, capital investment for infrastructure, which is all responsible for gaining the attention and capital of private investors, thereby effecting a positive change in the competitiveness of the industry and the betterment of the society. Three crucial indicators, namely, tourism and travel prioritisation, tourism services facilities, and ICT preparedness, have significant overlap; hence, research on these indicators is warranted to understand how these factors affect each other. Several nations in the Asia-Pacific and the Americas are required to enhance their ICT facilities to remain competitive, considering those nations having an advanced ICT framework. In contrast, some nations want to reduce excessive reliance on ICT and focus on environmental protection because the latter is a more significant concern due to the massive exploitation of natural resources, which presents another reason why this study is significant.

Research concerning the effects of ICT on the tourism industry and the travel domain is challenging, regardless of the ICT factor is the emphasised in this research. A vast amount of research information is available concerning ICT and tourism; nevertheless, there is a scope for much more because technology is making massive leaps towards achieving better outcomes. The benefits of ICT on tourism are not ignorable, and the literature has significantly discussed these benefits. The present study relies on the macro-scale panel data concerning 177 nations and uses advanced econometric techniques to determine the effects and the importance of ICT on the tourist industry. This study focuses on determining the growth achieved by the tourism industry. Proceeding under the assumption that the growth in tourism is a function of demand and ICT preparedness, data regarding the tourist count worldwide has been collected for the years 2011 to 2019. The dynamic system GMM has been employed to forecast tourism demand increase along with internet-use to provide a summary of tourism growth in the world for the upcoming years.

The intention is to perform an assessment to understand the correlations to understand the principal components affecting ICT readiness and evaluate how significantly it affects competitiveness on the tourism sector using principal component analysis (Pierdicca, Paolanti, & Frontoni, 2019). Historical data facilitates for a more informed idea concerning where a nation stands considering the attributes. This process helps determine and offer suggestions as to what the emphasis areas should be so that development can be facilitated. As a consequence of these suggestions, strategy formulation may be done appropriately. This study computes correlations and uses system GMM analysis to highlight the way of ICT readiness on tourism industry.

This paper has several remaining sections that are structured in the sequence of the information concerning ICT readiness, assessing the tourism structure. Subsequently, the details of the method and technique are discussed after which results are presented along with associated discussions. The contribution of this research follows next, while the last section provides the conclusion and areas for additional research relating to aspects addressed in the study.

LITERATURE REVIEW

ICT

The society and the businesses have been massively influenced by the information age, which has paved the way for several changes at the organisational and human level. Using ICT “becomes essential for the largest part of active population in the developed and emergent countries” (Matei & Savulescu, 2012). The World Bank analysed a sample of 50,000 businesses spread across 50 developing nations, and it specified that enterprises employing ICT witness higher sales growth, improved productivity, and swift growth concerning the employees. The economies of all the countries are dependent massively on the developmental avenues offered by creating and communicating information, which facilitates dissemination (Zhang, 2019). ICT has been witnessing continuous development – e-banking, mobile technology, and the internet are defining new ways of creating and communicating knowledge, thereby influencing how organisations and markets work as well as the route for economic growth (Vu, Hanafizadeh & Bohlin, 2020). ICT facilities of the 21st century provide an advanced electronic communication backbone for countries that allows the transmission of every possible form of information including voice, pictures, video, data, music, among other types. The presence of globally connected networks provides cost-effective communication and helps create possibilities for economies to communicate better. ICT infrastructure is vast and is extensively used by countries to transform their economies and integrate knowledge, where the primary economic growth drivers are information creation, dissemination and its use for further advancement (Bilan et al., 2019).

ICT Readiness: Technology Factor in Tourism

As specified previously, the literature has extensively discussed the role of ICT in tourism. Hence, pinpointing the significant changes and the application areas developed over time, along with the associated challenges due to widespread adoption is considered essential to have a relevant context for the research. The application of ICT to the tourist industry can be traced back to the early 1950s. Since then, there has been a shift from using ICT for booking airline tickets to the creation of the internet (Ma et al., 2003). The emergence of the internet is the most significant factor driving the changes in the tourism sector since the travellers, or anyone associated with tourism can use the internet to obtain information any time (Kumar & Kumar, 2020). Buhalis and Law (2008) specify that the effects of ICT have been very significant since the 2000s because of the focus and efforts directed towards technological in the last twenty years, which have enabled for new business models, tools, and services that allow individuals to interact with others globally. Several researchers opine that ICT has a significant role in creating competition in the tourism sector (Aramendia-Muneta & Ollo-Lopez, 2013; Buhalis & Kaldis, 2008; Petrovic, & Milićević, 2020); however, a unanimous perspective concerning the effects of ICT on tourism is not present because many doubt the role of ICT (Mihalic, 2007), while others have gone to the extent of specifying that tourism competitiveness and ICT lack any form of association (Dos Santos et al., 1993).

The proliferation of the internet has led to skyrocketing use of the social media, which may be understood as the collection of internet-based platforms that facilitate uploading individually-generated content on the internet for storage or sharing with others (Chung & Koo, 2015; Xiang & Gretzel, 2010; Zach, Gretzel & Xiang, 2010). Social media offers a foundation where consumers may contact and look for services, exchange information, thoughts, perspectives, and personal experiences (Chan & Guillet, 2011;

Chung & Koo, 2015; Sigala et al., 2012). Before the advent of social media, there was relatively limited access to travel-specific information, which was disseminated using books, newspapers or magazines. The contemporary alternatives to these media are posts, websites, blogs, online magazines, digital or personal insight, among other forms (Chung & Koo, 2015).

The advancements in ICTs have brought about changes in the demand and supply framework. ICT has facilitated increased demand for flexible and personalised services, while the increasing information quality has provided a personal flavour to tourism and leisure travel (Chung & Koo, 2015). Using the latest technology, individuals can use socio-economic ratings (e.g. those available on the social media platforms like Twitter, Facebook, and blogs, among others) and exchange information concerning popular destinations, service quality in hotels, and the environmental and social aspects of travel. Numerous well-known hotel chains such as Ritz Carlton, Hyatt, and Marriot have dedicated efforts to build a stronger brand and interact directly with customers using means like press release or Twitter-based promotions.

The internet has facilitated a better choice for consumers concerning the way services are delivered. ICT has led to the customers becoming more knowledgeable, aware, and demand high service standards due to the combined effect of knowledge and higher standards of living. Consequently, the standards demanded by the tourists have steadily increased, who are now wanting high-quality goods that justify the price paid by the individuals and especially for the time spent, which indicates that travellers value time immensely. Individuals have exposure to many tourism-specific goods, experiences, destinations. Therefore, there is an increasing number of travellers who have a heavy reliance on electronic sources for gathering information about destinations along with the ability to tell the services providers what exactly they want.

ICT and Tourism Growth

International tourism is of great significance for many developing nations. The tourism sector has been growing more relevant for economic growth primarily due to the development of ICT over the past decades. Efforts previously focused on import substitution and agriculture but are now being directed towards creating a revolution in the structural and organisational aspect of tourism (Sheldon, 1997). Tourists during the trip or while planning required information to make significant decisions (Xiang & Fesenmaier, 2006). Specifically, tourists must choose the destination, travel date, duration, accommodation, food options, and modes of transport, among others. Sheldon (1989, pg. 589) indicates that “information is the lifeblood of the tourism industry”. Almost all the stakeholders of the tourism sector, which include travellers, travel service providers, and others that work on the supply chain require information. ICT has facilitated better information flow in tourism-based organisations, while also improving the speed and quality of information exchanged between the stakeholders. Additionally, external requests can be serviced with a better turnaround, while inquiries can be swiftly addressed. Hence, the advancements in the tourism sector have enhanced competition and facilitated market forces to drive prices (Buhalis & Law, 2008).

From a theoretical perspective, the connection between ICT and tourism has been analysed since the early 1990s; see, inter alia, Buhalis (2003), Xiang and Fesenmaier (2006), Garbin Pranic'evic' (2006), Gretzel et al. (2004), Pease et al. (2005), Werthner and Klein (1999), and Sheldon (1997). Since tourism is information-intensive, these researchers assert that the advancement of ICT has been the primary driver effecting changes in tourism and tourism-based organisation (Ramos et al. 2009). Product differentiation, value addition, and offers can be created to provide differentiation to products and services if

the providers leverage ICT strategically (Bazini and Elmazi 2009; Garbin Pranic'evic' 2006; Paskaleva 2010). The application of ICT to tourism has led to significant change and renovation of the processes concerning the distribution framework. Additionally, all the stakeholders have reassessed their market and area of expertise (Buhalis and O'Connor 2005).

Creation of ICT infrastructure has led to the formulation of technology-based platforms that facilitate the creation of a comprehensive information network comprising several stakeholders (Pease et al. 2005). Such networks are crucial for the tourism sections and have a critical role in determining the success of the distribution of tourist products and services. Electronic distribution refers to the tourism-specific services that are implemented or delivered using electronic means (Ramos et al. 2009). Electronic distribution massively influences individual satisfaction in response to tourism demand, since it provides consumers, providers, and third parties to communicate, while also offering the requisite tools for formulating marketing strategies (Buhalis 2003).

World Trade Organisation (WTO 2001) asserts that the connection between the internet and tourism is exemplary since it facilitates a fast and natural association between those involved in distribution. At the same time, tourists can reap the benefits of having relevant information at hand, which may be used to make faster and better-informed reservation decisions. Technology facilitates building reservation systems that can cater to an extensive set of customers while requiring lesser capital; at the same time, it provides communication mechanisms and relationship building between partners, providers, and third parties. These factors are of prime importance since there is a significant complementary aspect to tourism, thereby indicating a requirement for easy access across the cost-effective, efficient, updated, and relevant services using tourism information systems.

The link between the tourism industry and ICT has benefited the businesses from a practical standpoint by reducing the digital gap; nevertheless, it has not received due attention (Minghetti and Buhalis, 2010). Additionally, capital invested in the enhancement of telecommunication and ICT provides an opportunity to further the economy by enhancing the productivity of the workforce (Katz, 2009). ICT not only benefits tourism but also helps industries relying on ICT to have better operations by improving productivity and providing the consumers with a choice to avail high-quality products with cost-effective prices (Porter, 2001; Buhalis and Law, 2008). Kuppusamy et al. (2009) used a case study to analyse the effects of ICT investment in Malaysia. The invested capital brought a significant positive impact on the economy, considering both the short and long-term scenarios. The wholesale and manufacturing industries were the biggest beneficiaries of the investment. Venturini (2009) assessed the increase in the digital capital of fifteen nations in the European Union (EU-15) and the United States. It was concluded that the enhancement of ICT capital significantly boosts GDP growth in the long-term scenario. Jalava and Pohjola (2008) assessed the contribution of ICT to electricity use considering the economic enhancement in Finland; it was found that ICT provides thrice the amount of electricity. Additionally, Horscroft (2010) commented that the developing nations situated on the Pacific Islands are restricted by the sea and proximity to business hubs, thereby limiting growth and economic prosperity; nevertheless, ICT can potentially help connect business operations for nations that are dependent on tourism.

Furthermore, in the context of Australia, technology has helped the tourism industry immensely, while also helping enhance economic activity. One instance of this is Tourism Australia, where the travellers are encouraged to use mobile technology to facilitate the journey planning and booking. Providing fast access to a mapping framework positively affects stakeholders of the tourism industry, such as accommodation providers, car for hire, and tour agencies. With the use of the Global Positioning System (GPS), travellers can know more about their immediate surroundings while they are travelling.

Several nations like Korea, Thailand, and Indonesia have felt the need to build technological ability to enhance tourism and benefit from it.

ANALYTICAL FRAMEWORK

This empirical analysis evaluates any potential impact of ICT on tourism growth (GPD). A two-step technique was formulated to assess how GPD and ICT interact and affect associations, which may be measured using growth in tourism (using GDP figures). In the first step, the GMM technique was employed to determine how ICT affected GDP. This step provided the creation of the dynamic characteristics of the dataset. Several challenges were handled using the GMM technique; first, the dynamic aspect of dataset constitution was used by considering that there is a high probability of the current scope and performance of ICT being affected by its historical performance. This research paid due consideration to the propensity where current performance is associated with several factors like heterogeneity, which may or may not be observable. Along the same lines, such aspects could influence ICT decisions, which provided for connecting with businesses that had a significant reliance on process and product quality in addition to enterprises having a higher propensity of investing in ICT. Therefore, there was some correction for such endogenous factors by not swiftly providing their effect to tourism growth. Thirdly, the direction of causality was considered in this study, where TUR could influence ICT or the other way.

The relationships shared by ICT variables (ICT_{it}) and GDP (GDP_{it}), which includes firm-level control variables (POP , CPI , EX and TUR) or $CTRL_{it}$. This study considered the following equation:

$$GDP_{it} = \pm +^2_1 GDP_{it-1} + ^2_2 ICT_{it} + ^2_{53} CTRL_{it} + Year_{it} + \mu_{it} \quad (1)$$

where i denotes the nation, t denotes time, μ_i denotes the nation-specific undetected fixed aspects, and ε_{it} denotes the error term, which had a distribution of $N(0, \sigma^2)$. GDP_{it} indicates the aspect concerning tourism growth, which is GDP. ICT_{it} indicates the aggregate ICT score. Numerous other variables ($CTRL_{it}$) were considered in this work to help understand the cross-sectional changes in GDP, like the ability to elucidate tourism growth. The year account for the effects during that time, which may influence the shared ICT trends over time. Considering estimation using Equation 1, there may potentially be three sources of endogeneity, namely unobservable heterogeneity (the unobservable parameters are influenced by dependent and independent variables), simultaneity (where the predictor variables may behave as a function of the output variable), and the present values representing ICT, which may be connected to previous GDP (typically ignored in the context of endogeneity). To nullify the influence of endogeneity, the Generalised Method of Moments (GMM) estimation technique was employed. This technique asserts that GMM corrects the coefficients to an optimal extent. Furthermore, the dynamic GMM technique has the ability to regular upward bias during the least-squares estimation of a dynamic framework under rational circumstances. It can also rectify downward bias occurring when ascertaining a dynamic framework's mean difference under the circumstances of small T value.

Sources of Data

This study considered data pertaining to 177 nations for the years 2011 to 2019. Data availability and the requirement to have balanced data were the factors considering which the countries were chosen. The final set comprised data equivalent to 1593 country-years. The data was obtained through the Global Travel Service (GTS) from Oxford Economics, which is a detailed database and facilitated the analysis of prevalent trends, tourist perspective and the world economy. The database offered a friendly and facilitated access to information concerning regional data and aggregate data about 183 nations. A balanced panel comprising 177 nations was constituted to ascertain the impact of the competitiveness of tourist destinations on the corresponding country's economy and tourism section. The concept, parameters, and the data sources employed are listed in Table 1. Numerous works have employed the growth decomposition method to ascertain the effects of the tourism industry to economic development (Brida and Aguirre 2010; Ivanov and Webster 2007; 2013; 2014).

Table 1. Concepts, variables, and primary data sources

Abbreviation	Variable	Concept	Primary Data Source
GDP	Total tourism contribution to GDP economic growth (ratio)	Tourism's contribution to economic growth	Author calculation
TUR	Log total tourist arrival	Tourism specification	Oxford Economic
POP	Log population	Population size	Oxford Economic
CPI	Consumer Price Index	Consumer Price Index	Oxford Economic
ICT readiness	ICT readiness Index (2000 – 2019)	competitiveness	Oxford Economic
Exchange rate	Exchange rate	Exchange rate	Oxford Economic

RESULTS AND DISCUSSION

This study was split into two steps. During the first step, any direct indications of an association between tourist arrival and ICT were investigated. Descriptive information concerning the model's parameters is summarised in Tables 1 and 2. It was observed that the correlations between pairs of independent variables were not very high; however, it was observed that there was a correlation between total assets and other parameters, which may potentially cause the multicollinearity issue. The value of the variance inflation factor (VIF) was evaluated during a thorough assessment, and the multicollinearity issues were deemed not significant. The mean and maximum values of VIF were 1.56 and 2.24, respectively.

ICT Readiness and Tourist Arrival Relationship

Several models like the static and dynamic ordinary least squares, fixed effects, and system general method of moments, are listed in Table 4. The ICT scores were used in combination with statistics regarding tourist arrival to determine the impact of the heterogeneity between ICT and supervising dynamic traveller arrival and their relationships. The misspecification analyses were further tested using

authentication, which included the 2nd-order serial correlation analysis (AR2) and the Hansen analysis for determining other limitations. Authentication facilitated the validation of whether the characteristics of the GMM framework were suitable. The dependent variable had a lag and was found significant with a positive coefficient, thereby indicating that previous values affect the current value. Table 3 specifies the coefficients for the GMM system's lagged parameters identified between the fixed effects and the combined OLS. The observations are in line with those provided by Blundell, Bond and Windmeijer (2001), where an effective bias-free GMM system was formulated. Consequently, the researchers were motivated to employ and prefer using the two-step GMM technique (Blundell & Bond, 1998).

Table 2. Descriptive Statistics

Abbreviation	Description	Obs	Mean	Std. Dev	Min	Max
GDP	Total tourism contribution to GDP economic growth (ratio)	1.593	0.948734	2.524433	0.255898	58.393123
TUR	Log total tourist arrival	1.593	7.619135	1.930875	1.768984	12.26433
POP	Log population	1.593	5.121933	2.173142	2.420101	14.17206
CPI	Customer purchasing index	1.593	5.939261	3.320027	-2.00736	15.63196
ICT readiness	ICT readiness Index	1.593	99.20547	25.38578	51.5291	166.578
Exchange Rate	Exchange rate	1.593	0.03515	0.0850	0.000024	1.28000

Notes: All statistics are based on original data values

Table 3. Correlation Matrix

	GDP	TUR	POP	CPI	ICT readiness	Exchange rate
GDP	1					
TUR	-0.0245	1				
POP	-0.0314	0.3658	1			
CPI	0.4107	0.2848	0.4484	1		
ICT readiness	0.4469	0.0403	0.1054	0.0057	1	
Exchange rate	0.0508	-0.0032	0.0131	-0.0104	-0.0078	1

Notes: All statistics are based on original data values

A two-step GMM estimation system was used to determine the statistical model for tourist arrival and the role of ICT. Using this method, unobservable, time-invariant firm-specific aspects can be nullified by computing the first order difference pertaining to every corresponding parameter. Furthermore, this sophisticated technique facilitates nullifying the probability of endogeneity using differenced expressions using the lagged levels in the expressions along with the differences in the level using the first-order lag difference corresponding to the variables.

The technique employed here provides ICT forecast values. The observations indicated that specific biases could be present if the association between dynamic tourist arrival and ICT (fixed aspects) and unobservable differences (aggregated OLS) are ignored entirely. Positive associations are highlighted by

OLS forecast between ICT and traveller arrival, whereas the neutral correlations were found as per the GMM forecasting and fixed-effect observations. Hence, the definition of the association between tourist arrival and ICT must include dynamic aspects. Fixed-effect or OLS-based frameworks may lead to biased observations; therefore, the outcomes of the GMM framework must be carefully inspected. It was determined that ICT did not have any significant effect on tourist arrival. The findings been proved using the provided information, thereby indicating a direct effect of the previous ICT on tourist arrival. Typically, positive associations are likely between ICT and tourist arrival, which is in agreement with previous works.

Constructive high-speed ICT backbone along with associated software is crucial for the advancement of the hospitality and the tourism sectors. Customer relationships and supply chain may be integrated using ICT to one entity that provides for several processes like product choice and order, order tracking and fulfilment, payments, and reporting to be completed using an integrated tool. ICT facilitates cost reduction by bringing the consumer closer to the provider while also generating employment for skilled individuals who can maintain the ICT infrastructure. The leaderships for tourism businesses employ ICT for several processes that facilitate the enhancement of employee productivity, which is primarily achieved using online bookings. Innovative businesses may utilise a wide range of possibilities to tailor the products for different requirements by the consumers. In the business travel domain, ICT is an integrated and core aspect of travel since the businesspersons expect a basic level of facilities during travel. Tourist and benefitted massively using the World Wide Web and the internet to enhance communication and market products and services effectively. ICTs can help restructure the distribution setup by facilitating change in commission structure, thereby allowing the likes of eBookers and Expedia to rise rapidly with significant market share.

CONCLUSION AND POLICY IMPLICATIONS

The effects of ICT on increasing tourism were investigated in this study, especially for emerging economies. Five panel-analysis techniques (dynamic GMM, pooled OLS, and fixed effects) were used on data between years 2001 and 2019. Empirical knowledge and theory indicate that ICT exerts a positive influence on the tourism industry. Even though there has been much analysis by empirical researchers, the authors declare that to the best of their knowledge, the effects of ICT on tourism using a 177-countries sample have not been investigated to date. A significant portion of panel data analysis techniques (dynamic GMM, Pooled OLS, and fixed effects) indicate ICT exerting a very positive effect on tourism growth, which is in agreement with a majority of the theoretical forecasts. The study, therefore, presents the suggestion that developing markets should build and deploy ICT policy that facilitates the tourism sector to flourish.

It is evident, without doubt, that ICT is a significant aspect of economic development and acts as a significant driver of critical economic sectors like tourism. This study establishes that technology may be employed to expand the tourism market and increase visitor arrival, especially by the relevant markets appraised. Technology facilitates better travel plans and allows travellers to remain informed on crucial aspects like safety and security, which are essential for tourism to grow. With the strides in mobile technology and allied services, the authors propose that the integration of ICT to tourism with the intention of enhanced development has a high chance of being beneficial for the economy. It can be inferred from the study that such association provides the way for building comprehensive tourism infrastructure, bolster security, and facilitate the creation of several tourism products and services that

are specific to education, medicine, nature, archaeology, religion, and agriculture. The results highlight the advantages of effectively exploiting technology and information sharing to bridge global tourism. Furthermore, deploying additional resources for research and technology to create state-of-the-art products tailored for the tourists can facilitate a self-sufficient cycle to keep the sectors and the economy at a growth trajectory.

Table 4. Effects of ICT readiness on GPD (N = 177 firms; T = 10; sample period = 2011–2019)

	Static		Dynamic		
	Pooled OLS	Fixed Effect	Pooled OLS	Fixed Effect	System GMM
	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
VARIABLES	GPD	GPD	GPD	GPD	GDP
GDP _{t-1}			1.005***	0.952***	1.029***
			(0.00133)	(0.00716)	(0.000614)
ICT readiness	538.1***	82.07***	8.008***	46.17*	16.27***
	(14.59)	(7.37)	(1.320)	(27.53)	(1.072)
Tourist arrival	-0.000201	-0.00000238	-0.000000122	0.0000131	0.0000180***
	(0.00103)	(0.000207)	(0.00000766)	(0.00000765)	(0.000000398)
Exchange rate	2.396***	0.164	0.0690	0.0643	0.240***
	(0.685)	(0.264)	(0.0514)	(0.101)	(0.0602)
Population	0.0506***	0.122***	0.0000106	0.000548*	0.00664***
	(0.00259)	(0.00846)	(0.00905)	(0.000323)	(0.00009005)
CPI	-0.0784***	0.00235***	0.00120***	0.00873**	0.000643***
	(0.00129)	(0.000834)	(0.000208)	(0.00350)	(0.000112)
Constant	-44,728***	-2,102	-601.8***	-4,157	1,334***
	(1,504)	(7,396)	(129.1)	(2,737)	(114.0)
Observations	1,593	1,593	1,593	1,593	1,593
R-squared	0.382	0.075	0.997	0.865	
Number of Countries		177		177	177
Number of Instruments					57
AR1					-2.51(0.012)
AR2					0.59(0.557)
Hansen Test					62.25(0.115)
Hansen Different Test					7.31(0.293)

Source: (Author, 2020)

Notes: The standard errors are reported in parentheses, except for Hansen test, AR1, AR2 and Difference-in-Hansen test which p-values, ***, ** and * indicate significant at 1%, 5% and 10% levels, respectively. Time dummies are included in the model specification, but the results are not reported to save space. System GMM model is estimated by using the Blundell and Bond (1998) dynamic panel system GMM estimations and Roodman (2009)—Stata xtabond2 command.

Nevertheless, there are some restrictions concerning this study. Firstly, the estimation is based on limited parameters, and there is scope to include the effects of the exchange rate and human capital (Stauvermann et al., 2016). Secondly, the demand for tourism may be modelled to evaluate destination-specific tourism elasticity. Demand analyses can help prepare a preference framework which may be utilised to determine the tourists' (visiting Israel) willingness to spend money. Studies considering these aspects assess demand and microeconomics. Thirdly, ICT has several indicators (Kumar et al., 2016a, b) that may be explored using the growth model. Lastly, the model using in this study may be used and modified to determine the effects of ICT and tourism on factor productivity or to ascertain threshold impact (Kumar & Stauvermann 2016). Additionally, it is suggested that future research focuses on the macroeconomic aspects concerning the emerging markets to create a positive influence of ICT on the development of tourism.

REFERENCES

- Adeola, O., & Evans, O. (2020). ICT, infrastructure, and tourism development in Africa. *Tourism Economics*, 26(1), 97–114. doi:10.1177/1354816619827712
- Aramendia Muneta, M. E., & Ollo López, A. (2013). ICT Impact on tourism industry. *International Journal of Management Cases*, 15(2), 87–98.
- Bazini, E., & Elmazi, L. (2009). ICT influences on marketing mix and building a Tourism Information System. *China-USA Business Review*, 8(2), 36–45.
- Bilan, Y., Mishchuk, H., Samoliuk, N., & Grishnova, O. (2019). ICT and Economic Growth: Links and Possibilities of Engaging. *Intellectual Economics*, 13(1), 93–104.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143. doi:10.1016/S0304-4076(98)00009-8
- Blundell, R., Bond, S., & Windmeijer, F. (2001). *Estimation in dynamic panel data models: improving on the performance of the standard GMM estimator*. Emerald Group Publishing Limited.
- Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism*, 19(4-5), 411–421. doi:10.1080/09669582.2011.580586
- Brida, J. G., & Risso, W. A. (2010). Tourism as a determinant of long-run economic growth. *Journal of Policy Research in Tourism, Leisure & Events*, 2(1), 14–28. doi:10.1080/19407960903542276
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management*, 29(4), 609–623. doi:10.1016/j.tourman.2008.01.005
- Buhalis, D., & O'Connor, P. (2005). Information communication technology revolutionizing tourism. *Tourism Recreation Research*, 30(3), 7–16. doi:10.1080/02508281.2005.11081482
- Chan, N. L., & Guillet, B. D. (2011). Investigation of social media marketing: How does the hotel industry in Hong Kong perform in marketing on social media websites? *Journal of Travel & Tourism Marketing*, 28(4), 345–368. doi:10.1080/10548408.2011.571571

Chung, N., & Koo, C. (2015). The use of social media in travel information search. *Telematics and Informatics*, 32(2), 215–229. doi:10.1016/j.tele.2014.08.005

Crotti, R., & Misrahi, T. (2015). *The travel & tourism competitiveness index 2015: T&T as a resilient contribution to national development*. The Travel & Tourism Competitiveness Report, 13.

Crotti, R., & Misrahi, T. (2017). *The travel & tourism competitiveness report 2017. Paving the way for a more sustainable and inclusive future*. World Economic Forum.

Dos Santos, B. L., Peffers, K., & Mauer, D. C. (1993). The impact of information technology investment announcements on the market value of the firm. *Information Systems Research*, 4(1), 1–23. doi:10.1287/isre.4.1.1

Gooroochurn, N., & Sugiyarto, G. (2005). Competitiveness indicators in the travel and tourism industry. *Tourism Economics*, 11(1), 25–43. doi:10.5367/0000000053297130

Gruescu, R., Nanu, R., & Pirvu, G. (2009). Destination competitiveness: A framework for future research. *Entelequia. Revista Interdisciplinar*, 9, 197–209.

Guimarães Pereira, Â., & O'Connor, M. (1999). Information and communication technology and the popular appropriation of sustainability problems. *International Journal of Sustainable Development*, 2(3), 411–424. doi:10.1504/IJSD.1999.004331

Harvey, D. (2010). *Social justice and the city* (Vol. 1). University of Georgia Press.

Horscroft, V. (2010). *An Eye on East Asia and Pacific – The Role of Information and Communications Technology in Mitigating the Challenges on Economic Geography in the Pacific Islands*. World Bank. http://www.siteresources.worldbank.org/INTEASTASIA/PACIFIC/Resources/226262-1291126731435/EOEA_Virginia_Horscroft_Nov2010.pdf

Hwang, Y., Gretzel, U., Xiang, Z., & Fesenmaier, D. R. (2006). Information search for travel decisions. *Destination Recommendation Systems: Behavioral Foundations and Applications*, 42(4), 357–371.

Ion, P., & Andreea, Z. (2008). Use of ICT in SMEs management within the sector of services. *Annals of the University of Oradea. Economic Science Series*, 17(4), 481–487.

Irvine, W., & Anderson, A. R. (2008). ICT (information communication technology), peripherality and smaller hospitality businesses in Scotland. *International Journal of Entrepreneurial Behaviour & Research*, 14(4), 200–218. doi:10.1108/13552550810887381

Ivanov, S., & Webster, C. (2007). Measuring the impact of tourism on economic growth. *Tourism Economics*, 13(3), 379–388. doi:10.5367/000000007781497773

Ivanov, S. H., & Webster, C. (2013). Globalisation as a driver of destination competitiveness. *Annals of Tourism Research*, 43, 628–633. doi:10.1016/j.annals.2013.07.010

Katz, R. L. (2009). The economic and social impact of telecommunications output. *Inter Economics*, 44(1), 41–48. doi:10.1007/10272-009-0276-0

Kő, A., Vas, R., Kovács, T., & Szabó, I. (2019). Knowledge Creation from the Perspective of the Supply Chain. The Role of ICT. *Society and Economy*, 41(3), 311–329. doi:10.1556/204.2019.009

- Kumar, N., & Kumar, R. R. (2020). Relationship between ICT and international tourism demand: A study of major tourist destinations. *Tourism Economics*, 26(6), 908–925. doi:10.1177/1354816619858004
- Kumar, R. R., Stauvermann, P. J., Patel, A., Kumar, N., & Prasad, S. (2016b). Exploring the nexus between tourism and output in Cook Islands: An ARDL bounds approach. *Social Indicators Research*, 128(3), 1085–1101. doi:10.1007/11205-015-1070-y
- Kumar, R. R., Stauvermann, P. J., & Samitas, A. (2016a). The effects of ICT on output per worker: A study of the Chinese economy. *Telecommunications Policy*, 40(2-3), 102–115. doi:10.1016/j.telpol.2015.06.004
- Ma, J. X., Buhalis, D., & Song, H. (2003). ICTs and Internet adoption in China's tourism industry. *International Journal of Information Management*, 23(6), 451–467. doi:10.1016/j.ijinfomgt.2003.09.002
- Matei, A. I., & Savulescu, C. (2012, September). Empirical analysis of ICT, economic growth and competitiveness in the EU. In *Proceedings of the International Conference on ICT Management (ICTM 2012)*. College of Management Edukacja.
- Mazzola, F., Pizzuto, P., & Ruggieri, G. (2019). The role of tourism in island economic growth and resilience. *Journal of Economic Studies (Glasgow, Scotland)*, 46(7), 1418–1436. doi:10.1108/JES-04-2019-0172
- Mihalic, T., & Buhalis, D. (2013). ICT as a new competitive advantage factor-Case of small transitional hotel sector. *Economic and Business Review for Central and South-Eastern Europe*, 15(1), 33–56.
- Minghetti, V., & Buhalis, D. (2010). Digital divide in tourism. *Journal of Travel Research*, 49(3), 267–281. doi:10.1177/0047287509346843
- Nunkoo, R. (2015). Tourism development and trust in local government. *Tourism Management*, 46, 623–634. doi:10.1016/j.tourman.2014.08.016
- Paskaleva, K. A., & Azorin, J. A. (2010). Developing integrated e-tourism services for cultural heritage destinations. *International Journal of Services Technology and Management*, 13(3-4), 247–262. doi:10.1504/IJSTM.2010.032081
- Pease, W., & Rowe, M. (2005). An overview of information technology in the tourism industry. In *Conference Proceedings-ICT Networks-Building Blocks for Economic Development*. Communication Economics and Electronic Markets Research Centre.
- Pease, W., Rowe, M., & Cooper, M. (2005). The role of ICT in regional tourism providers. *The Asia Pacific Journal of Economics & Business*, 9(2), 50–62.
- Petrovic, J., & Milićević, S. (2020). The ICT Impact on Inbound and Outbound Tourism Demand in the EU. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 25(1), 47–55.
- Pierdicca, R., Paolanti, M., & Frontoni, E. (2019). eTourism: ICT and its role for tourism management. *Journal of Hospitality and Tourism Technology*, 10(1), 90–106. doi:10.1108/JHTT-07-2017-0043
- Porter, M. E. (2001). Strategy and the Internet. *Harvard Business Review*, 63–78. PMID:11246925

- Praničević, D. G. (2006). *Application of information and communication technologies (ICT) in tourism* [Paper presentation]. *3rd International Conference: An Enterprise Odyssey: Integration or Disintegration*, Zagreb, Croatia.
- Ramos, C. M., & Rodrigues, P. M. (2013). The importance of ICT for tourism demand: A dynamic panel data analysis. In *Quantitative methods in tourism economics* (pp. 97-111). doi:10.1007/978-3-7908-2879-5_6
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology*, 73(6), 1380–1393. doi:10.1037/0022-3514.73.6.1380
- Sheldon, P. J. (1989). Professionalism in tourism and hospitality. *Annals of Tourism Research*, 16(4), 492–503. doi:10.1016/0160-7383(89)90004-2
- Sigala, M., Christou, E., & Gretzel, U. (Eds.). (2012). *Social media in travel, tourism and hospitality: Theory, practice and cases*. Ashgate Publishing, Ltd.
- Smith, J. R., Mohan, R., & Li, C. S. (1998, October). Content-based transcoding of images in the Internet. In *Proceedings 1998 International Conference on Image Processing. ICIP98 (Cat. No. 98CB36269)* (pp. 7-11). IEEE. 10.1109/ICIP.1998.998987
- Stauvermann, P. J., & Kumar, R. R. (2016b). Economics of tourism & growth for small island countries. *Tourism Management*, 55, 272–275. doi:10.1016/j.tourman.2016.02.020
- Suhel, S., & Bashir, A. (2018). The role of tourism toward economic growth in the local economy. *Economic Journal of Emerging Markets*, 10(1), 32–39. doi:10.20885/ejem.vol10.iss1.art4
- Venturini, F. (2009). The long-run impact of ICT. *Empirical Economics*, 37(3), 497–515. doi:10.1007/00181-008-0243-9
- Vu, K., Hanafizadeh, P., & Bohlin, E. (2020). ICT as a driver of economic growth: A survey of the literature and directions for future research. *Telecommunications Policy*, 44(2), 101922. doi:10.1016/j.telpol.2020.101922
- Wang, Y., & Bramwell, B. (2012). Heritage protection and tourism development priorities in Hangzhou, China: A political economy and governance perspective. *Tourism Management*, 33(4), 988–998. doi:10.1016/j.tourman.2011.10.010
- Webster, C., & Ivanov, S. (2014). Transforming competitiveness into economic benefits: Does tourism stimulate economic growth in more competitive destinations? *Tourism Management*, 40, 137–140. doi:10.1016/j.tourman.2013.06.003
- Werthner, H., & Klein, S. (1999). *Information technology and tourism: a challenging relationship*. Springer-Verlag Wien. doi:10.1007/978-3-7091-6363-4
- Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31(2), 179–188. doi:10.1016/j.tourman.2009.02.016

Zach, F., Gretzel, U., & Xiang, Z. (2010). Innovation in the web marketing programs of American convention and visitor bureaus. *Information Technology & Tourism*, 12(1), 47–63. doi:10.3727/109830510X12747489979628

Zhang, J., & Danish. (2019). The dynamic linkage between information and communication technology, human development index, and economic growth: Evidence from Asian economies. *Environmental Science and Pollution Research International*, 26(26), 26982–26990. doi:10.1007/11356-019-05926-0 PMID:31313229

KEY TERMS AND DEFINITIONS

Autoregression (AR): Autoregression is a time series model that uses observations from previous time steps as input to a regression equation to predict the value at the next time step. It is a very simple idea that can result in accurate forecasts on a range of time series problems.

Generalized Method of Moments (GMM): Generalized method of moments (GMM) is a generic method for estimating parameters in statistical models. Usually it is applied in the context of semiparametric models, where the parameter of interest is finite-dimensional, whereas the full shape of the data's distribution function may not be known, and therefore maximum likelihood estimation is not applicable.

Gross Domestic Product (GDP): Gross domestic product (GDP) is the standard measure of the value added created through the production of goods and services in a country during a certain period. As such, it also measures the income earned from that production, or the total amount spent on final goods and services (less imports).

Information and Communication Readiness: Refer to one's ability to converse with people through various technologies. Similar to information technology (IT), ICT refers to technology use for regular, everyday tasks: sending an email, making a video call, searching the internet, using a tablet or mobile phone, and more.

Ordinary Least Squares (OLS): Ordinary least squares (OLS) is a type of linear least squares method for estimating the unknown parameters in a linear regression model.

Panel Data: Panel data is a subset of longitudinal data where observations are for the same subjects each time. Time series and cross-sectional data can be thought of as special cases of panel data that are in one dimension only (one panel member or individual for the former, one time point for the latter).

Tourism Industry: The tourism industry, also known as the travel industry, is linked to the idea of people travelling to other locations, either domestically or internationally, for leisure, social or business purposes. It is closely connected to the hotel industry, the hospitality industry and the transport industry, and much of it is based around keeping tourists happy, occupied and equipped with the things they need during their time away from home.

Chapter 13

Website Quality, Perceived Flow, Trust, and Commitment: Developing a Customer Relationship Management Model

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ABSTRACT

Website quality in online business is still exploratory, and despite growth in building a relationship with customer research, various challenges remain in developing a more customer-oriented website. This chapter tackles the dilemma of how to support website inclusivity in the building of a customer relationship, by investigating flow, commitment-trust, and stimulus-organism-response (SOR) theories. The authors applied the covariance-based SEM (structural equation modeling) to examine the structural model. Primary data for the study comes from 500 respondents through an online questionnaire. The study results reveal that website quality certainly influences users' perceived flow, which in turn positively influences customer trust and CRM. Again, collective trust influences customer commitment and CRM. Finally, collective customer commitment positively controls CRM. Based on the study findings, the theoretical implications, practical inferences, and directions for future study are highlighted.

1. INTRODUCTION

With the ever-increasing effect of the internet on consumer lifestyles, the internet has been both apparatus and part of cyberculture (Macek, 2004), but also noteworthy marketing media (Sramova and Pavelka, 2019). Online visitors make up a strong group in their online shopping activities, where they can compare best price and value while shopping on the internet (Hall and Towers, 2017). This is par-

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ticularly imperative for the modern generation, who exercise online purchasing power to articulate their freedom and identity (Gunter and Furnham, 1998; Hartman et al., 200; Sramova and Pavelka, 2019). In current society, online buying has the motive not only of gratifying several primary wishes, such as for clothing, food, water, etc. but it also has become a habit. Thus, as an important communication medium, shopping organizations implement the internet to communicate with their buyers (Akram et al., 2018; Yu and Kim, 2019). Certainly, for modern businesses, a website is a multipurpose apparatus for promoting and selling products and services to consumers, and holding onto these customers in the long term (Jeon and Jeong, 2017; Yu and Kim, 2019). Considering the potential background of online dealing, the online shopping industry aims for websites to be a valuable selling means, and utilizes them to convince their clients' decision-making (Akram et al., 2018). Consequently, a supportive website is a fundamental tool for a business, to both create a center for customers' attention and keep them in the long term. Online organizations carry out repeat business through their loyal clients, they are committed and less conscious of prices (Jeon and Jeong, 2017). A significant number of customers prefer online shopping to off-line purchasing, due to convenience, time-saving, and so on (Mallapragada et al., 2016).

The speedy growth of online consumers and internet acquaintances provides visible authentication that shopping websites are currently the foundation of the contemporary business setting. The universal internet and its expansion through mobile devices and social websites has improved universal e-business to become a unique arena. Consumers buy in great quantity from websites (Cao et al., 2018). Every day, millions of visitor browse websites to find related information regarding products and services (Cao et al., 2018). They regularly spend more time online buying goods and services more than their genuine requirements (Akram et al., 2018).

The Customer Relationship Management (CRM) model is one of the crucial aspects for all businesses including online shopping; the majority of marketers attempt to develop an online CRM system for more successful trading. In fact, after the riot of IT (information technology), CRM rose as an imperative and eye-catching group of marketing activities (Chou and Chen; 2018; Roberts-Lombard, 2020). Cao and Tian (2020) explain that CRM is a significant tool for marketers, enabling businesses to increase key knowledge to humanize their performance. We should also consider the perceived flow of online users: this flow is the users' unconscious situation during their time online; accordingly, they are utterly occupied in that action (Ali, 2016; Hossain et al., 2018; Hossain et al., 2019), and visiting websites is one of their actions (Hsu et al., 2012). Therefore, visiting shopping websites can extend customers' perceived flow, so that they will revisit these markets (Ali, 2016). Many research scholars have emphasized the value of customer flow in shaping customer actions in the online business setting (Ali, 2016; Hsu et al., 2012; Novak et al., 2003).

Morgan and Hunt (1994) mentioned that customer trust is a situation where one has belief in a partner's veracity and consistency. Trust is an imperative part of the continuation of a relationship where the buyer is confident in the business (Chou and Chen, 2018; Crosby et al., 1990). Thus, customer trust helps to build and preserve a strong, long-term CRM (Dehghanpouri et al., 2020; Ou et al., 2015). Relationship commitment is another central facet, defined as the situation when a customer believes in continuing their connection with an organization (Chou and Chen, 2018). The committed buyer allows an added effectual relationship with organizations, since it is more possible to persist in the long term (Morgan and Hunt, 1994; Ou et al., 2012; Ou et al., 2015). Morgan and Hunt (1994) mentioned that buyer commitment is strongly positioned as the ultimate commitment, and is one of the imperative consequences of trust and is a major issue for upholding long-term relationships between buyers and marketers. The relationship

commitment of buyers is present when buyers perceive that the association with the business is necessary, (Chou and Chen, 2018; Ou et al., 2015; Ou et al., 2012; Roberts-Lombard, 2020; Tabrani et al., 2018).

Already many businesses have implemented CRM to generate a sustainable competitive advantage. Thus, CRM has been vital for all organizations in ensuring the optimistic interaction and long-term relationship with the customers (Hassan et al., 2019). Moreover, Marino and Presti (2018) mentioned that throughout the buyer journey, it is extremely imperative to realize the possible benefits of the technologies that can be implemented to engage buyers and enhanced meet buyer desires. Accordingly, Ostovare and Shahraki (2019) described that website is one of the technology-related marketing tools which has become a fundamental feature for keeping the organization alive. Prior studies showed that consumers' flow experience (Ali, 2016; Hossain et al., 2018), trust (Mukherjee and Nath, 2007; Bonsón Ponte et al., 2019), and commitment (Mukherjee and Nath, 2007) play important role in online business. However, researchers have recognized the key forceful factors of CRM such as website quality, perceived flow, customer trust, and commitment, and the interactions between the aforementioned constructs have not yet been investigated. Consequently, to fill the gaps existing in the current business literature, examining the associations between these constructs and their belonging in CRM are the major concern of our present study. Mostly, our study is concerned with six fundamental research questions: (i) How do website dimensions influence customers' flow experiences? (ii) How do website dimensions brunt CRM? (iii) How does customers' perceived flow influence their trust in them and CRM? (iv) How does customer trust influence their commitment and CRM? (v) How does customer commitment influence CRM? and (vi) Which dimension of website quality has the lowest/highest effect on perceived flow, customer trust, customer commitment, and CRM respectively? This study estimates the impact of website quality on customer relationship management (CRM) in the online shopping situation. The authors also investigate the impact of website quality based on perceived flow, trust, and commitment. Consequently, the study develops a model based on SOR and commitment-trust theories to measure the associations between the constructs. This investigation diminishes the knowledge gap between perceived flow, trust, commitment, and CRM under diverse dimensions of website quality. To the best of the authors' knowledge, this current study is the first research outcome to calculate the impact of website quality on CRM and develop a CRM model based on website quality, perceived flow, trust, and commitment.

Following the aforesaid key research issues, we organize our study as follows. The theoretical background, including conceptual framework and hypotheses, is presented in the next part. Subsequently, we describe the methodology in part 3. After that, part 4 presents our detailed results. Lastly, the theoretical implications, practical inferences, and directions for future study are highlighted in the last section.

2. CONCEPTUAL STUDY FRAMEWORK AND REVIEW OF LITERATURE

2.1 Conceptual Study Framework

The study's conceptual framework, based on the stimulus-organism-response (SOR) theory (Ali, 2016; Hossain et al., 2018; Hsu et al., 2012), was developed in the current study. The theory suggests that a stimulus as an original construct changes a person's organismic inner conditions (Ali, 2016; Hossain et al., 2018; Mehrabian and Russell, 1974). This is followed by the organism as a mediator mediating the connection between the individual's stimulus and responses (Ali, 2016; Hsu et al., 2012). Accord-

ingly, the response illustrates the consequence of the stimulus, such as the individual's positive/evading behavior (Ali, 2016; Hossain et al., 2018).

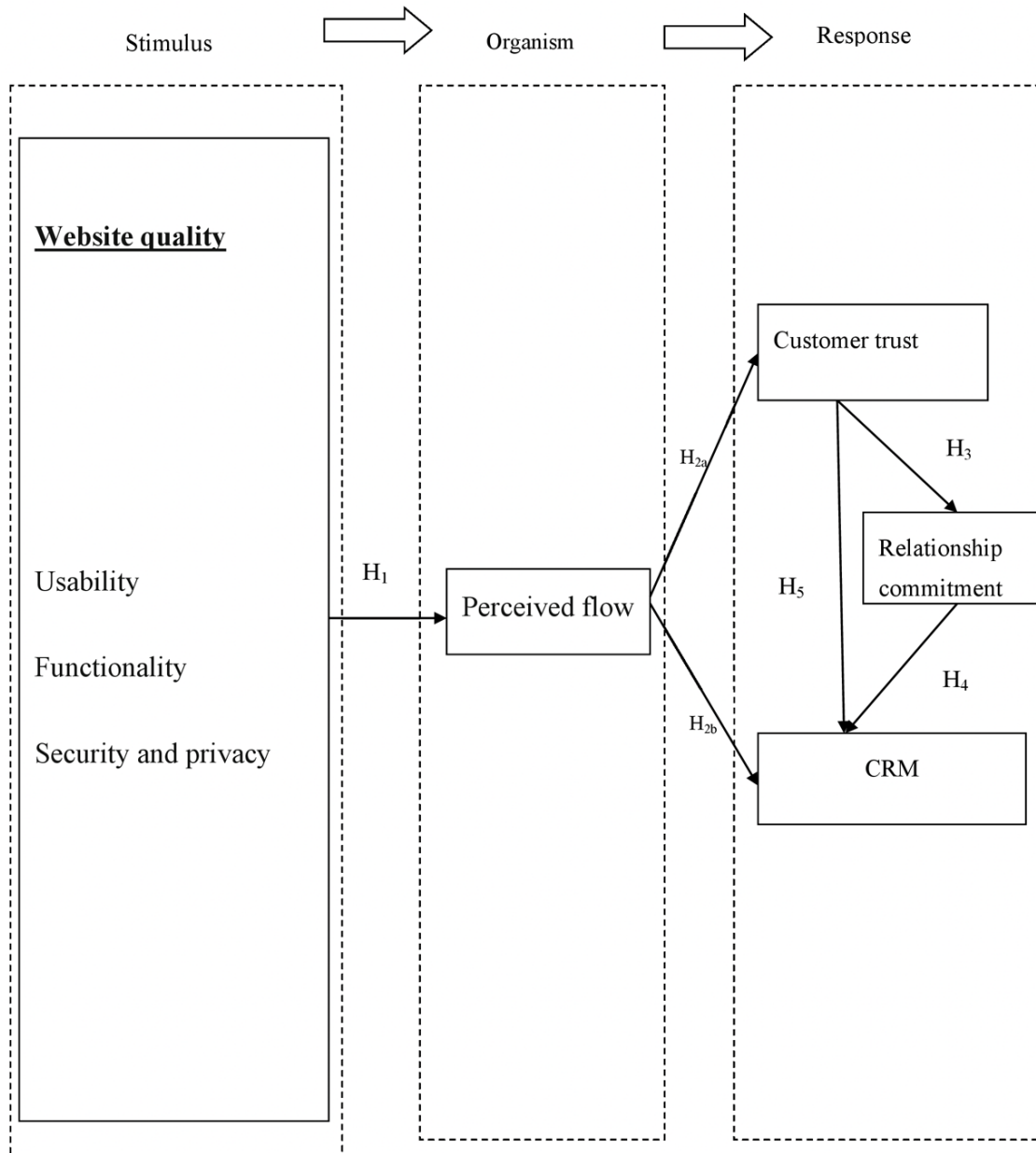
In the online shopping situation, the number of users is rising rapidly, following the increase of different shopping websites. In the current investigation, we assumed that website quality affects the user's internal state. Besides, Ali (2016) explained that perceived flow experience is an affective situation of the buyer, which changes with different circumstances and is influenced by a user's interface with various conditions (Hossain et al., 2018). Additionally, the commitment-trust theory shows that customer's trust and commitment are both essential aspects for developing and maintaining a successful long-term CRM (Chou and Chen, 2018; Dagger and O'Brien, 2010; Morgan and Hunt, 1994). Conversely, trust and commitment are not equivalent, but one depends on the other: customer trust is the ancestor of their commitment. Subsequently for increasing buyer commitment, it is vital first to build trust between buyers and organizations (Chou and Chen, 2018; Dagger and O'Brien, 2010). Additionally, some earlier studies (Ali, 2016; Hossain et al., 2018; Hsu et al., 2012) mentioned that a website can persuade through only customers' perceived flow. Therefore, as a stimulus, since website quality positively influences customers' perceived flow (measured as an organism), our study posits that website quality controls buyer trust and CRM. Furthermore, customer trust completely influences customer commitment and CRM. In turn, buyer commitment again influences CRM (according to commitment-trust theory). Hence in our framework in Figure 1 as a response, customer trust and commitment are outcomes, and CRM is the final response.

2.2 Literature Review

2.2.1 Stimulus: Website Quality

A website is a set of linked web pages, with or without multimedia, usually recognized by a overall domain name known as a URL, published on the web server. The website may be usable through the public internet or a private LAN (local area network). Website quality has received huge interest from practitioners and scholars alike, because of its essential function in growing buyer satisfaction and buying intentions (Ali, 2016). Consumers expect superb service from shopping websites during the purchase of products and services (Jeon and Jeong, 2017; Law and Cheung, 2006). The idea of "website quality" was first described by Jeong et al. (2003). They stated that website quality is the overall supremacy or usefulness of a website in supplying premeditated messages to visitors (Li et al., 2017). Equally, Chang and Chen (2008) modified this, defining it as "customers' estimation of whether a web site's features meet up visitors' needs and reveal the overall superiority of the website" (p. 821) (Ali, 2016). Various scholars (Ali, 2016; Chang and Chen, 2008; Hernandez et al., 2009; Wang et al., 2015) have used diverse measurements to compute website quality. Additionally, Ahn et al. (2007) mentioned that website quality is an intricate, multidimensional factor. Moreover, Au Yeung and Law (2004) explained that website design covers its usability and functionality. Au Yeung and Law (2004) defined the usability of a website as the level of a website's competence and pleasure in its goods/services, and functionality as the scale of information stipulation about the website's products. Conversely, Pavlou et al. (2007) highlighted the consequence of privacy and security to avoid ambiguity in online dealings. Besides, Wang et al. (2015) proposed a three-dimensional model of a website, namely usability, functionality, and security/privacy. Therefore, highlighting the growing weight of usability, functionality, and security/privacy, the current study uses the three-dimensional scale described by Wang et al. (2015), as did earlier studies (Ali, 2016; Ongsakul et al., 2020).

Figure 1. The conceptual framework
Source: Adapted from Ali (2016)



2.2.2 Organism: Customers' Perceived Flow

Flow theory is one of the leading theoretical frameworks for knowing customers' sustained intentions in the field of online marketing (Clementson, 2018; Kaur, 2016). Csikszentmihalyi (1975) explained the flow occurrence of users as a situation of great engagement in the activity. Flow is the condition when users are so immersed in and concentrated on an activity and lose their self-consciousness and their

own sense regarding the time of doing the activity, enjoying each minute, leading them to repeat the feeling (Clementson, 2018; Csikszentmihalyi, 1975; Herrando et al., 2018; Hudock, 2015). The flow situation is demonstrated by the motivated situation for achieving a target/goal, such as singing with a musical instrument or drawing a picture. Flow is recognized when there is a balance between the ability of the participant and the intricacy of the activity (Clementson, 2018).

The state of flow has been extensively implemented in diverse contexts and numerous disciplines (Csikszentmihalyi and Csikszentmihalyi, 1988; Herrando, et al., 2018). The attention to flow theory for e-commerce organizations is the state of customer flow engaged that increases the intention to purchase the product or service, repurchase, and revisit the e-commerce website (Ettis, 2017; Herrando, et al., 2018; Kamis et al., 2010). This situation also develops the loyalty of customers towards the e-commerce website (Herrando, et al., 2018; Huang, et al., 2017), and also increases the intention of customers to spread positive WOM (word of mouth) (O'Cass and Carlson, 2010). E-commerce websites permit customers to concentrate, to enjoy and lose track of time while visiting the website, and connect with other customers or salespeople which allows an occurrence of the flow state (Ettis, 2017; Zhang et al., 2014).

In recent time, many websites of e-commerce organizations have developed various interactive tools for social media (Zhang and Benyoucef, 2016). Socially integrated websites confront organizations, allowing the concentration of customers' affective and cognitive proportions. During the process of visiting the socially integrated website, perceived flow not only influences customers' intentions to purchase, but also boast about their emotional effect (Herrando, et al., 2018).

Consequently, due to the inherent uniqueness of online environments, flow has interactive functions regarding online advertising, website management, and content generated by customers, along with supplementary characteristics (Lin et al., 2016). Another distinctive feature of socially integrated websites is the capability to engross clients easily with the organization, give customers more dynamic actions, and encourage social occurrence through producing and sharing information over social networks (Lin et al., 2016). This interactive atmosphere of highly manipulated flow can give enhanced excitement, sentiment, and tremendously positive feelings to arouse affection and influence upbeat behavioral aspects (Herrando, et al., 2018)

2.2.3 Response: Trust, Commitment, and CRM

2.2.3.1 Commitment-Trust Theory

Morgan and Hunt (1994) developed trust-commitment theories in relationship marketing. They mentioned that both the trust of the customer and relationship commitment of the customer are the crucial mediators in the exchange between members, which fundamentally leads to creating a relational collaboration (Cunningham, 2018; Jeong and Oh, 2017). Basically, commitment-trust theory indicates that both trust and commitment are imperative aspects for developing a successful CRM (Dagger and O'Brien, 2010; Mahmoud et al., 2018; Morgan and Hunt, 1994).

Trust can be defined as the situation when a customer has the assurance of the marketer's integrity and reliability during any activity. On the other hand, customer commitment is sentimental loyalty in continuing an ongoing customer relationship with the marketer, which might be increased by customer trust. Thus trust is the collective assessment of CRM (Cunningham; 2018; Morgan and Hunt, 1994; Ou et al., 2012; Sharma et al., 2017). Additionally, Ou et al. (2015) mentioned that commitment is also a vital component for maintaining CRM.

Most online organizations appreciate that an added shared situation will assist them in employing their assets more efficiently and delivering value to the exaggerated customers. Conway and Swift (2000) mentioned that customer trust and commitment are the two imperative issues for building and maintaining harmonization between diverse factors of success. Adding to the concept of commitment and trust theory, Wilson (1995) identified customer trust as an essential building-block for maintaining a long-term relationship. Miettila and Moller (1990) proposed that customer trust is the prerequisite for building customer commitment. After considering the basis of the commitment-trust theory, Morgan and Hunt (1994) also argued that customer trust builds customer commitment (Dimyati and Subagio, 2018). For example, trusted partners might engage in further commitment and intensify the long-term transactional relationship. Hence, customer trust is based on the shared processes that influence a relationship; customer commitment is further oriented toward the procedures and strategies of marketers towards future relationships (Ferro et al., 2016).

2.2.3.2 CRM

The term CRM can be defined as the managerial process that businesses implement to construct a long-term, sustainable, do-able advantage. Attracting profitable buyers, and building and maintaining a long-term, sustainable relationship is a means of continuing in the competitive marketplace (Hassan et al., 2019; Mekkamol et al., 2013). CRM assists business relations with buyers by combining technologies and dealing practices that seek to recognize an organization's buyers and future prospects (Kim et al., 2003; Venturini and Benito, 2015). Basically, CRM is a blueprint for turning profitable buyers into an asset to remain longer in the business marketplace (Hassan et al., 2019). Additionally, a CRM system involves the company's management connections with its buyers by considering customers' historical interaction data in the organization; this increases and develops the relationship between the company and its customers, with the intention of increasing the buyers' retention rates (Vella and Caruana, 2012). Hassan et al. (2019) indicated that the purpose of using technology in the CRM system is to assist and automate the whole business process, in diverse areas such as customer support, management, sales, marketing, and analysis.

2.3 Hypotheses Development

2.3.1 Website Quality and Customers' Perceived Flow

During online purchasing, both users and organizations coordinate and communicate through sharing and exchanging information over the internet (Shih, 2004). Hence, a website is the key communication medium between consumers and service providers. A fantastic website can result in contented users and convert web-users into customers (Wang et al., 2015). Website quality can assist organizations in converting website visitors into very loyal customers (Ongsakul et al., 2020). Additionally, the dimensions of website quality have become a significant topic within internet-human relationship researches. Many scholars have projected different dimensions to measure website quality. Moreover, prior studies have indicated the positive relationship between the different dimensions of website quality and customers' perceived flow. Hsu et al. (2012) mentioned a major relationship between the diverse features of website quality and customers' flow experience. Subsequently, Ali (2016) found that different dimensions, namely, usability, functionality, and the security and privacy of website quality were positively

associated with perceived flow in the hotel industry. This finding was also supported by Ongsakul et al. (2020). Gao and Bai (2014) described it as when users are more occupied in the dealings on the website, they are more likely to lose self-awareness and go into a flow state. Hence, our study also proposes that online consumers' positive perceptions of the usability, functionality, and the security and privacy of website quality, as a whole, will lead to their connection in the shopping website. Therefore, to achieve consumers' flow experience, marketers should enlarge users' positive perceptions of the quality of the shopping website. From the current argument and focus on the online shopping context, we have developed the subsequent hypotheses:

H1a: The usability of website quality has a positive effect on customers' perceived flow

H1b: The functionality of website quality has a positive effect on customers' perceived flow

H1c: The security and privacy of website quality has a positive effect on customers' perceived flow.

2.3.2 Customers' Perceived Flow, Customer Trust and CRM

In the service context, consumer-website interactions generate the prospect of positive occurrences that can increase trust, brand equity, and ultimately lead to the building of a long-term relationship (Zhou, 2019). In the online context, flow diminishes the risk of unwanted effects, such as an avoidance of visiting a marketer's website and harmful approaches of the customer. Hampton-Sosa and Koufaris (2005) observed the consequence of an organization's website on trust. Their observations revealed that perceived flow is an important issue of trust. They also noted that the flow experience has a major impact on the consumer's intention to visit the same website in the near future. Bilgihan et al. (2015) proposed that flow impacts the online shopping behavior of a customer, including future buying intentions and relationship. Similarly, Rose et al. (2012) reported that perceived flow was positively allied to intentions of buying a product and maintaining a relationship (p. 942). Bilgihan et al. (2015) mentioned that e-commerce continuously uses persuasive tools of online marketing to provide the flow experience for building a relationship in the online context.

Zhou (2019) indicated that users who experience perceived flow through online shopping activities from a website are more prone to revisit a marketer's website and have a high purchasing rate, signifying a sustainable relationship between them. Earlier studies also mentioned that customers' perceived flow through the website (Ali, 2016; Hossain et al., 2018) completely influences customer trust and CRM (Hossain et al., 2018). Accordingly, the perceived flow experience during shopping will assist in increasing transactions and intentions to build a long-term relationship (Bilgihan et al., 2015; Zhou, 2019).

Based on our arguments, we have developed the two hypotheses for the online shopping context:

H2a: Customers' perceived flow positively influences customer trust.

H2b: Customers' perceived flow positively influences CRM.

2.3.3 Customer Trust and Commitment of Customer

Customer trust toward marketers could be seen as an antecedent of customer commitment, so customer trust notably influences customer commitment (Mahmoud et al., 2018; Wu et al., 2012). Ou et al. (2015) explained that commitment is an emotional reliability in continuing the current relationship with marketers, and this could be modified by the trust of customer—that is, the cumulative assessment of satisfaction.

So far, numerous studies on relationship either directly or indirectly supported the connection between customer trust and customer commitment (Mahmoud et al., 2018; Wu et al., 2012, 2015). Kashef et al. (2018) mentioned a noteworthy and positive connection between trust and commitment in the context of high-tech industry. Wu et al. (2012) found that the levels of trust and commitment are positively connected in the perspective of the distribution system (Mahmoud et al., 2018). Cegarra-Navarro (2018) also showed that customer trust and customer commitment in financial institutions are positively connected.

Therefore, Lewicka and Krot (2015) mentioned that all kinds of trust lead to an emotional customer commitment because jointly they generate an attractive working situation for them. Hennig-Thurau et al. (2002) found that customer trust directly affects customer commitment in three diverse service industries; they also explained that customer trust and commitment are positively related. Hence, we raise the following hypothesis:

H3: Customer trust positively affects customer commitment.

2.3.4 Customer Commitment and CRM

Elbeltagi and Agag (2016) defined online commitment as a customer's wish to maintain a relationship with the same online marketer. Akrouf and Nagy (2018) also described commitment as a customer's psychological affection for the providers of an online service, besides their keenness to uphold the relationship between consumer and organization. Customer commitment to the provider of the online service is a wish to continue a durable relationship with the organization through an emotional attachment.

Allen and Meyer (1990) recognized three aspects of commitment within an organizational structure: Emotional, based on the evaluation and recognition regarding the organization's service; instrumental, or the continuance of commitment leading from the estimate of switching costs, or connecting in an affiliation with the same provider; and normative, indicating the sense of ethical responsibility to continue the relationship with the provider. The emotional part, as characterized by emotional affection, is one of the extensively used features in the earlier study that seeks to elucidate customer commitment to a service provider as an aspiration to continue a durable relationship (Akrouf and Nagy, 2018; Morgan and Hunt, 1994). When customers like the service provider, they feel an emotional commitment towards it (Akrouf and Nagy, 2018). Moreover, Ou et al. (2015) revealed that customer commitment is essential in the exchange of relationship achievement, and is a strong sign of future involvement. Commitment exists when customers recognize that the relationship is essential (Ou et al., 2012). Hence, we raise the following hypothesis:

H4: Customer commitment positively affects CRM.

2.3.5 Customer Trust and CRM

Customer trust is a complicated construct that has emotional and rational aspects (McAllister, 1995), and both aspects are essential for maintaining and building a long-term CRM (Roy et al, 2018). Emotional trust increases consumer interactions, which can generate deep affective bonds, if service providers confirm concern and care regarding customer needs (Johnson & Grayson, 2005). The emotional trust of a customer is an outcome arising from experiences, sensory cues, and personality while connecting with an organization.

The rational factor of trust (cognitive trust), on the other hand, is entrenched in an individual's awareness and understanding of the capabilities of a service provider (Roy et al., 2015). In service relationships, the rational factor is a consumer's self-confidence or keenness to rely on the service provider (Johnson & Grayson, 2005). The rational factor is the result of mutual experiences, values, and information exchange between consumer and marketer, that reduce ambiguity in the relationship (Roy et al., 2018).

However, in the service encounter, customer trust depends equally on the customer's present and past experience (Dowell et al., 2015). Customer trust has a crucial role in building and maintaining a long-term, sustainable relationship between marketers and customers (Dehghanpouri et al., 2020; Dimyati and Subagio, 2018). Customer trust arises when one party believes in the partner's veracity and consistency. Trust is a powerful contributor to the purpose of building a relationship (Dimyati and Subagio, 2018). Basically, trust upholds the state of a relationship, since customers habitually have low concerns about increasing a relationship with the organizations (Dimyati and Subagio, 2018). Moreover, trust in the service provider leads to fondness and a desire to preserve a long-term sustainable relationship (Chou and Chen, 2018; Dowell et al., 2015). Consequently, the following hypothesis was developed:

H5: Customer trust positively impacts on CRM.

3. METHODOLOGY

Our study focuses on online shopping contexts because one of the foremost factors of this study is website quality, and another key factor is customer relationship. We selected the research context of Bangladesh because of the recent setting of the online sector. As a country, Bangladesh might be chosen for the rapid rise in the number of internet visitors and online shoppers. Following the research approaches adopted by Ali (2016) and Ongsakul et al. (2020), we included three dimensions of website quality, namely, usability, functionality, and security and privacy. A total of 3300 online-based questionnaires were distributed to respondents through email and social media such as Facebook Messenger, Whatsapp, and WeChat. We also shared our link on different groups of social networks. From the all sources, we received 560 responses. After removing 60 responses due to notably incomplete responses or consistently identical reactions for all items, our study obtained a total sample of 500 observations used to check the study model. Our questionnaire consisted of three key parts. The first section was developed to find out the online shopping experiences of respondents. The subsequent part was designed to know the demographic profile of our respondents. Table 1 shows the profile for the study sample. Out of the final sample of 500, 260 (52%) were female and 240 (48%) were male. The highest (38%) age group was between 28 and 37 years. The majority of our respondents had college-level education (37.6%) and most of them were unemployed (33.4%). The largest number of samples had internet experience above 8 years (38.8%) and spent more than 15 hours per week on it (37.8%).

The final part was developed to capture the responses of our key questions concerning our study model. All constructs of this study were measured, with several items adapted from diverse earlier period studies. For determining website quality, five items were used to determine usability and functionality, and three items were used to measure security and privacy were adapted from Ongsakul et al. (2020) and Ali (2016). Three items were used to measure perceived flow, trust, and relationship commitment, correspondingly. Items of perceived flow were adapted from Ali (2016) and items of trust and commitment were adapted from Chou & Chen (2018). Lastly, CRM was measured with four items, adapted

from Marino and Presti (2018). We measured all items using five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). Before collecting final data, we conducted a pre-test ($N = 17$) and a pilot test ($N = 76$). Based on pre- and pilot test, slight modifications were made.

Table 1. Profile of respondents

Variable	Number	Percentage (%)
Gender		
Female	260	52
Male	240	48
Age		
18-27	180	36
28-37	190	38
38-47	110	22
above 47	20	4
Education level		
High school or below	57	11.4
College	188	37.6
Graduate school or above	255	51
Profession		
Public job	86	17.2
Private job	120	24
Business profession	127	25.4
Unemployed (e.g., student, housewife, and retired)	167	33.4
Internet experience		
1-4 years	140	28
5-8 years	166	33.2
Above 8 years	194	38.8
Internet browsing time in hours per week		
0-5	49	9.8
6-9	110	22
10-15	152	30.4
Above 15	189	37.8

4. DATA ANALYSIS

Firstly, we tested descriptive statistics, reliability, and validity to confirm our data quality. We measured Cronbach's α to examine the consistency of our study constructs. Table 3 shows that all the reliability coefficients of our study constructs surpassed the lowest cut-off value (0.7) as supported by Nunnally (1978). Table 2 confirms that there were no multivariate outliers based on the mean and standard devia-

tions. Consequently, all the evidence confirmed satisfactory reliability. We also used AVE (the average variance extracted), reliability, and CR (composite reliability) of all constructs under FLs (factor loadings) to compute the convergent validity of our study model (Hair et al., 2013; Hossain et al., 2018; Shih 2004). After analyzing, we found that all values of FL beat the smallest recommended value (0.7), as suggested by Fornell and Larcker (1981). CR values (scale of the construct pointers) also showed that the latent construct were higher than the suggested lowvalue of 0.7 (Hair et al., 2013; Hossain et al., 2018) and AVE values, which confirmed that the common variance in the indicators considered by the latent construct were higher than the minimum suggested value of 0.5 (Hair *et al.*, 2013). Additionally, the result confirms that there were no multivariate outliers based on the mean and standard deviations.

Subsequently, Table 4 shows that the values of the squared inter-correlations between our study constructs do not hammer the explained average variance's square root. These squared inter-correlation values specify the shared variance. Hence, our study also justified the discriminant validity.

The results from CB-SME (covariance-based structural-equation-modeling) verified a Chi-square value of 729.17, which is suitable for the 346 degrees of freedom directed to the ratio of 2.10 between the Chi-square value and degree of freedom, which is a smaller ratio than the maximum recommended value of 5 as suggested by Bagozzi and Yi (1988). Additionally, all our indices were within the recommended values as suggested by Bagozzi and Yi (1988). Thus, our indices signified a good model fit (GFI = 0.84, AGFI = 0.86, NFI = 0.94, CFI = 0.95, NNFI = 0.92, IFI = 0.93, PNFI = 0.853, RMSEA = 0.058).

The standardized estimate of path coefficients are presented in Figure 2, where the coefficients of all paths are significant. These consequences show that all the dimensions of website quality were positively associated with the customers' perceived flow, accordingly providing confirmation of our hypotheses H1a to H1c; these consequences gives support to the study of Hsu et al. (2012), Wang et al. (2015), Ali (2016), Hossain et al. (2019), and Ongsakul et al. (2020). According to the results of prior studies such those of Zhou (2019), Hampton-Sosa and Koufaris (2005), Rose et al. (2012), and Bilgihan et al. (2015), we also showed that, in the online shopping context, customers' perceived flow positively connected with customer trust and CRM, to provide support for our hypotheses H2a and H2b.

Furthermore, customer trust in the online shopping context was positively connected with commitment; as a consequence, hypothesis H3 was clearly supported; this consequence is like those of Ou et al. (2015), Ou et al. (2012), Kashef et al. (2018), Mahmoud et al. (2018), Cegarra-Navarro (2018), Lewicka and Krot (2015), and Hennig-Thurau et al. (2002). Additionally, the results of precedent studies such as Chou and Chen (2018), Tabrani et al. (2018), Rauyyruen and Miller (2007), Lipiäinen (2015), Spekman (1988), Roberts-Lombard (2020), and Morgan and Hunt (1994) mentioned that customer trust is positively associated with customer commitment. Accordingly, our findings verify the predicted hypothesis H4. Finally, customer trust had a positive effect on CRM, thus the last hypothesis of this study, H5, was supported, just as in past few studies by Dowell et al. (2015), Spekman (1988), Dimiyati and Subagio (2018), Hartmann et al. (2015), Morgan and Hunt (1994), and Mpinganjira et al. (2017). Table 6 shows the summary of hypotheses testing results.

Strangely, we found that the latent construct security and privacy dimension of website quality presented the top coefficient in shaping customers' perceived flow (0.301). Following that, the latent constructs of functionality (0.211) presented the strongest influence, then usability (0.132) for determining customers' flow experiences. We also noticed that both customer trust (0.273) and commitment (0.221) played an extremely stronger function in determining the CRM than customers' perceived flow (0.177). However, the perceived flow powerfully associated with trust (0.193).

Table 2. Reliability and factor loadings

Variables	Items	Mean	SD	Factor loadings	Composite reliability (CR)	Average variance extracted (AVE)
Usability					0.84	0.70
	UST1	4.50	0.32	0.84		
	UST2	4.65	0.33	0.79		
	UST3	4.06	0.25	0.81		
	UST4	4.55	0.31	0.85		
	UST5	4.67	0.56	0.87		
Functionality					0.81	0.60
	FTY1	4.70	0.25	0.82		
	FTY2	4.52	0.27	0.79		
	FTY3	4.68	0.19	0.74		
	FTY4	4.59	0.23	0.76		
	FTY5	4.56	0.36	0.77		
Security and privacy					0.83	0.62
	SAP1	4.80	0.15	0.79		
	SAP2	4.44	0.39	0.82		
	SAP3	3.79	0.67	0.76		
Perceived flow					0.86	0.65
	PFW1	3.75	0.67	0.82		
	PFW2	4.80	0.17	0.79		
	PFW3	4.62	0.23	0.81		
Trust					0.88	0.72
	TUT1	4.30	0.39	0.83		
	TUT2	4.25	0.45	0.87		
	TUT3	4.57	0.19	0.85		
Commitment					0.85	0.58
	CMT1	4.67	0.23	0.79		
	CMT2	4.80	0.19	0.75		
	CMT3	4.67	0.34	0.74		
CRM					0.88	0.70
	CRM1	4.80	0.13	0.86		
	CRM2	4.61	0.23	0.83		
	CRM3	4.52	0.18	0.82		
	CRM4	4.57	0.23	0.84		

(Source: AMOS output)

Website Quality, Perceived Flow, Trust, and Commitment

Table 3. Measurement items for constructs

Construct	Item	Based on
Usability (reliability $\alpha = 0.79$)	UST1: The shopping website had a noticeable language UST2: The shopping website was quick to load UST2: The shopping website had accessible layout UST3: The shopping website had efficient information UST4: Graphics harmonized with the text on the shopping website UST5: The shopping website had straightforward navigation system (e.g., site map or menu)	Ongsakul et al., 2020; Ali, 2016
Functionality (reliability $\alpha = 0.72$)	FTY1: The shopping website provided product information FTY2: The shopping website provided service information FTY3: The shopping website provided special offers/ promotions-related information FTY4: The shopping website provided pricing information FTY5: The shopping website had a simple purchase and payment navigation system	
Security and privacy (reliability $\alpha = 0.85$)	SAP1: The shopping website had a privacy policy regarding purchasers' personal information SAP2: The shopping website provided a secure online payment system SAP3: The shopping website provided information regarding third-party recognition	
Perceived flow (reliability $\alpha = 0.85$)	PFW1: I felt fully captivated during browsing the shopping websites PFW1: Time passed very swiftly while visiting the shopping website PFW1: For me, nothing seemed to happen while browsing the shopping website	Ali (2016)
Trust (reliability $\alpha = 0.87$)	TUT1: The shopping organization delivered a feeling of trust through its website TUT2: I trust the website of the shopping organization TUT3: The online shopping organization gave me a feeling of reliability	Chou & Chen (2018)
Commitment (reliability $\alpha = 0.79$)	CMT1: The shopping website has lots of special meaning for me CMT2: I felt proud of being their client CMT3: I have a strong sense of belonging to this shopping organization	Chou & Chen (2018)
CRM (reliability $\alpha = 0.85$)	CRM1: I have a greater feeling about the online shopping organization CRM2: I want to obtain products from the website of this shopping organization in future CRM3: I feel pleased while getting information from shopping organization CRM4: I want to maintain the relationship with the online shopping organization as long as is feasible	Marino and Presti, (2018)

Table 4. Squared inter-correlation between the constructs

		1	2	3	4	5	6	7
1	Usability	0.75						
2	Functionality	0.32	0.79					
3	Security and privacy	0.33	0.24	0.82				
4	Perceived flow	0.05	0.32	0.21	0.76			
5	Trust	0.07	0.08	0.25	0.23	0.87		
6	Commitment	0.05	0.04	0.02	0.21	0.22	0.77	
7	CRM	0.24	0.13	0.08	0.06	0.31	0.06	0.79

All correlation values are significant at 0.01 level

Table 5. Direct, indirect and total effects—estimates

	Usability	Functionality	Security and privacy	Perceived flow	Trust	Commitment
Direct effect calculation						
Perceived flow	0.132	0.211	0.301			
Trust	-	-	-	0.193		
Commitment	-	-	-	-	0.212	
CRM	-	-	-	0.112	0.241	0.221
Indirect effect calculation						
Perceived flow	-	-	-	-	-	-
Trust	0.072	0.021	0.113	-	-	-
Commitment	0.021	0.004	0.043	0.060	-	-
CRM	0.123	0.031	0.042	0.065	0.032	
Total effect calculation						
Perceived flow	0.132	0.211	0.301	-	-	-
Trust	0.072	0.021	0.113	0.193	-	-
Commitment	0.021	0.004	0.043	0.060	0.212	-
CRM	0.123	0.031	0.042	0.177	0.273	0.221

All correlation values are significant at 0.01 level
(Source: AMOS output)

Table 6. Summary of hypotheses testing

Hypotheses		Results
H1a:	The usability of website quality has a positive effect on customers' perceived flow	Supported
H1b:	The functionality of website quality has a positive effect on customers' perceived flow	Supported
H1c:	The security and privacy of website quality has a positive effect on customers' perceived flow.	Supported
H2a:	Customers' perceived flow positively influences customer trust.	Supported
H2b:	Customers' perceived flow positively influences CRM.	Supported
H3:	Customer trust positively affects customer commitment.	Supported
H4:	Customer commitment positively affects CRM.	Supported
H5:	Customer trust positively impacts on CRM.	Supported

5. DISCUSSION

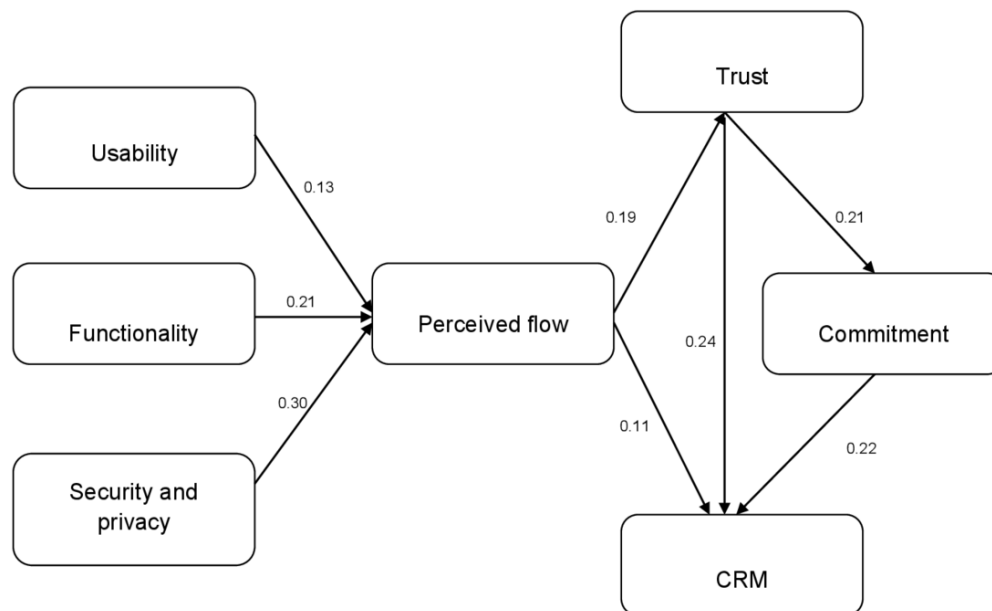
Table 5 provides strong evidence to support our study framework, by indicating both the direct and indirect effects between variables. Based on that, we noticed that diverse dimensions of website quality affected customers' perceived flow, and in consequence, they influenced both trust and CRM. Besides, our results showed that customer trust influenced customer commitment and CRM, and in turn, customer commitment influenced CRM. The relationships between these variables are discussed below.

Our results confirmed that all the dimensions of website quality influenced the perceived flow state, and in turn, influenced customer commitment and CRM. The total impact of usability on customers'

perceived flow, customer trust, customer commitment, and CRM were 0.132, 0.072, 0.021, and 0.123, correspondingly, accordingly presenting the definite influence of usability, not only on the customers' perceived flow but also in determining CRM. The total impact of functionality in these constructs was 0.211, 0.021, 0.004, and 0.031, respectively. Also, our results for the security and privacy construct showed the following total effects: 0.301 for customers' perceived flow, 0.113 for customer trust, 0.043 for customer commitment, and 0.042 for CRM, thus indicating that security and privacy impacted CRM. Overall, we can report that all the dimensions of website quality presented a significant effect on the customers' perceived flow, customer trust, customer commitment, and CRM.

Figure 2. Results of structural modeling analysis

χ^2 (Chi square): 729.17; df (Degrees of freedom): 346; GFI (Goodness of fit index): 0.84; $AGFI$ (Adjusted goodness of fit index): 0.86; CFI (Confirmatory fit index): 0.95; NFI (Normed fit index): 0.94; $NNFI$ (Non-normed fit index): 0.92; $PNFI$ (Parsimony-normed fit index): 0.853; IFI (Incremental fit index): 0.93; $RMSEA$ (Root mean square error of approximation): 0.058.



6. IMPLICATIONS

In the present study, we developed a CRM model based on website quality, customers' perceived flow, trust, and commitment, as an important contribution in the field of management and marketing. Additionally, our model showed the impact level between website quality, customers' perceived flow, customer trust, customer commitment, and CRM, which presents a valuable contribution in the theoretical field of online marketing, relationship marketing, CRM, and consumer behavior.

Also, our findings are practically significant for both online shopping organizations and customers. Particularly, results from hypotheses H1 to H5 expose some practical applications. First, a better-perceived flow, such as increased concentration through a website or the customer losing self-consciousness, probably creates consumer belief, adds to confidence in the integrity and capabilities of the online marketers, and customers efforts to maintain a long-term relationship with shopping organizations. Second,

greater customer trust towards website quality, such as integrity and reliability of services, leads in turn to increased customer trust, which will influence greater customer commitment and better relationships. Last, greater customer commitment, such as greater emotional loyalty or reduced anxiety toward online marketing, leads to maintaining interaction with the organization, which ultimately influences CRM. Additionally, the outcome suggests that online marketers need to develop and maintain website quality in a way that fosters perceived flow, trust, and commitment. By understanding the current study results, online marketers could develop better website quality and coordinate the multiple services delivered through the website. This knowledge could also contribute to improving the relationship for the long term.

Furthermore, our research has an important impact in recognizing consumers' purchase intentions and behavior regarding website quality. In the current business period, the number of shopping websites is growing quickly, and marketers are trying to build and maintain long-term sustainable relationships with their customers. In this circumstance, our findings are also significant for online marketers, because the current study will help them to identify suitable techniques to build and maintain sustainable relationships with customers. Therefore, the implications of this research extend to both the practical and scientific sides, with a particular contribution of guiding better operational strategies for the online shopping sector. As a result, these benefits produced by customers' perceived flow, trust, and commitment are essential for marketers to develop appropriate marketing strategies for building and maintaining long-term relationships. Hence, marketers need to feel regarding long-term sustainable relationships with customers that can amplify enjoyment, appreciation, and familiarity. The results of this current study show that website quality only influences CRM through customers' perceived flow, trust, and commitment. In other words, organizations should not anticipate an instant outcome from any website, but the result may happen later due to increasing customers' flow experience, trust, and affiliation commitment. Finally, our study helps consumers to understand their own shopping behavior online.

7. LIMITATIONS AND FUTURE RESEARCH

Even though our findings provide numerous major implications, there are still a few limitations needing to be tackled in future studies. First, we adopted only three dimensions of website quality i.e., usability, functionality, and security and privacy. Conversely, other important aspects of website quality, such as service quality and information, and system quality, are not measured. Thus, future research could include these in their models. Second, we measured the online flow construct with merely three items, due to its multi-contextual nature. Further research could entail a closer examination of customers' perceived flow. Third, future studies could embrace some affective features in their research frameworks, such as enjoyment, perceived excitement, and customer satisfaction, to estimate the effect of website quality on CRM. Fourth, due to the dissimilarity of frequent and irregular online shoppers, further studies could discern and analyze their thought processes to calculate the impact of website quality on CRM. Lastly, our proposed model focused on website quality, trust, relationship commitment, and CRM. Conversely, additional factors could also be useful to measure as additional mediating factors, such as perceived playfulness, perceived challenge, telepresence, customer satisfaction, and purchase intention. Thus, we recommend further research that could incorporate more appealing and mediating aspects to expand our study model.

8. CONCLUSION

CRM has become an imperative business practice in fostering customer retention. The essence of CRM is to build and maintain a long-term, sustainable relationship with customers, in order to decrease customers' changing habit and as a means of maintaining customer retention. The study therefore evaluated the direct and indirect associations between diverse dimensions of website quality, customers' perceived flow, customer trust, customer commitment, and CRM in the shopping sector. Consequently, we elucidated numerous major issues regarding the impact of website quality on customer trust, customer commitment, and CRM mediated by customers' perceived flow. Maintaining website quality and CRM in online business is a serious issue in modern business because they can swiftly boost profit levels. Our study showed that website quality can positively influence the perceived flow, trust, and commitment of customers, and that they positively and jointly influence CRM.

We also suggest that website quality influences customers' perceived flow, the latent construct which indicates whether users feel fully captivated, nothing seeming to matter for them, and time passing very swiftly while visiting a shopping website. In turn, customers' perceived flow influences customer trust (having a sense of reliability and trustworthiness), and subsequently customer trust influences their commitment, indicating that the online shopping business possesses many special connotations for them: pride in being their client and a strong sense of belonging to the shopping organization. Finally, customers' perceived flow, trust, and commitment mutually influence CRM, showing that these customers have a stronger feeling about the online shopping organization, wanting to buy products from the website, feeling pleased while getting information, and wanting to maintain the relationship with the online shopping organization as long as possible.

REFERENCES

- Ahn, T., Ryu, S., & Han, I. (2007). The impact of web quality and playfulness on user acceptance of online retailing. *Information & Management*, 44(3), 263–275. doi:10.1016/j.im.2006.12.008
- Akram, U., Hui, P., Kaleem Khan, M., Tanveer, Y., Mehmood, K., & Ahmad, W. (2018). How website quality affects online impulse buying: Moderating effects of sales promotion and credit card use. *Asia Pacific Journal of Marketing and Logistics*, 30(1), 235–256. doi:10.1108/APJML-04-2017-0073
- Akrout, H., & Nagy, G. (2018). Trust and commitment within a virtual brand community: The mediating role of brand relationship quality. *Information & Management*, 55(8), 939–955. Advance online publication. doi:10.1016/j.im.2018.04.009
- Ali, F. (2016). Hotel website quality, perceived flow, customer satisfaction and purchase intention. *Journal of Hospitality and Tourism Technology*, 7(2), 213–228. doi:10.1108/JHTT-02-2016-0010
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1–18. doi:10.1111/j.2044-8325.1990.tb00506.x
- Au Yeung, T. & Law, R. (2004). Extending the modified heuristic usability evaluation technique to chain and independent hotel websites. *International Journal of Hospitality Management*, 23(3), 307–313.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. doi:10.1007/BF02723327

Bilgihan, A., Nusair, K., Okumus, F., & Cobanoglu, C. (2015). Applying flow theory to booking experiences: An integrated model in an online service context. *Information & Management*, 52(6), 668–678. doi:10.1016/j.im.2015.05.005

Bonsón Ponte, E., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286–302. Advance online publication. doi:10.1016/j.tourman.2014.10.009

Cao, G., & Tian, N. (2020). Enhancing customer-linking marketing capabilities using marketing analytics. *Journal of Business and Industrial Marketing*, 35(7), 1289–1299. Advance online publication. doi:10.1108/JBIM-09-2019-0407

Cao, Y., Ajjan, H., & Hong, P. (2018). Post-purchase shipping and customer service experiences in online shopping and their impact on customer satisfaction: An empirical study with comparison. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 400–416. doi:10.1108/APJML-04-2017-0071

Cegarra-Navarro, J., Jiménez-Jiménez, D., García-Pérez, A., & Giudice, M. D. (2018). Building affective commitment in a financial institution through an ambidexterity context. *European Business Review*, 30(1), 2–25. doi:10.1108/EBR-07-2016-0093

Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online Information Review*, 32(6), 818–841. doi:10.1108/14684520810923953

Chou, S., & Chen, C. (2018). The influences of relational benefits on repurchase intention in service contexts: The roles of gratitude, trust and commitment. *Journal of Business and Industrial Marketing*, 33(5), 680–692. doi:10.1108/JBIM-08-2017-0187

Clementson, C. J. (2018). A mixed methods investigation of flow experience in the middle school instrumental music classroom. *Research Studies in Music Education*. Advance online publication. doi:10.1177/1321103X18773093

Conway, T., & Swift, J. S. (2000). International relationship marketing: The importance of psychic distance. *European Journal of Marketing*, 34(11/12), 1391–1414. doi:10.1108/03090560010348641

Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal of Marketing*, 54(3), 68–82. doi:10.1177/002224299005400306

Csikszentmihalyi, M. (1975). *Beyond Boredom and Anxiety*. Jossey-Bass.

Csikszentmihalyi, M., & Csikszentmihalyi, I. S. (1988). *Optimal Experience: Psychological Studies of Flow in Consciousness*. Cambridge University Press. doi:10.1017/CBO9780511621956

Cunningham, P. (2018). Drivers of Performance of Privately Owned, Rapid-Growth Firms: A Reconceptualization of the Trust? Commitment Model of Relationship Marketing. *Innovation and Strategy*, 15, 10–283. doi:10.1108/S1548-643520180000015013

- Dagger, T. S., & O'Brien, T. K. (2010). Does experience matter? Differences in relationship benefits, satisfaction, trust, commitment and loyalty for novice and experienced service users. *European Journal of Marketing*, 44(9/10), 1528–1552. doi:10.1108/03090561011062952
- Dehghanpouri, H., Soltani, Z., & Rostamzadeh, R. (2020). The impact of trust, privacy and quality of service on the success of E-CRM: The mediating role of customer satisfaction. *Journal of Business and Industrial Marketing*, 35(11), 1831–1847. Advance online publication. doi:10.1108/JBIM-07-2019-0325
- Dimiyati, M., & Subagio, N. A. (2018). Customer trust as mediator in the creation of customer relationship intention. *Management & Marketing. Challenges for the Knowledge Society*, 13(1), 710–729. doi:10.2478/mmcks-2018-0001
- Dowell, D., Morrison, M., & Heffernan, T. (2015). The changing importance of affective trust and cognitive trust across the relationship lifecycle: A study of business-to-business relationships. *Industrial Marketing Management*, 44, 119–130. doi:10.1016/j.indmarman.2014.10.016
- Elbeltagi, I., & Agag, G. (2016). E-retailing ethics and its impact on customer satisfaction and repurchase intention: A cultural and commitment-trust theory perspective. *Internet Research*, 26(1), 288–310. doi:10.1108/IntR-10-2014-0244
- Ettis, S. A. (2017). Examining the relationships between online store atmospheric color, flow experience and consumer behavior. *Journal of Retailing and Consumer Services*, 37, 43–55. doi:10.1016/j.jretconser.2017.03.007
- Ferro, C., Padin, C., Svensson, G., & Payan, J. (2016). Trust and commitment as mediators between economic and non-economic satisfaction in manufacturer-supplier relationships. *Journal of Business and Industrial Marketing*, 31(1), 13–23. doi:10.1108/JBIM-07-2013-0154
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *JMR, Journal of Marketing Research*, 18(1), 39–50. doi:10.1177/002224378101800104
- Gao, L., & Bai, X. (2014). An empirical study on continuance intention of mobile social networking services: Integrating the IS success model, network externalities and flow theory. *Asia Pacific Journal of Marketing and Logistics*, 26(2), 168–189. doi:10.1108/APJML-07-2013-0086
- Gunter, B., & Furnham, A. (1998). *Children as Consumers: A Psychological Analysis of Young People's Market* (1st ed.). Routledge. doi:10.4324/9780203272947
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*. Sage Publications.
- Hall, A., Towers, N., & Shaw, D. R. (2017). Understanding how Millennial shoppers decide what to buy: Digitally connected unseen journeys. *International Journal of Retail & Distribution Management*, 45(5), 498–517. doi:10.1108/IJRDM-11-2016-0206
- Hampton-Sosa, W., & Koufaris, M. (2005). The Effect of Web Site Perceptions on Initial Trust in the Owner Company. *International Journal of Electronic Commerce*, 10(1), 55–81. doi:10.1080/10864415.2005.11043965

- Hartman, J. B., Gehrt, K. C., & Watchravesringkan, K. (2004). Re-examination of the concept of innovativeness in the context of the adolescent segment: Development of a measurement scale. *Journal of Targeting, Measurement & Analysis for Marketing*, 12(4), 353–365. doi:10.1057/palgrave.jt.5740122
- Hassan, S. H., Mohamed-Haniba, N. M., & Ahmad, N. H. (2019). Social customer relationship management (s-CRM) among small- and medium-sized enterprises (SMEs) in Malaysia. *International Journal of Ethics and Systems*, 35(2), 284–302. doi:10.1108/IJOES-11-2017-0192
- Hennig-Thurau, T., Gwinner, K. P., & Gremler, D. D. (2002). Understanding relationship marketing outcomes an integration of relational benefits and relationship quality. *Journal of Service Research*, 4(3), 230–247. doi:10.1177/1094670502004003006
- Hernandez, B., Jimenez, J., & Martin, M. J. (2009). Key website factors in e-business strategy. *International Journal of Information Management*, 29(5), 362–371. doi:10.1016/j.ijinfomgt.2008.12.006
- Herrando, C., Jimenez-Martinez, J., & Martin de Hoyos, M. J. (2018). Surfing or flowing? How to retain e-customers on the internet. *Spanish Journal of Marketing - ESIC*, 22(1), 2–21. doi:10.1108/SJME-03-2018-006
- Hossain, M. S., Zhou, X., & Rahman, M. F. (2018). Examining the impact of QR codes on purchase intention and customer satisfaction on the basis of perceived flow. *International Journal of Engineering Business Management*, 10, 1–11. doi:10.1177/1847979018812323
- Hossain, M. S., Zhou, X., & Rahman, M. F. (2019). Customer satisfaction under heterogeneous services of different self-service technologies. *Management & Marketing. Challenges for the Knowledge Society*, 14(1), 90–107. doi:10.2478/mmcks-2019-0007
- Hsu, C. L., Chang, K. C., & Chen, M. C. (2012). The impact of website quality on customer satisfaction and purchase intention: Perceived playfulness and perceived flow as mediators. *Information Systems and e-Business Management*, 10(4), 549–570. doi:10.1007/10257-011-0181-5
- Huang, H. C., Huang, L. S., Chou, Y. J., & Teng, C. I. (2017). Influence of temperament and character on online gamer loyalty: Perspectives from personality and flow theories. *Computers in Human Behavior*, 70, 398–406. doi:10.1016/j.chb.2017.01.009
- Hudock, S. L. (2015). Can research “send me high?” Addressing flow theory. *RSR. Reference Services Review*, 43(4), 689–705. doi:10.1108/RSR-04-2015-0025
- Jeon, M. M., & Jeong, M. (2017). Customers’ perceived website service quality and its effects on e-loyalty. *International Journal of Contemporary Hospitality Management*, 29(1), 438–457. doi:10.1108/IJCHM-02-2015-0054
- Jeong, M., & Oh, H. (2017). Business-to-business social exchange relationship beyond trust and commitment. *International Journal of Hospitality Management*, 65, 115–124. doi:10.1016/j.ijhm.2017.06.004
- Johnson, D., & Grayson, K. (2005). Cognitive and affective trust in service relationships. *Journal of Business Research*, 58(4), 500–507. doi:10.1016/S0148-2963(03)00140-1

- Kamis, A., Stern, T., & Ladik, D. M. (2010). A flow-based model of web site intentions when users customize products in business-to-consumer electronic commerce. *Information Systems Frontiers*, 12(2), 157–168. doi:10.1007/10796-008-9135-y
- Kashef, M. A., Ginige, A., & Hol, A. (2018). Framework for enhancing online working-together relations. *Journal of Information. Communication and Ethics in Society*, 16(4), 357–380. doi:10.1108/JICES-04-2018-0043
- Kaur, P. (2016). Underpinnings of User Participation in Service Provider–Hosted Online Communities. *Service Science*, 8(3), 249–262. doi:10.1287/erv.2016.0136
- Kim, J., Suh, E., & Hwang, H. (2003). A model for evaluating the effectiveness of CRM using the balanced scorecard. *Journal of Interactive Marketing*, 17(2), 5–19. doi:10.1002/dir.10051
- Law, R., & Cheung, C. (2006). A study of the perceived importance of the overall website quality of different classes of hotels. *International Journal of Hospitality Management*, 25(3), 525–553. doi:10.1016/j.ijhm.2005.03.001
- Lewicka, D., & Krot, K. (2015). The model of HRM-trust-commitment relationships. *Industrial Management & Data Systems*, 115(8), 1457–1480. doi:10.1108/IMDS-12-2014-0388
- Li, L., Peng, M., Jiang, N., & Law, R. (2017). An empirical study on the influence of economy hotel website quality on online booking intentions. *International Journal of Hospitality Management*, 63, 1–10. doi:10.1016/j.ijhm.2017.01.001
- Macek, J. (2004). Koncept rané kyberkultury. In J. Volek & P. Binková (Eds.), *Média a realita* (pp. 35–65). FSS MU.
- Mahmoud, M. A., Hinson, R. E., & Adika, M. K. (2018, May 9). The Effect of Trust, Commitment, and Conflict Handling on Customer Retention: The Mediating Role of Customer Satisfaction. *Journal of Relationship Marketing*, 21(2), 1–20. doi:10.1080/15332667.2018.1440146
- Mallapragada, G., Chandukala, S. R., & Liu, Q. (2016). Exploring the effects of “what” (product) and “where” (website) characteristics on online shopping behavior. *Journal of Marketing*, 80(2), 21–38. doi:10.1509/jm.15.0138
- McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24–59.
- Mekkamol, P., Piewdang, S., & Untachai, S. (2013). Modeling e-CRM for community tourism in upper northeastern Thailand. *Procedia: Social and Behavioral Sciences*, 88, 108–117. doi:10.1016/j.sbspro.2013.08.486
- Mietttila, A., & Moller, K. (1990). Interaction perspective into professional business services: A conceptual analysis. In R. Fiocca & I. Snehota (Eds.), *IMP conference: Research developments in international industrial marketing and purchasing* (6th ed., pp. 759–781). University of Bocconi, Italy.
- Morgan, M. R., & Hunt, D. S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38. doi:10.1177/002224299405800302

- Mukherjee, A., & Nath, P. (2007). Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. *European Journal of Marketing*, 41(9/10), 1173–1202. Advance online publication. doi:10.1108/03090560710773390
- Novak, T. P., Hoffman, D. L., & Duhachek, A. (2003). The influence of goal-directed and experiential activities in online flow experiences. *Journal of Consumer Psychology*, 13(1), 3–16. doi:10.1207/153276603768344744
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- O’Cass, A., & Carlson, J. (2010). Examining the effects of website-induced flow in professional sporting team websites. *Internet Research*, 20(2), 115–134. doi:10.1108/10662241011032209
- Ongsakul, V., Ali, F., Wu, C., Duan, Y., Cobanoglu, C., & Ryu, K. (2020). Hotel website quality, performance, telepresence and behavioral intentions. *Tourism Review*. doi:10.1108/TR-02-2019-0039
- Ostovare, M., & Shahraki, M. R. (2019). Evaluation of hotel websites using the multicriteria analysis of PROMETHEE and GAIA: Evidence from the five-star hotels of Mashhad. *Tourism Management Perspectives*, 30, 107–116. Advance online publication. doi:10.1016/j.tmp.2019.02.013
- Ou, W. M., Shih, C. M., & Chen, C. Y. (2015). Effects of ethical sales behaviour on satisfaction, trust, commitment, retention and words-of-mouth. *International Journal of Commerce and Management*, 25(4), 673–686. doi:10.1108/IJCoMA-04-2013-0040
- Ou, W. M., Shih, C. M., Chen, C. Y., & Tseng, C. W. (2012). Effects of ethical sales behaviour, expertise, corporate reputation, and performance on relationship quality and loyalty. *Service Industries Journal*, 32(5), 773–787. doi:10.1080/02642069.2010.531268
- Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigate uncertainty in online exchange relationships: A principal agent perspective. *Management Information Systems Quarterly*, 31(1), 105–136. doi:10.2307/25148783
- Roberts-Lombard, M. (2020). Antecedents and outcome of commitment in Islamic banking relationships – an emerging African market perspective. *Journal of Islamic Marketing*, 11(6), 1851–1871. Advance online publication. doi:10.1108/JIMA-09-2018-0164
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online Customer Experience in e-Retailing: An empirical model of Antecedents and Outcomes. *Journal of Retailing*, 88(2), 308–322. doi:10.1016/j.jretai.2012.03.001
- Roy, S. K., Devlin, J. F., & Sekhon, H. (2015). The impact of fairness on trustworthiness and trust in banking. *Journal of Marketing Management*, 31(9–10), 996–1017. doi:10.1080/0267257X.2015.1036101
- Sharma, S., Menard, P., & Mutchler, L. A. (2017). Who to Trust? Applying Trust to Social Commerce. *Journal of Computer Information Systems*, 59(1), 32–42. doi:10.1080/08874417.2017.1289356
- Sramova, B., & Pavelka, J. (2019). Gender differences and wellbeing values in adolescent online shopping. *International Journal of Retail & Distribution Management*, 47(6), 623–642. doi:10.1108/IJRDM-08-2017-0173

- Tabrani, M., Amin, M., & Nizam, A. (2018). Trust, commitment, customer intimacy and customer loyalty in Islamic banking relationships. *International Journal of Bank Marketing*, 36(5), 823–848. doi:10.1108/IJBM-03-2017-0054
- Vella, J., & Caruana, A. (2012). Encouraging CRM systems usage: a thesis among bank managers. *Management Research Review*, 35(2), 121–133. doi:10.1108/01409171211195152
- Venturini, W. T., & Benito, Ó. G. (2015). CRM software success: A proposed performance measurement scale. *Journal of Knowledge Management*, 19(4), 856–875. doi:10.1108/JKM-10-2014-0401
- Wang, L., Law, R., Guillet, B. D., Hung, K., & Fong, D. K. C. (2015). Impact of hotel website quality on online booking intentions: eTrustas a mediator. *International Journal of Hospitality Management*, 47(1), 108–115. doi:10.1016/j.ijhm.2015.03.012
- Wilson, D. T. (1995). An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science*, 23(4), 335–345. doi:10.1177/009207039502300414
- Yu, Y., & Kim, H.-S. (2019). Online retailers' return policy and prefactual thinking. *Journal of Fashion Marketing and Management*, 23(4), 504–518. doi:10.1108/JFMM-01-2019-0010
- Zhang, H., Lu, Y., Gupta, S., & Zhao, L. (2014). What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences. *Information & Management*, 51(8), 1017–1030. doi:10.1016/j.im.2014.07.005
- Zhang, K. Z., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, 86, 95–108. doi:10.1016/j.dss.2016.04.001
- Zhou, T. (2019). *The effect of flow experience on users' social commerce intention*. Kybernetes. doi:10.1108/K-03-2019-0198

ADDITIONAL READING

- Al-Qeisi, K., Dennis, C., Alamanos, E., & Jayawardhena, C. (2014). Website design quality and usage behavior: Unified theory of acceptance and use of technology. *Journal of Business Research*, 67(11), 2282–2290. doi:10.1016/j.jbusres.2014.06.016
- Haddad, G. E., Shahab, A., & Aïmeur, E. (2018). Exploring User Behavior and Cybersecurity Knowledge - An experimental study in Online Shopping. In *2018 16th Annual Conference on Privacy, Security and Trust, PST 2018*. Institute of Electrical and Electronics Engineers Inc. 10.1109/PST.2018.8514190
- Jiang, H., Kim, B., Gupta, M., & Guan, M. Y. (2018). To trust or not to trust a classifier. In *Advances in Neural Information Processing Systems* (Vol. 2018-December, pp. 5541–5552). Neural information processing systems foundation.
- Kim, H., & Niehm, L. S. (2009). The Impact of Website Quality on Information Quality, Value, and Loyalty Intentions in Apparel Retailing. *Journal of Interactive Marketing*, 23(3), 221–233. doi:10.1016/j.intmar.2009.04.009

- Lee, Y., & Kozar, K. A. (2006). Investigating the effect of website quality on e-business success: An analytic hierarchy process (AHP) approach. *Decision Support Systems*, 42(3), 1383–1401. doi:10.1016/j.dss.2005.11.005
- Rocha, Á. (2012). Framework for a global quality evaluation of a website. *Online Information Review*, 36(3), 374–382. doi:10.1108/14684521211241404
- Rosen, D. E., & Purinton, E. (2004). Website design. *Journal of Business Research*, 57(7), 787–794. doi:10.1016/S0148-2963(02)00353-3
- Su, N., He, J., Liu, Y., Zhang, M., & Ma, S. (2018). User intent, behaviour, and perceived satisfaction in product search. In *WSDM 2018 - Proceedings of the 11th ACM International Conference on Web Search and Data Mining* (Vol. 2018-February, pp. 547–555). Association for Computing Machinery, Inc. 10.1145/3159652.3159714
- Wu, L., Hu, D., Hong, L., & Liu, H. (2018). Turning Clicks into purchases: Revenue optimization for product search in e-commerce. In *41st International ACM SIGIR Conference on Research and Development in Information Retrieval, SIGIR 2018* (pp. 365–374). Association for Computing Machinery, Inc. 10.1145/3209978.3209993

KEY TERMS AND DEFINITIONS

Commitment: Sentimental loyalty of customers to continue an ongoing relationship with the marketer and could be increased by customer trust.

CRM: Practices, strategies, and technologies that companies use to manage customer interactions throughout the customer life cycle.

Customer Trust: A situation where a customer has assurance in exchange for the marketer's integrity and reliability.

E-Commerce (Electronic Commerce): Known as internet commerce, refers to the selling and purchasing of products and services through online which includes online ordering, e-payment, online distribution, and any other activities of online marketing.

Online Shopping: Purchasing products or services through the internet using a website or app.

Perceived Flow: The state while a consumer is unconsciously engaged in an activity or action, the user becomes so engrossed with activity, and they lose the sense.

Website: A website is a set of linked web pages, with or without multimedia, usually recognized with a pervasive domain name known as URL that is published on the web server. The website maybe usable through public internet or private LAN (local area network).

Section 4

Online Customer Behavior

Chapter 14

Customer Satisfaction on Social Media Marketing in Malaysian Hospitality Industry

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ABSTRACT

Customer satisfaction plays an important role in achieving the competitive advantage and ensures to bring success to the organizations. Nowadays, people tend to use technologies in boosting the revenue of their businesses as well as to promote the products and services. Therefore, this chapter is focusing on the factors that drive the satisfactions of the customers on the social media marketing in the hospitality industry in Malaysia. The research gaps have been identified on Malaysia's customer satisfaction on social media marketing in the hospitality industry. Hence, the objective of this research is to explore three factors that influence the satisfaction level of the customers on the technologie in the social media, namely social technology approach, social media tools, and socia media engagement. Last but not least, this study will also provide the researchers and managers with strategic plan in order to enhance the business efficiency.

INTRODUCTION

Customer satisfaction is described as a common assessment based on total on the overall purchase and depletion experience with the products and services over the years (Khristianto, Kertahadi, and Suyadi, 2012). It is hence a decisive upshot as an unlawful knowledge on how to make customers further gratified because customer satisfaction also derives laterally with it which means it establishes the expectation of the customers with marketing on how the products and services are being expedited by the companies (Heizer and Render, 2011). In today's business world, customer satisfaction's feedback are very noteworthy

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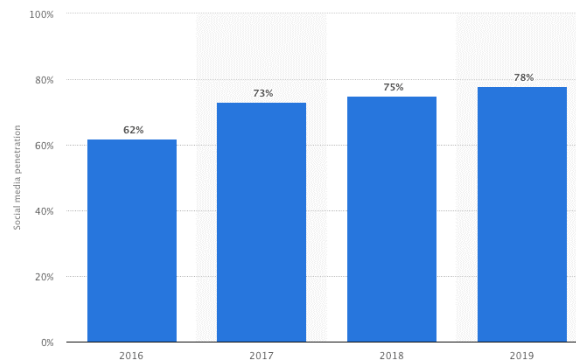
(Hanif, Hafeez, and Riaz, 2010). This is also supported by many researchers that customer satisfaction is widely used these days as the customers' feedback are remarkable to be referred as references (Hao, Yu, Law et al., 2015; McColl-Kennedy, 2015). According to Wu (2011), an idiosyncratic kind of customer attitude has fallen under the category of customer satisfaction where in terms of the level of customer satisfaction, the customers are inclined to demonstrate innumerable kinds of behaviours. The satisfaction level of the customers would be influenced through the service quality awareness where this is also supported and concluded by (Kashif, Altaf, and Ayub et al., 2014).

Technology has proven a swift expansion with the primer of small communication devices where these devices are used for retrieving social networks anytime at anywhere in which the gadgets include laptops, iPads, iPods, mobile phones and pocket computers (Tariq, Mehboob, and Khan et al., 2012). Social media is changing the social patterns and culture where it is becoming part of our society these days (Al-Sharqi, Hashim, and Kutbi, 2015). Therefore, this study will further enhance the understanding of the use of social media marketing in today's businesses. In the globalization world, the knowledge and contents sharing is a social aspiration to everyone now (Wolf, Wenskovitch, and Anton, 2016). According to Lowisz (2014). Social media has also wedged the world events of today where the instant news received on daily basis through this channel is as high as 50% where everyone will be able to know the news on the spot.

In addition, the facilitation of two-way communication between a company and their stockholders is also one of the benefits of social media to act as a communiqué platform (Chuck, 2019). Social media can be a marketing tool in which it entails endless revising as social media permits users to store and remark information of different form or publishing as well as a key for attaining the business-end goals (Daj, 2013). Social media has given in no-way finishing opportunity for communication; it is the people who serve as the influencers but no longer the technology (Gonzalez, 2010). Kaplan and Haenlein (2010) further explained that the description of the sum of all ways in which people make use of social media is through the user generated content and it is usually used to portray the innumerable forms of media content that are visibly accessible and shaped by end users.

Figure 1 shows the segment of social media users as a percentage of the total population in Malaysia from 2016-2019. According to the survey conducted by the Statista Research Department as of January 2019, about 78 percent of the Malaysian population were vigorous social media users (Statista Research Department, 2019). Since the hospitality industry is instantly growing and the social media is widely used by everyone, the market potential for the hospitality industry in Malaysia is significant through the influence of social media (Matikitia, Krugerb, and Saaymanc, 2016; Rosman and Stuhura, 2013). For these reasons, this study was designed to explore the level of satisfaction of the customers on social media marketing in the Malaysian hospitality industry. Conversely, at present, there is limited research on social media marketing in the Malaysian hospitality industry, rather these researches focus on the businesses sector, education sector, society and other diverse industries (Akram and Kumar, 2017). The hypothesis of this study is that there exist suitable variables to passage the term of social media marketing. Moreover, guileless approach can be developed to accurately describe the perception of the customers towards social media marketing in the Malaysian hospitality industry. The aims of the research are to identify whether customer satisfaction on social media marketing in the Malaysian hospitality industry has a relationship with the variables of this study.

Figure 1. Usage of Social Media in the Society (Statista Research Department, 2019)



Social media platforms used by the hospitality industry should aim to reach out to as many people as they can through the most preferred platforms so that the number of tourists visiting the country and accommodate in the hotels and resorts can be increased. However, despite the presence of varied studies offering experimental evidence of the paybacks to companies, many firms have yet to encompass social media into their strategies (Alhabash, McAlister, Quilliam, Richards and Lou, 2015). The Tourism Malaysia has achieved 100% growth where the tourism and hospitality industry is known as one of the biggest industry in the world (Department of Statistics Malaysia, 2019). One of the most vigorous developing fields of the world economy today is the tourism and hospitality industry (Bowie and Buttle, 2004; Cochrane, 2010; Liu, Pan and Zheng, 2019). Moreover, the execution of new technologies, strategies and approaches to business administration has proven that there is a gap between the social media marketing and the hospitality industry (Leung, Law, and Van Hoof et al., 2019). It is further supported by Anderson (2012) that the hotel performance had been strengthened through the social media. Therefore, it is vibrant to measure the effects of social media in the hospitality industry.

The growth of social media in the hospitality business marketing plans has shown a great improvement (Al-Deen and Hendricks, 2011). Due to the increasing growth of social media as well as the number of tourists visiting Malaysia, the hospitality industry shall gather the information or feedback from the customers on the usefulness of the social media. Feedback provided by other customers are more convincing than the photos shown on the social media (Itzhakov and Latham, 2018). With that, the hospitality industry will further understand the needs and wants of the customers as well as the benefits which are significant acknowledgement from the customers in the areas of value. Hence, the persistence of this research is to examine the customer satisfaction on social media marketing in the Malaysian hospitality industry.

The rest of the paper is organized as follow: This paper will continue with the discussion of relevant literature and methodology of the study, followed by the discussion of findings as well as limitations and areas for future research.

THEORETICAL MODEL

A conservatory of the Theory of Reasoned Action (TRA) is the Theory of Planned Behaviour where most of the social psychologists use this model to prophesy behavioural intentions (Ajzen, 1985; Ajzen and Mad-

den, 1986; Collins and Carey, 2007; Fielding, McDonald, and Louis, 2008). Intention is cognizant blueprint of achievement that unambiguously needs a behaviour and motivation to stimulate it (Patch, Tapsell, and Williams, 2005). The effects of attitudes, independent norms and superficial behaviour control are entirely intervened by the intentions in which many researchers think that the intentions are the best forecasters of behaviour (Ajzen, 2002; Gracia and de Magistris, 2013; Liobikiene, Mandravickaite, and Bernatoniene, 2016). To be specific, the superlative accessible analyst of human behaviour which is also known as the heart of the Theory of Planned Behaviour framework is the intention (Han, Hsu, and Sheu, 2010; Liobikiene et al., 2016). The result of intention was obtained through the actual use of behaviour which was jagged by TPB (Wee, Ariff, and Zakuan, 2014). Hence, TRA was chosen as the basic framework for the present study.

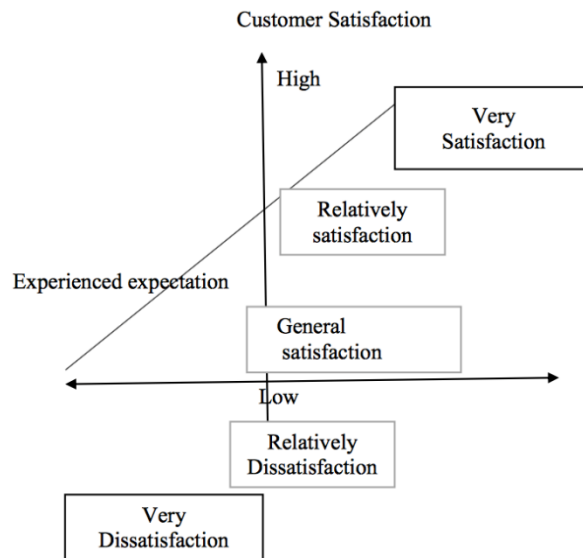
Customer Satisfaction

Customer satisfaction is defined as the heart of marketing. In other words, it is known as one of the organization's goals to achieve good customer satisfaction in upgrading the business (Ganiyu, Uche and Adeoti, 2012). The level of customers' positive feeling towards the products or services are provided to them (Lee, 2013). Most organizations are able to achieve abundant success if the methodology of satisfying customer contains insightful knowledge by discovering the customers' needs and wants and meet the expectations as well as their demands (Dominici and Palumbo, 2013). The needs of the customers shall not be neglected or it will be impossible for the business to grow further (Tao, 2014). Furthermore, more loyal customers shall be retained in consuming or purchasing the products and services provided by an organization if it shows a high level of customer satisfaction towards the products and services offered. It will simultaneously increase the value of the organization as well as to build a stronger relationship between the customers and the organization (Khan, 2012).

Referring to the triangle law in Figure 2, customer satisfaction is equals to customer expectations minus customer satisfaction in which it is clearly seen in the figure that the customer satisfaction is negatively linked with the customer expectations. The customer satisfaction will become higher when the customer experience indispensable flats with customer expectation. The lower customer satisfaction is defined as the worse experience given to the customers in providing the services and products (Tao, 2014). With that, word of mouth is known as one of the best marketing tools (Scheers and Prinsloo, 2012). Satisfied customers will always provide good feedback to others through word of mouth when they are satisfied with the products and services offered to them in which this will allow them to share their positive experiences to other potential consumers (Hague and Hague, 2016; Yeoh, Othman and Ahmad, 2013).

Customer satisfaction is regarded as one of the most crucial determinants in conserving a relationship between the organization and the customers in the long run where it has also been the core aim of the business to build and endure customer satisfaction to an optimum level (Kaura and Datta, 2012). Hence, customers are the keys for all successful business. Nowadays, business maintains the competitive advantage of their business by prioritizing to satisfy the customers' needs and wants as well as to bring about the customers' expectancies (Cengiz, 2010). Many researches have been studying about customer satisfaction for the past three decades where a customer behaviour model has been created. The contents of the model refer to the inspiration of the customers whether or not to purchase the product or service depends on the satisfaction level of the customers in the view of the product or service that is delivered to them (Wang, 2017). There are some researches which disagree on the features of customer satisfaction where generally signifying the elements that the result of the service offered and the experiences with the service providers are dependent on customer satisfaction (Parasuraman, Zeithaml, and Berry, 1988).

Figure 2. Customer Satisfaction Analysis Model (Tao, 2014)



In the service literature, the appraisal of customer satisfaction is widely applauded as a substitute gauge of quality (Tateke, Woldie and Ololo, 2012). Customer satisfaction can be described in many ways, conversely, it is usually linked to customer evaluation experiences in which the definitive dimension of the customer satisfaction on the services and products provided differed to the post-experience of the customers (Kotler and Armstrong, 2012). The service delivery is the antecedent of customer expectation where the service enactment is ascertained (Zeithaml, Bitner and Gremler, 2013). A precise satisfaction is also known as a valuation of the overall experience where innumerable conceptualization of satisfaction has sophisticated over the foregoing decades (Han and Hyun, 2015). There will be an upsurge on the satisfaction level as well as keenness to acquire the products and services if the customers had evaluated the total experiences of depletion (Jani and Han, 2013). There are three types of service which include desired service, satisfactory service and anticipated service. Desired service is known as the service quality level where the customers presume to attain. Satisfactory service is known as the service quality level where the customers are eager to enjoy the services and anticipated service is known as the service quality level where the customers expect to get (Parasuraman et al., 1988).

According to Zeithaml et al. (2013), the first premeditated measure in providing excellent service quality is to recognize the anticipation of the customers through the elements of persuasion that include word of mouth, intimate constraints, communication, preceding service experience and expense. Perception is also known as a psychosomatic and societal occurrence that can bring about the participation of the external parties where the discernment of ambiances and individual prominence will influence the customers' behaviour as well as their thoughts and beliefs (Warr and Inceoglu, 2012). It is also supported that thoughtfulness and allusion are the fundamentals of perception where positive feedback will be circulated around the people by the satisfied customers (Yelkikalan, Hacioglu and Kiray et al., 2012).

Comprehended service quality is a prudence trading with the dominance of the service (Parasuraman, 2010) where the customers' behaviour or decision can be swayed by the people in their surroundings and environment. The conception of a divergence is made by the customers between a product and service

occurrence and values are parts of the comprehended service quality and satisfaction literatures (Bitner, Zeithaml and Gremler, 2010; Zeithaml et al., 2013). The theory of principles is referred to the quality perception whereas the theory of prophetic prospects and apparent quality with dissimilar criteria in which this explains on the reason why one can be easily satisfied even if the quality of the service or product is low (Oliver, 2014).

Customer Satisfaction- Malaysia Perspective

Malaysia is one of the rapid growing countries leading to a change in many areas such as retail stores, banking services, healthcare industry, tourism industry and others where businesses' growth depends on customer satisfaction level to increase their recurrence purchases that will lead to higher profits through the products and services offered (Muniady, Al-Mamun and Yukthamarani et al., 2014). Every organization's strategies hinge on customer satisfaction in which it makes customer satisfaction as one of the decisive part in the organization where the organizations today are aiming to achieve higher index in terms of customer satisfaction standard by giving more awareness to the services provided to the customers (Khattak, 2010). According to Munusamy, Chelliah and Mun (2010), customer satisfaction is regarded as the factor of the nature services which is offered by the organizations in concordance to meet the customers' expectations. A compelling foundation of any service organizations shall be provided through impulse, aspirations and prospects of the customers in order to augment the service standards and achieve better in the future (Naik, Gantasala and Prabhakar, 2010). Nowadays, many Asian customers are moving towards online banking services (Barquin and Kinayak, 2015). There are 670 million of online banking customers in Asia and is anticipated to upsurge to 1.7 billion in year 2020; approximately 25 percent of pre-purchase resolution making and 40 percent of post-purchase servicing is directed through online banking across Asians (McKinsey and Company, 2014).

Customer satisfaction also includes a positive hesitation of online banking service where the interaction between the customers and the bank is crucial for the improvement of customer relationship where reliable performance and a sense of loyalty shall be developed for the customers to feel committed (Eriksson and Schuster, 2009). Internet has been helpful in the expansion of the interactions and stipulating approaches which have resulted to an increase intellect relating to fondness in the relationship between the organization and the customers in order to nurture new relationships at a low-slung cost and intervallic manner (Noreen and Han, 2015; Schirr, 2013). Customers' up-to-date expectations and demands as well as the achievement of the necessities of the customers are reviewed from time-to-time as this will aid in accomplishing an affirmative customer satisfaction (Lim, 2017).

One of the significant aspects in distressing satisfaction towards online banking is also convenience (Aliyu, Rosmain and Takala, 2014). There are some users who are reluctant to change from manual to online banking simply because of difference in mind set of convenience (Munusamy, Annamalah and Chelliah, 2012). There are roughly 5 million broadband users, 2.5 million people using wireless broadband users and about 10 million people using 3G in Malaysia in which these show that Malaysians' satisfaction level towards acceptance of using the internet is positive (Suki, 2013). Interaction technology and extension of various smart devices is one of the main reasons for rapid growth in the online banking in Malaysia (Asian Institute of Finance, 2016). The level of customers' satisfaction on online banking in Malaysia is influenced by the efficacy and ease to access (Chong, Islam, and Manaf et al., 2015). Before the customers choose their banking methods, customers' place convenience is set as the uppermost precedence (Ong, Hong and Teh et al., 2014).

According to Charoensukmongkol and Sasatanun (2017), in order to enhance customer satisfaction and pledge to a long-term relationship, the interaction between the companies and customers are essential as well as to develop an appropriate marketing communication on a one-to-one basis. In addition, the marketing communication can also be made through social media as it allows companies to interrelate and respond to customers instantaneously. It is also supported by the study of Trainor et al. (2014) that the concentration of social media application in business certainly and ominously relates to complex financial and non-financial enactment in Malaysia whereby the social media aids businesses in enhancing the business performance. Consequently, Charoensukmongkol and Sasatanun (2017) argues that there are two factors; social proficiency and whether businesses generate sales through social media could deliver positive influence of social media on business performance satisfaction.

A study was conducted by Anand, Ramachandran and Sambasivan et al. (2019) on the customer satisfaction towards online shopping in Malaysia where the prominence of customer satisfaction cannot be ignored, predominantly on online retailers as this will lead to poor performance of the company and progressively persuasive in convincing depletion linked decisions. It is supported by Chen, Yu, Gentry and Yu (2016) that in the future, customers who are pleased with the recital of online retailers tend to humour in more online shopping as the customers have previously experienced good service. The key forebear of customer satisfaction is the perception of the customer whereby the perception is operationalised through functional aspects for example suitability, ease-of-use and approachability in which the increasing demand of shopping online is expected through the use of technology (White, 2015; Mishra, 2015).

The growth of the businesses which in return leads to the overall growth of economic of a country is through the level of satisfaction of the customers whereby customer is the key factor to the organizations' revenue (Shahid, Saeed and Tirmizi, 2015). The fortitude of factors that subsidize to customer satisfaction and service quality has been carried out by many researchers (Bahari 2014; Razak et al. 2013; Hamid 2011). According to Akman and Mishra (2017), researchers are meanderingly mandatory to comprehend the interactivity of social surroundings particularly on the satisfaction viewpoint due to the increase in acceptance of social commerce these days. Online shopping is flattering gradually popular in Malaysia (Ling et al., 2011; Montaz et al., 2011). According to Anand et al. (2019), consumer's perception was driven through the emergent preference to shop online whereby all the aspects such as safety and dependability aspect have wedged the overall customer satisfaction.

Despite customers' loyalty and accessibility in defining the customer satisfaction have been acknowledged in the preceding marketing literatures yet the experiential examination of this issue is restricted (Aliyu et al., 2014; Osman, Mohamad, and Mohamad, 2015; Sakhaei, Afshari, and Esmaili, 2014).

Social Technology Approach

Technology comes from the word "Logos" where the pre-Socratic Greek academics first indicated the belief of celestial in which it connects the source of formation that was carried in the meaning of "Techne" (Skrbina, 2015). Talent and ability are also used to define the word "Techne" (Volti, 2009). Despite the struggle in emerging the meaning of technology, most people undeniably recognise what it is and differentiate between things that are human-made and those that transpire unsurprisingly (Brey, 2009). Technologies are also used to accomplish precise tasks in life and they strengthens human competences (Ramey, 2012). Technology has been changed to the next level of technology in which it is defined as

a societal drawback in pursuit for and the execution of decision theory approach (Derksen, Vikkelsø, and Beaulieu, 2012).

Social technology is defined as the invention of over 40 years of technology advancement and growth; a vision of the constraint digital devices can do (Chui et al., 2012). Koo, Wati and Jung (2011), stressed that redefinition of the social technologies based on the fundamental definition is desired although the designate used to refer the new social media is regularly depleted. Social technologies benefit the users with innovative dynamisms and empower contemporary affiliations with group subtleties as well as associating the right mentors, attaining answers to the questions and obtaining information (Skaržauskienė, Tamošiūnaitė and Žalėnienė, 2013). People who were born between 1980 and 2000; known as the Millennial or the Generation Y, are joining the workplace where their attitudes and behaviours as well as their form of communication are dissimilar from the older generation (Alberghini, Cricelli and Grimaldi et al., 2010).

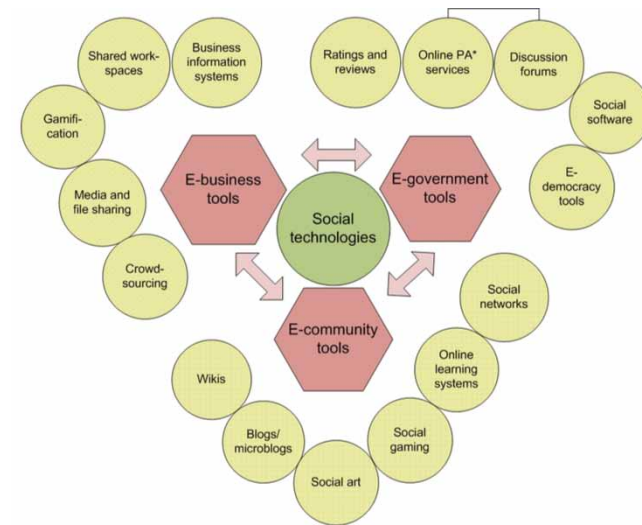
According to De Gennaro (2010), social technologies could have an analogous outcome in the revolution of interaction dynamics. Social technologies are also used to hit it off across geographies and time zones as well as swell the stimulus beyond the number of people they could reach as social technologies are unregulated from the confines of the physical world (Bughin, Byers and Chui, 2011). Social technology is gradually prominent as a purpose of research for social sciences and sociality is more to something that people product precisely because the social sciences are referred to as humanity shapers, the potency of soft technologies is re-evaluated and concentration to human actors is reconditioned (Derksen et al., 2012).

In the modern era, social technologies are defined as technologies which are used to achieve goals or any social basis which includes social hardware, social software and social media (Alberghini et al., 2010). People used social technologies to intermingle collectively and product, boost and trade content (Chui et al., 2012). There are three characteristics of social technologies which include information technology which qualifies social technologies, the content and interactions which form, augmented and adjust the dispersed rights by social technologies and social technologies which allow disseminated admittance to guzzle the content and communication (Bughin et al., 2011). Social technologies include a broad range of various technological mechanisms that can be used by many. Figure 3 shows the types of technologies that could be used by many in the private or public sector organizations (Skaržauskienė et al., 2013).

A set of theoretically illogical operative social disputes ecological elucidation, ways to accomplish projected outcomes, undertaking human social effect, social groups and dissimilar social configurations' behaviour is defined as the term of social technology by (Alberghini, et al., 2010; Bughin et al., 2011; Bughin et al., 2012). Social technologies are not only about consumer portents but they are more than a consumer portents where many organizations connect the social technologies internally and externally in order to grasp the external borders too (Bughin, Chui and Manyika, 2013). The use of social technologies also acts as a tool for communication and marketing as well as an immersion of civilization into decision making process (Scott and Carrington, 2011). Hence, social technologies have benefited many people with their uses and approaches (Chui et al., 2012). In this regard, the present study proposes to test the direct relationship between the social technology approach and customer satisfaction on social media marketing in the Malaysian hospitality industry and this leads to the construction of the first hypothesis:

Hypothesis One: There is a significant relationship between social technology approach and customer satisfaction on social media marketing in the Malaysian hospitality industry.

Figure 3. Social Collaboration Tools and Technologies (Skaržauskienė et al., 2013)



Social Media Tools

Social media, the advent and extend of a sub-set of IT technologies, is known as one of the most influence IT occurrences (Kane, Alavi, and Labianca, 2014; Kapoor, Tamilmani, and Rana, 2017). As years pass by, the timeworn descriptions are following the inclination of constructing new and up-to-date definitions, as does the growth, practice and acceptance of social media (Kapoor et al., 2017). The innumerable electronic tools, technologies and applications that expedite collaborative interaction and content alteration which permit the users to relocate around effortlessly between the characters of the viewer and content makers is known as the definition of social media (Hysenlika, 2012). In this day and age, social media is becoming one of the most significant parts of the business strategies to blast-off their products, acquire consumer reliability and news apportioning (Walaski, 2013). The information regarding any crisis situations are transmuted and broadcasted to the affected societies in the steadfast and laid-back way through the technology innovations (Veil, Buehner and Palenchar, 2011).

Credible conversions in business-to-business communication, business-to-customer communication and customer-to-customer communication are made through social media and technological theories (Kietzmann, Hermkens, and McCarthy et al., 2011). In this current era of social media, internet has advanced from a moderate propagation level to a partaking platform in which it sanctions people to be the 'broadcast' themselves for cooperating and partaking the information (Zolkepli and Kamarulzaman, 2015). The Pew Research Centre has steered a study and found that the use of internet by Americans is at 87% and those who connects to the internet by using their tablets, smartphones or other gadgets are at 68. Whereas in 2000, it showed that a rise from 53% to 90% for the cell phone ownership by adults and an upsurge in 2011 from 35% to 58% for those who own smartphones (Fox and Raine, 2014). Hence, the use of mobile technology for communication purposes is becoming more popular that this is also an approach to associate to the customers anytime, anywhere (King, 2015).

Referring to Figure 4, the use of social media is expected to gradually increase every year. The use of social media tools which are exposed and spontaneously reachable by most of the people has become a part of the interaction supplies (Huang, Baptista, and Galliers, 2013). The planetary of commercial relations is being participated by new audiences in the case of social media-use in Human Resources (Wolf, Sims, and Yang, 2017). It is also further emphasized that social media tools are also used to indorse their organisations through their personal influence (Billington and Billington, 2012). It was concluded that the use of social media tools are influential instruments for attaining customers and the techniques to make gainful use of social media that are recognized by the organizations (Kirakosyan, 2014).

Figure 4. Social Network User Penetration in Malaysia from 2017 to 2023
(StatCounter, 2019)

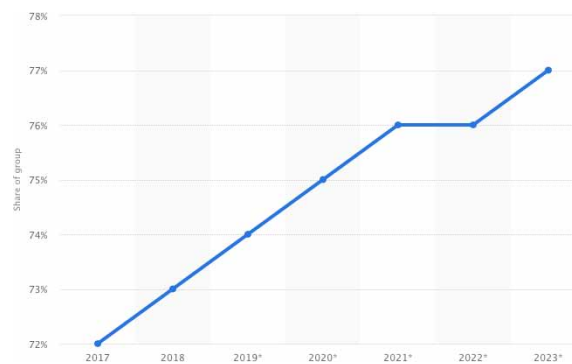


Figure 5 shows the most used social media tool is Facebook in which the overall percentage of users using Facebook in Malaysia is at 75.97% (Statista, 2019). Facebook is the most widely used social media tools among all ages and professions (Jha, Shah, and Basnet et al., 2016). It is then further emphasized that Facebook is also known as one of the most visited sites with high levels of frequency (Smith and Anderson, 2018). Referring to the statistics in Figure 6 that was provided by Pew Research Centre, there is 51% of Facebook users who sight the site several times a day. Anyone who has access to the social media tools such as Facebook can undoubtedly view the tools used (Ting, Wong and De Run et al., 2015). Facebook also acts as one of the important roles in boosting the esteem of the vogue of online shipping, marketing and other industries in which it simultaneously-thrives the business growth of the organizations by achieving its goals through the social media marketing (Akram, 2018; Kim, 2012).

Referring to Figure 5, Twitter is the next social media tool that is used by many users (Statista, 2019). The information translucence and engagement with stakeholders in the crisis management of a public university have improved through the usage of Twitter (Gruber, Smerek, and Thomas-Hunt et al., 2015). Since social media has been one of the most effective tools in the marketing strategy to expedite the customer engagement with the organization, it is specified that the marketers integrate social media into their programs for better outcome (Hollebeek, Glynn, and Brodie, 2014). This is supported that over the last quarter of 2013, more than 80% of Fortune 500 companies that were active on Twitter managed to increase their growth by 20% followers by the end of 2013 (Shively, 2014). Most businesses' financial results and firm disclosures were conveyed through Twitter to augment their market liquidity (Alexander and Gentry, 2014; Blankespoor, Miller and White, 2013). In this regard, the present study proposes to

test the direct relationship between the social media tools and customer satisfaction on social media marketing in the Malaysian hospitality industry and this leads to the construction of the second hypothesis:

Hypothesis Two: There is significant relationship between social media tools and customer satisfaction on social media marketing in the Malaysian hospitality industry.

Figure 5. Social Media Stats Malaysia (Statista Research Department, 2019)

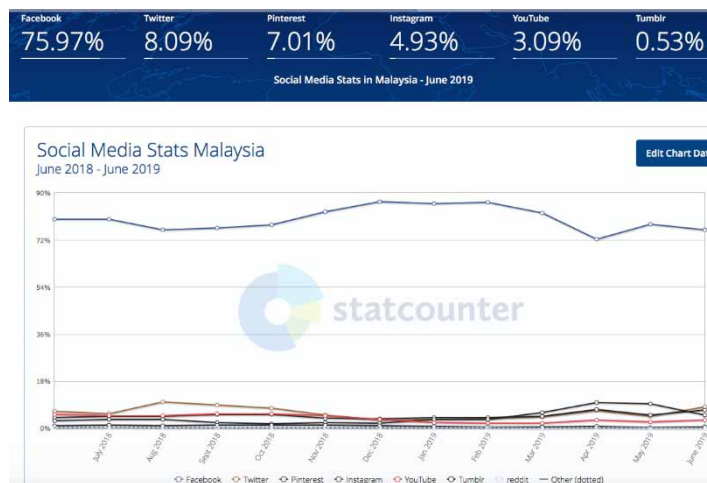
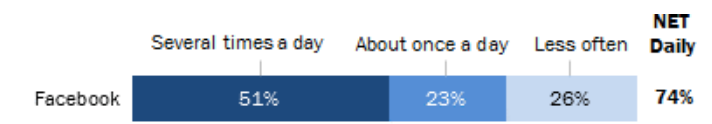


Figure 6. A majority of Facebook users visit the platform on a daily basis (Pew Research Center, 2018)



Social Media Engagement

In 2016, 500 US law enforcement agencies have casted-off a countrywide survey of social media and claimed that 94% of users were using Facebook followed by Twitter at 71.2% and YouTube at 40% (Kim, Oglesby-Neal, and Mohr, 2017). Dissimilar social media management approaches will influence the diverse form of audience engagement through a scrutiny of Facebook activities (Huang, Huo, and Yao et al., 2016).

In the last 7 years, the erudition of customer engagement has fully-fledged ominously (David, Czellar, and Spangenberg, 2009; Dessart, Veloutsou, and Morgan-Thomas, 2010; Van Doorn, Lemon, and Mittal et al., 2010). The efficiency and achievement of social media engagement approaches of the organizations can be accessed through the concept of engagement as the concept is known as one of the useful perspectives (Jiang, Luo and Kulemeka, 2016; Paine, 2011). Engagement is supposedly a multidimensional concept where it integrates numerous forms of psychological situations and behaviours in rejoinder to

social media activities. In order to direct the countless replies which include authorization and agreement, people may just click a like button to it and delight and entertainment although the definition of social media engagement is not extensively acknowledged (Dessart et al., 2015; S.-Y. Lee, Hansen and J.K. Lee, 2016). There are three engagement types in the framework of customer municipal which include affective, cognitive and behavioural. Affective includes delight and passion, cognitive includes courtesy and fascination and behavioural includes education, sanctioning and allotment (Dessart et al., 2015).

Social media engagement is the entirety of these precise social media involvements (Calder, Isaac, and Malthouse, 2016). Since engagement diverges across online media, social media engagement is a context-specific manifestation of consumer engagement which is worth to be measured (Brodie, Ilic, and Juric et al., 2013; Geissinger and Laurell, 2016). A conventional of modest objective metrics for accessing stakeholder engagement on commercial Facebook accounts by gauging an account's admiration, pledge and virality (Bonson and Ratkai, 2013). Social media engagement is categorized to participation, communication, familiarity and inspiration where these are known as the 4-I model (Haven, 2007). Engagement has been casted-off as a recital measure in understanding the connection between social media management approaches and corporate-public dealings in which the engagement consists of two aspects: word-of-mouth and attitudinal allegiance (Benthaus, Risius, and Beck, 2016; Risius and Beck, 2015).

The study of user engagement is vital because this behaviour is able to do beyond transmuting into analogous performance metrics and quality gauges to consequent happenings that are also able to be enthused in in which it duplicates and inflates on messages across social media networks (Gerlitz and Helmond, 2013). The box office performance is linked to the number of Facebook 'likes' after a movie was pre-released in which this simultaneously results in the visibility of the company can be heightened and grasped through the social marketing tools (Ding, Cheng, and Duan et al., 2017). Hence, a variety of engagement metrics within the purview of an explicit province is able to be unrushed and construed. The demographics factors such as the age and education and beneficiary benefits will also be exaggerated by the user engagement through social media (Harvey, Stewart, and Ewing, 2011; Ruddell and Jones, 2013).

Most re-tweets are normally from the highly cooperating, circumstantial and information-rich posts (Tanupabrungsun, Hemsley, and Semaan et al., 2016). Many photos that were posted on Facebook by the city governments have more likes and followers compared to those that were shared through links and texts only (Mainka, Hartmann, and Stock et al., 2015). Higher engagement levels can be achieved through graphics compared to text and videos in which by watching videos, it requires more lengthy time to finish viewing it (Hofmann, Beverungen, and Rackers et al., 2013; Lev-On and Steinfeld, 2015; Michalska, Lilleker and Michalski., 2016). Another research was also proven that a lengthier response time hinders dispersion, and rather counterintuitively, so too does the practice of hashtags (Lee, Agrawal and Rao, 2015). More likes and comments will be able to achieve when post short posts compared to the longer ones (Huang et al., 2016). The superlative selection to kindle engagement is through numerous colours, calls to action, circumstantial imageries and pictures (Schneider, 2016).

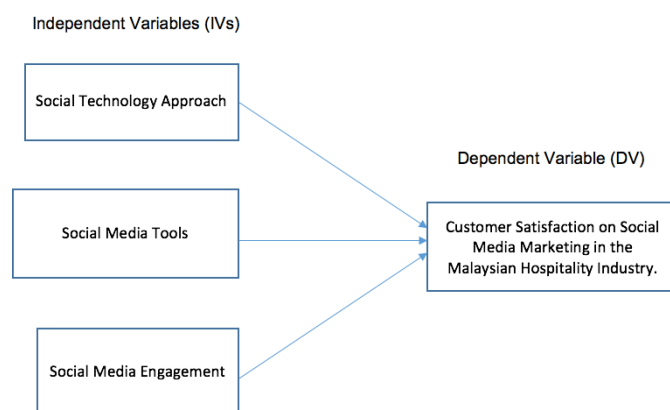
The division of the engagement substances such as the community and the brand are also the important features of the social media engagement's definition. Engagement can materialize with reverence to dissimilar bits and pieces on social media (Wirtz, Ambtman and Bloemer et al., 2013). Most studied engagement focus is on the brand engagement which also includes the social media frameworks (Malthouse, Calder, Kim et al., 2016; Marbach, Lages, and Nunan, 2016; Van Doorn et al., 2010; Verhoef, Reinartz and Krafft, 2010). The precise vibrant might subsidize to the formation, nourishment and liveliness of the societies and distress customer interactions (Hennig-Thurau, Malthouse, and Friege et al., 2010). Hence, the study on social media engagement will be discussed further in this research. In this

regard, the present study proposes to test the direct relationship between the social media engagement and customer satisfaction on social media marketing in the Malaysian hospitality industry and this leads to the construction of the second hypothesis:

Hypothesis Three: There is significant relationship between social media engagement and customer satisfaction on social media marketing in the Malaysian hospitality industry.

The research model is designed based on the underlying theory in which theory of planned behaviour is used for this research and the relevant literature as discussed above. A diagrammatic view of the research framework shown in Figure 7 was designed by using the variables described in the previous section.

Figure 7. Research Model



METHODOLOGY

The sampling techniques and analysis methodology will be further disserted in order to ensure that the analysis tools, questions designed and methodical theory are relevant to this research. This chapter also includes the data collection method and measures of constructs.

A number of methods were used during the data collection. Distributing questionnaires is one of the most appropriate methods used as this research is a quantitative research. Questionnaires are distributed to the respondents where the questions were set and distributed by using the Google Form. According to Zikmund et al. (2013), the researcher is allowed to choose the questionnaire method as it was the most accepted method for data collection. Conversely, some researchers argued that questionnaires primarily oblige the identical purpose whereby gathering information in the form of written responses from the respondents (Quinlan, 2011). According to Reinartz, Haenlein and Henseler (2009), there must be equally huge sample size in order to prove the importance of this study, henceforth, 400 respondents will be considered as the suitable amount of data collected. These data to be collected represent the level of the customer satisfaction towards the social media marketing in the Malaysian hospitality industry. The questionnaires will be distributed through the social media: WhatsApp, Facebook and Instagram in order to analyse the data.

A structured questionnaire will be used in this research. The questionnaire is divided into three sections which consist of demographic questions, questions on dependent variables and independent variables. The demographic of the respondents comprise of gender, age, occupation and average hours spent on social media per day. The questions on dependent variable and independent variables were designed by using the five-point Likert scale which provides respondents with choices of 1- Strongly disagree, 2- Disagree, 3- Neutral, 4- Agree and 5- Strongly agree. According to Sekaran and Bougie (2011), the answers of the respondents are based on their experiences and opinions in which it is more operative in gathering the precise data.

RESULTS AND FINDINGS

In this study, the analyses were done for each variable in order to gather a summary of the respondents' demographic profile. This is to get the preliminary information as well as the feel of the data (Sekaran, 2003). Table 1 showed the respondents' demographic profiles of the survey.

A summary of the demographic information related to the respondents of the sample is presented in the following diagrams.

Figure 8 shows a fair number of respondents from different genders had completed this survey in which the pie chart shows that 61.6% of female respondents and 38.4% of male respondents have answered the questionnaires accordingly. Although it is seen that it is somewhat skewed towards the female centric, however, these genders were also seen also equally represented in this data collection.

Referring to Figure 9, it is clearly seen that the highest percentage of respondents are from the age of 21-30 years old, however, the respondents over 60 years old are the least in which the percentage is only at 1.4%.

Figure 10 shows that there were more full time respondents who have done this survey compared to those who are working part time which is was at 2.5% only. Despite their busy schedule working as a full time, they were able to spare 5 minutes of their time in completing this questionnaire survey.

The average hour spent per day on social media can be used as an indicator on how long do the respondents actually spent on the social media per day. Referring to Figure 11, most of the respondents spent average 1-5 hours on their social media that they have registered/ unregistered whereas the least is more than 10 hours where the percentage is at 6.9% only.

Exploratory Factor Analysis

The structure of the questionnaire has to be dependable and reliable before performing a complete research. This is to ensure that the objectives of this research can be met. According to Zikmund, *et al.* (2012), a well piloted pilot study should have a suitable sample size which includes 10 to 50 samples. The data collection tool used in this research is through the distribution of the survey through online by using the Google Form. A sample size of 40 was piloted and the preliminary test was done to analyse the result of the data collected. The summary of the pilot study is described in Table 2.

According to Zikmund *et al.* (2012), Cronbach's Alpha is done to test whether the unnecessary questions will be removed from this research. Referring to the variables, all the Cronbach's Alpha is above 0.7 which means that they have high level of internal consistency with the specific samples (Lewis *et al.*, 2016). Hence, no correction is needed as all the data are acceptable.

Table 1. Respondents' Profile

Respondent's Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	139	38.4	38.4	38.4
	Female	223	61.6	61.6	100.0
	Total	362	100.0	100.0	

Respondent's Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
5-20 years old		73	20.2	20.2	20.2
1-30 years old		171	47.2	47.2	67.4
1-40 years old		83	22.9	22.9	90.3
1-50 years old		14	3.9	3.9	94.2
1- 60 years old		16	4.4	4.4	98.6
0 years above		5	1.4	1.4	100.0
total		362	100.0	100.0	

Respondent's Occupation					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Student	104	28.7	28.7	28.7
	Full Time	226	62.4	62.4	91.2
	Part Time	9	2.5	2.5	93.6
	Unemployed	23	6.4	6.4	100.0
	Total	362	100.0	100.0	

Average Hour Spent Per Day on Social Media					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 hour	42	11.6	11.6	11.6
	1-5 hours	242	66.9	66.9	78.5
	6-10 hours	53	14.6	14.6	93.1
	More than 10 hours	25	6.9	6.9	100.0
	Total	362	100.0	100.0	

Based on the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy presented in Table 3, the KMO value is at 0.672, 0.826, 0.700 and 0.723 which all is greater than 0.5. This demonstrates the sample adequacy for validity and supported the suitability of using validity to examine the underlying factors. Referring to the result of the Bartlett's Test of Sphericity, it is primarily significant as it has a significant p-value of 0.000. Hence, it could be claimed that there is an adequate sample size for factor analysis.

Figure 8. Pie Chart of the Respondents' Gender Distribution

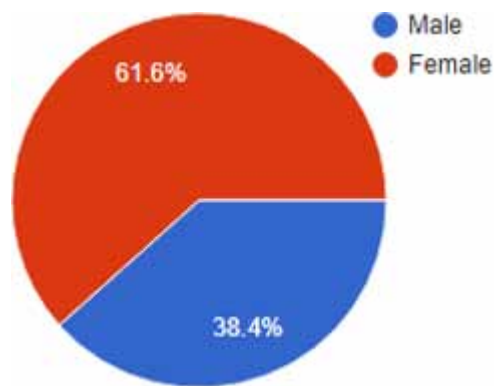


Figure 9. Pie Chart of the Respondents' Age Group

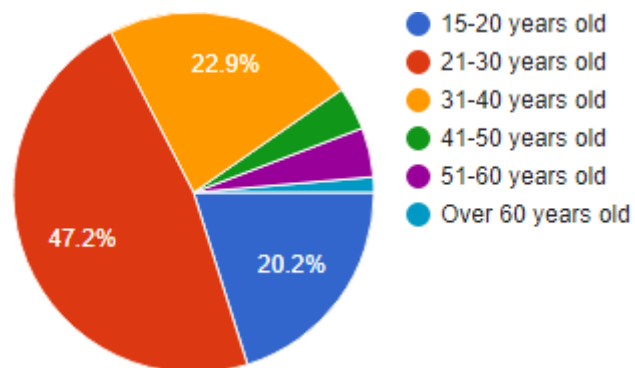


Figure 10. Pie Chart of the Respondents' Occupation

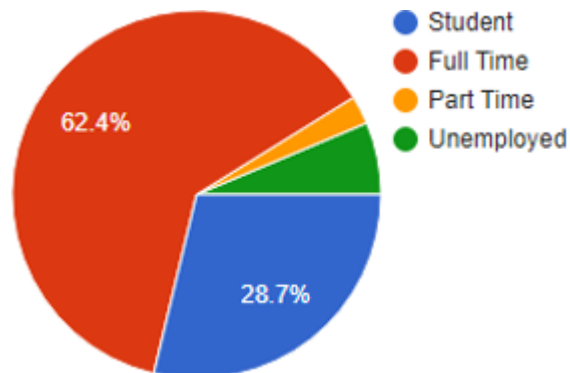
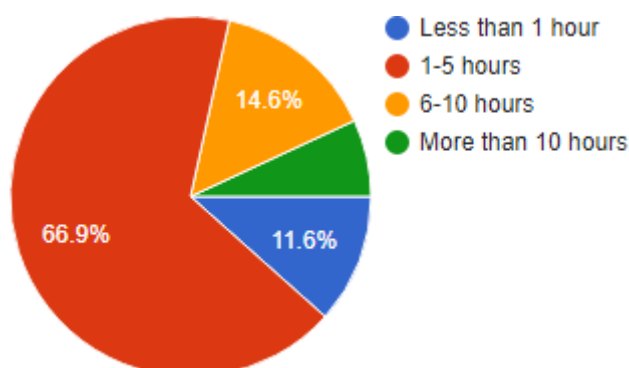


Figure 11. Pie Chart of the Respondents' Average Hour Spent Per Day on Social Media



Confirmatory Factor Analysis

The analyses were analysed using SPSS Version 25 and Microsoft Excel. The following sections included the factor loading and Cronbach Alpha's result, Spearman Correlation Analysis and Multiple Regression Analysis.

Factor loading is used to determine whether all the items in the questionnaires are practical and adequate (Cooper, Schindler and Blumberg, 2014). During the pilot test, the result can be accepted if the value is more than 0.5 but less than 0.6, however, if the value is more than 0.6, the result will also be accepted (Cooper et al., 2014). Nevertheless, according to Zikmund et al. (2013), if the value is less than 0.5, the items will have to be changed because it is necessary to meet the requirements of the rule of thumb before conducting the reliability test. As all the factor loading values shown in Table 4 are more than 0.5, the reliability level of the measures is acceptable.

According to Sekaran and Bougie (2012), the consistency of data collected for this research is measured by using the reliability test. Cronbach Alpha is applied under this test in order to measure the reliability of the questionnaire. This is to ensure that the purposes of this research is attainable by having a stable measurement, internal constancy and underlying error of measurement (Sekaran and Bougie, 2010; Quinlan, 2011). According to Cooper et al. (2014) and Zikmund et al. (2016), the result is valid if every single item of Cronbach alpha is > 0.7 , however, if it is < 0.7 , it means the items are not reliable in which they have to be detached. The Cronbach alpha is more than 0.7, hence, then reliability level of the measures is acceptable.

Table 2. Reliability Result

	Cronbach's Alpha	N of Items
Customer Satisfaction Level	0.712	4
Social Technology Approach	0.863	5
Social Media Tools	0.745	4
Social Media Engagement	0.746	4

Table 3. KMO and Bartlett's Test of Sphericity

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.826
Bartlett's Test of Sphericity	Approx. Chi-Square	851.772
	df	10
	Sig.	.000

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.700
Bartlett's Test of Sphericity	Approx. Chi-Square	457.140
	df	6
	Sig.	.000

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.723
Bartlett's Test of Sphericity	Approx. Chi-Square	400.364
	df	10
	Sig.	.000

According to Lewis, Saunders and Thornhill (2016), the purpose of correlation test is to test the strength of the linear correlation coefficient between the two variables in which the data should lie between -1 and 0. A sturdy inverse relationship is when the data shows that the value is closer to -1 between the two variables measured. Furthermore, as for the data value which is 1 indicates precisely sturdy relationship whereas 0 designates there is no measurable linear relationships between the two variables (Fellows and Liu, 2015). Nevertheless, the readings shown in Table 5 are symptomatic whereby certain items might have sturdy relationship. Henceforth, the research will be more heedful during the data analyzation as a strong correlation does not imply causation (Martz. 2013).

According to Zikmund et al. (2012), the summary of the relationship between variables and the significant level between the independent variables and dependent variable are summarized and tested using the beta coefficient test. There are three criteria to determine the acceptance of the hypotheses;

- i. The p-value must be less than 0.05 (Sekaran and Bougie, 2010). All significant values are <0.05 where the variables are relevant for this research.
- ii. The t-value for two-tier test is to be more than 1.64 (Hashim, 2010). This research uses two-tier test as two variables are used to compare the responses of the respondents. t value are > 1.64 for all the independent variables.

- iii. The beta value is to be greater than 1.0 (Keith, 2014). The phenomenon will be recognized if the beta value is more than 1.0 in which it shows that the factors are acknowledged in this study (Elsayed, 2016).

Table 4. Factor Loading and Cronbach Alpha's Result

No.	Questions	Factor Loading	Cronbach Alpha
S1	I often read posts in the social media.	0.693	0.712
S2	I often click the 'like' button on posts in the social media.	0.725	
S3	I get information concerning products, offers, campaigns through the social media.	0.720	
S4	I often share posts in the social media.	0.743	
KMO: 0.672 Bartlett's Test of Sphericity- p value < 0.05			
A1	I am able to convey verbal and non-verbal cues and facilitate shared meaning in a timely manner.	0.778	0.863
A2	I can easily obtain rapid feedback from others.	0.757	
A3	It allows me to communicate with others more efficiently and effectively.	0.683	
A4	I can enhance my relationship with others.	0.826	
A5	I am able to access for the information that I want.	0.794	
KMO:0.826 Bartlett's Test of Sphericity- p value < 0.05			
T1	I use Facebook to find out about the latest news.	0.648	0.745
T2	I find that different social media platforms are beneficial to most of us.	0.881	
T3	Many people and organisations are using social media tools to promote their businesses in order to achieve the aim of the individual/ company.	0.868	
T4	Twitter is widely used around the world to spread news.	0.647	
KMO:0.700 Bartlett's Test of Sphericity- p value < 0.05			
E1	I update my personal information on social media sites for ease of communication.	0.796	0.746
E2	I respond to social or personal updates of others.	0.825	
E3	I use LinkedIn to communicate with professionals for opinions.	0.577	
E4	I often comment on the posts in the social media.	0.805	
KMO:0.734 Bartlett's Test of Sphericity- p value < 0.05			

Table 5. Spearman Correlation Analysis

Correlations			CustomerSatisfactionLevel	SocialTechnologiesApproach	SocialMediaTools	SocialMediaEngagement
Spearman's rho	CustomerSatisfactionLevel	Correlation Coefficient	1.000	.491**	.463**	.522**
		Sig. (2-tailed)		.000	.000	.000
		N	362	362	362	362
	SocialTechnologiesApproach	Correlation Coefficient	.491**	1.000	.604**	.466**
		Sig. (2-tailed)	.000		.000	.000
		N	362	362	362	362
	SocialMediaTools	Correlation Coefficient	.463**	.604**	1.000	.471**
		Sig. (2-tailed)	.000	.000		.000
		N	362	362	362	362
	SocialMediaEngagement	Correlation Coefficient	.522**	.466**	.471**	1.000
		Sig. (2-tailed)	.000	.000	.000	
		N	362	362	362	362

** . Correlation is significant at the 0.01 level (2-tailed).

The collinearity among the independent variables is also analysed using the regression analysis where the measurement is based on Variance Inflation Factor (VIF) index. According to Kutner, Nachtsheim and Neter (2004) and Keith (2014), in order for the VIF to be accepted, the VIF should be below 10. This is to ensure that the data are statically legitimate and acceptable. The VIFs are below 10. Hence, the lower the VIF, the independent variables have stronger impact in the dependent variables (Keith, 2014).

The purpose of Multiple Linear Regression is to establish whether the relationship sustains between the variables and whether the phenomenon is explainable through the framework (Sekaran and Bougie, 2013). Referring to Table 6, the result of the R square for the proposed model was at 0.370 in which there was 37% customers' satisfaction level on social media marketing in the Malaysian hospitality industry. This can be explained by using the independent variables in this research which includes social technology approach, social media tools and social media engagement. However, 63% would possibly require other variables.

The summary of the hypotheses results for this study is presented in the following Table 7. It is clearly seen that all hypotheses are supported.

MANAGERIAL IMPLICATIONS

The objectives of this research is to find out the relationship between the dependent variable and the independent variables. The dependent variables include customer satisfaction and the independent variables consist of social technology approach, social media tools and social media engagement. Three research objectives and three hypotheses were designed to examine the parameters before the start of the data collection.

Table 6. Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
3	(Constant)	1.007	.172		5.867	.000	.670	1.345					
	SocialTechnologiesApproach	.265	.058	.265	4.602	.000	.152	.379	.522	.236	.193	.530	1.886
	SocialMediaEngagement	.253	.043	.281	5.904	.000	.168	.337	.483	.298	.247	.773	1.293
	SocialMediaTools	.199	.057	.199	3.517	.000	.088	.310	.490	.183	.147	.549	1.823

a. Dependent Variable: CustomerSatisfactionLevel

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.609 ^a	.370	.369	.56505

a. Predictors: (Constant), StAvSmTvSmEv

b. Dependent Variable: CustomerSatisfactionLevel

Table 7. Hypotheses Summary

Hypothesis	Decision
Hypothesis 1	Accepted
Hypothesis 2	Accepted
Hypothesis 3	Accepted

Hypothesis 1 (H1) states that there is a significant relationship between social technology approach and customer satisfaction on social media marketing in the Malaysian hospitality industry. This research shows that social technology approach is important and will affect the level of the customer satisfaction. Referring to the results, social technology approach has successfully achieved the second highest beta value of 0.265. This means that social technology approach is simultaneously imperative as it will affect the customers' views towards the use of technology in the social media marketing.

According to Skaržauskienė et al. (2013), social technologies include variety of technological mechanisms which have been very useful over the years as it aids many private and public sectors to achieve their target in the organizations. There were two primary components in the term of technology; one is a corporeal constituent which consists of items such as products, tool, equipment, blueprints, techniques and processes whereas the second one is the informational constituent where it includes of know-how in management, marketing, production, quality control, reliability, skilled labour and functional areas (Kumar, Kumar and Persaud, 1999). According to Penaflorida (2020), the most influential tool in affecting an organisation's business is through the voice of the customers whereby the conventional purchase decisions was guided through the consumers' reviews. Besides that, businesses do also use the customers' reviews to regulate strategies and unswervingly address customers' concerns (Penaflorida, 2020).

Hypothesis 2 (H2) designates that there is significant relationship between the customer satisfaction and the social media tools in the Malaysian hospitality industry. However, referring to the results, it has the lowest beta of 0.199 where the p-value is at 0.000 where it supports the hypothesis in this research. Social media tools have the lowest beta compared to other independent variables; social technology approach and social media engagement.

The conception and division of knowledge, information, media, ideas, opinions and insights are simplified by social media tools which at the same time tolerate people to enthusiastically contribute in the media itself (Chaturvedi and Gupta, 2014). People now are moving towards the technological era in which social media tools now are used to shop, communicate, do research, stay informed and catch new friends and enthusiasts (Martin, 2014). Furthermore, according to Huang, Baptista and Galliers (2013), social media tools are widely used by everyone where it has become a part of the collaboration provisions. In short, organizations predict that social media tools are significant instruments to reach the customers and the practices to make lucrative use of social media (Kirakosyan, 2014).

Hypothesis 3 (H3) has the highest beta of 0.281 among the other variables; social technology approach and social media tools where it has a significant relationship between customer satisfaction and social media engagement. The researcher has the intention to disproof that social media engagement is not important as it looks, however, referring to the results, it plays a vital role in determining the level of the customer satisfaction in the Malaysian hospitality industry.

Comparing the social technology approach and social media tools, most people think that engagement is more important because without engagement, the existence of technology and tools will not be relevant in this industry (Benthaus, Risius, and Beck, 2016; Risius and Beck, 2015). This is supported that the user experience was shaped by the social media engagement by nurturing a bespoke relationship among users, attending as a translucent means of communication, deliver admittance to social resources which comprises of friends, acquaintances and family members and express the probable welfares and costs to appealing within social media (Di Gangi and Wasko, 2016).

With the evolving social technologies these days, several companies are facing challenges to adapt to the latest technologies. Organizations are accountable to the customers' point of view in regard to their purpose of using different social platforms to communicate, shop, do research, stay well-versed and hook new friends (Martin, 2014). This study highlights the top priority managerial implications to aid the compressed parties. The study results offer information needed for the expansion of new strategies for businesses. Organizations will be able to exploit the study findings for developing new strategies in order to meet the customers' needs and wants.

The significant growth of online communities where businesses can engage their customers is due to the increasing numbers of smart phone users and rising perception of internet services (Otugo, Uzu-egbunam and Obikeze, 2015). Organizations may have several likes and followers on the social media page, nevertheless, organizations might face challenges in converting these followers into customers in which it leads to, one of the reasons why small scale organizations have not been able to procure the advantage of social media in heightening the sales and growing support from the customers (Alakali, Alu and Tarnong, 2013; Chikandiwa, Contogiannis and Jembere, 2013). Hence, social media tools shall be leveraged by small scale organizations in the evolving economies in order to endorse the businesses to persist pertinent in the market (Olotewo, 2016).

As for larger scale organizations, the organizations have stretched the maturity level and lookout for new businesses that could fully utilize the social media marketing strategy for new sources of revenue. Hence, this research offers valued information for larger organizations to look into the benefit of social

media by understanding the customers' satisfaction through social technology approach, social media tools and social media engagement. Henceforth, in order to upsurge its brand engagement and create more customer pleasures, organizations shall look into the design of effective social media marketing strategy (Olotewo, 2016).

CONCLUSION AND FURTHER RESEARCH

The clarifications of the research questions can be explained through the data results obtained and analysed in the research findings. All independent variables have significant relationships on the dependent variable where all the independent variables are equally important towards the level of customer satisfaction on social media marketing in the hospitality industry. All of the independent variables have successfully achieved p-values of 0.00 and beta of 0.281 (social media engagement), 0.265 (social technology approach) and 0.199 (social media tools) respectively. These findings would benefit the industry to look comprehensively in all the variables discussed in this research in order to further enhance or increase the revenue of the organizations. The future researchers will also be able to use the results of the data collected as stepping stones to their future researches. This will aid the researchers in spending more time to do research on the information that they wish to search for. With reference to the hypotheses result, the researchers are able to exploit these findings as references. In order to comply with the variables of the future researchers, further enhancement will be needed in order to fit in the appropriate variables to the suitable industry.

Every research has its own limitations and challenges. Time constraint had simultaneously affected the sample size of this research. The questionnaires were distributed online in order to achieve the expected target. The demographic of the questionnaires were carefully selected to avoid asking the respondents to answer unnecessary/ unrelated questions. This demographic was only used to analyse the percentage of each category but not to the extent of analysing the data as part of the moderating variables.

Besides that, it also limited the exploration scope of the researcher as the number of respondents targeted was at 400. However, due to time constraint, the researcher was only able to obtain 80% of the 400 questionnaires distributed. This was because, not all respondents were willing to spend their time to answer the questionnaires that were distributed to them. Hence, at least 80% of the response rate was sufficient for the data collection. Last but not least, as there were not many researches done in this field, the researcher had a hard time searching for relevant information through online and e-books. With the amount of time given and limited resources from the other authors, it was a challenge for the researcher to obtain additional information.

Most researches were done in a dissimilar field in which it is limited to be found in Malaysia. Hence, with this research majoring in the Malaysian hospitality industry, it can provide the overview on some of the ways or reasons on how and why these variables are important to measure the level of the customer satisfaction. In the event customer satisfaction is left unattended, it will affect the performance of the business, for example the revenue or sales of the organization. Besides that, it will also distress the brand reputation of the company in the market. Consequently, in this research, all three variables shows that they have significant relationships in influencing the customer satisfaction. These findings will benefit the industry to look comprehensively in all the variables discussed in this research in order to aid the businesses in increasing the revenue and brand reputation of the organizations.

REFERENCES

- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665–683. doi:10.1111/j.1559-1816.2002.tb00236.x
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474. doi:10.1016/0022-1031(86)90045-4
- Akman, I., & Mishra, A. (2017). Factors Influencing Consumer Intention in Social Commerce Adoption. *Information Technology & People*, 30(2), 356–370. doi:10.1108/ITP-01-2016-0006
- Akram, W. (2018). A Study on Positive and Negative Effects of Social Media on Society. *International Journal on Computer Science and Engineering*, 5(10), 347–354.
- Akram, W., & Kumar, R. (2017). A Study on Positive and Negative Effects of Social Media on Society. *International Journal on Computer Science and Engineering*, 5(10), 351–354.
- Al-Deen, H. S. N., & Hendricks, J. A. (2011). *Social media: usage and impact*. Lexington Books.
- Al-Sharqi, L., Hashim, K., & Kutbi, I. (2015). Perception of Social Media Impact on Students' Social Behaviour: A Comparison between Arts and Science Students. *International Journal of Education and Social Science*, 2(4), 122–131.
- Alakali, T. T., Alu, F. A., Tarnong, M., & Ogbu, E. (2013). The Impact of Social Marketing Networks on the Promotion Of Nigerian Global Market: An analytical approach, Advertising/Marketing: A Study of Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action Control* (pp. 11–39). Springer.
- Alakali, T. T., Alu, F. A., Tarnong, M., & Ogbu, E. (2013). The Impact of Social Marketing Networks on the Promotion of Nigerian Global Market: An analytical Approach. *International Journal of Humanities and Social Science Invention*, 2(3), 1–8.
- Alberghini, E., Cricelli, L., & Grimaldi, M. (2010). Implementing knowledge management through IT opportunities: definition of a theoretical model based on tools and processes classification. *The Proceedings of the 2nd European Conference on Intellectual Capital*, 22-33.
- Alexander, R. M., & Gentry, J. K. (2014). Using social media to report financial results. *Business Horizons*, 57(2), 161–167. doi:10.1016/j.bushor.2013.10.009
- Alhabash, S., McAlister, A. R., Quilliam, E. T., Richards, J. I., & Lou, C. (2015). Alcohol's getting a bit more social: When alcohol marketing messages on Facebook increase young adults' intentions to imbibe. *Mass Communication & Society*, 18(3), 350–375. doi:10.1080/15205436.2014.945651
- Aliyu, A. A., Rosmain, T., & Takala, J. (2014). Online banking and customer service delivery in Malaysia: Data screening and preliminary findings. *Procedia: Social and Behavioral Sciences*, 129, 562–570. doi:10.1016/j.sbspro.2014.03.714

Anand, T., Ramachandran, J., Sambasivan, M., & Batra, G. S. (2019). Impact of Hedonic Motivation on Consumer Satisfaction Towards Online Shopping: Evidence from Malaysia. *e-Service Journal*, 11(1), 56. doi:10.2979/eservicej.11.1.03

Anderson, C. (2012). The impact of social media on lodging performance. *Cornell Hospitality Report*, 12(15), 4–11.

Asian Institute of Finance. (2016). *Malaysia embraces a shift to digital banking* [Press release]. Available at: <https://www.aif.org.my/symposium2016>

Bahari, M.F. (2014). *Kepuasan pelajar terhadap kualiti perkhidmatan perbankan Islam di Malaysia* (Master Dissertation). Universiti Malaya.

Barquin, S., & Vinayak, H.K. (2015). Digital banking in Asia: What do consumers really want? *Asia Banking Practice*, 1-12.

Benthaus, J., Risius, M., & Beck, R. (2016). Social media management strategies for organizational impression management and their effect on public perception. *The Journal of Strategic Information Systems*, 25(2), 127–139. doi:10.1016/j.jsis.2015.12.001

Billington, M. G., & Billington, P. J. (2012). Social Media Tools for Leaders and Managers. *Journal of Leadership, Accountability and Ethics*, 9(6), 11–19.

Bitner, M., Zeithaml, V., & Gremler, D. (2010). Technology's Impact on the Gaps Model of Service Quality. In *Handbook of Service Science*. Springer. doi:10.1007/978-1-4419-1628-0_10

Blankespoor, E., Miller, G. S., & White, H. D. (2013). The role of dissemination in market liquidity: Evidence from firms' use of Twitter™. *The Accounting Review*, 89(1), 79–112. doi:10.2308/accr-50576

Bowie, D., & Buttle, F. (2004). *Hospitality marketing*. Elsevier Butterworth-Heinemann.

Brey, P. (2009). Philosophy of Technology Meets Social Constructivism: A Shopper's Guide. In D. M. Kaplan (Ed.), *Readings in the Philosophy of Technology* (2nd ed., pp. 268–324). Rowman & Littlefield Publishers.

Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114. doi:10.1016/j.jbusres.2011.07.029

Bughin, J., Byers, A. H., & Chui, M. (2011). *How business uses social technologies*. McKinsey Quarterly.

Bughin, J., Chui, M., Manyika, J. (2013, May). Ten IT-enabled business trends for the decade ahead. *McKinsey Quarterly*.

Calder, B. J., Isaac, M. S., & Malthouse, E. C. (2016). How to Capture Consumer Experiences: A Context-Specific Approach to Measuring Engagement Predicting Consumer Behavior across Qualitatively Different Experiences. *Journal of Advertising Research*, 56(1), 39–52. doi:10.2501/JAR-2015-028

Cengiz, E. (2010). 'Measuring customer satisfaction: Must or not? *Journal of Naval Science and Engineering*, 6(2), 76–88.

- Charoensukmongkol, P., & Sasatanun, P. (2017). Social media use for CRM and business performance satisfaction: The moderating roles of social skills and social media sales intensity. *Asia Pacific Management Review*, 22(1), 25–34. doi:10.1016/j.apmr.2016.10.005
- Chaturvedi, S., & Gupta, S. (2014). Social media – A new tool in modern era marketing. *International Journal of Engineering Sciences and Management Research*, 1(2).
- Chen, X., Yu, H., Gentry, J. W., & Yu, F. (2016). Complaint or recommendation? The impact of customers' state and trait goal orientations on customer engagement behaviours. *Journal of Consumer Behaviour*.
- Chikandiwa, S. T., Contogiannis, E., & Jembere, E. (2013). The Adoption of Social Media Marketing in South African Banks. *European Business Review*, 25(4), 365–381. doi:10.1108/EBR-02-2013-0013
- Chong, H. L., Islam, M. A., Manaf, A. H. A., & Mustafa, W. M. W. (2015). User's satisfaction towards online banking in Malaysia. *International Business Management*, 9(1), 15–27.
- Chuck, M. (2019). *Social Media Marketing Converts Up to 3-Fold Because Millennials Are Paying For It*. Business to Community. Available at: <https://www.business2community.com/social-media/social-media-marketing-converts-up-to-3-fold-because-millennials-are-paying-for-it-02214169>
- Cochrane, J. (2010). The sphere of tourism resilience. *Tourism Recreation Research*, 35(2), 173–186. doi:10.1080/02508281.2010.11081632
- Collins, S. E., & Carey, K. B. (2007). The theory of planned behavior as a model of heavy episodic drinking among college students. *Psychology of Addictive Behaviors*, 21(4), 498–507. doi:10.1037/0893-164X.21.4.498 PMID:18072832
- Cooper, D., & Schindler, P. (2013). *Business Research Methods* (12th ed.). McGraw-Hill Higher Education.
- Cooper, D., Schindler, P., & Blumberg, B. (2014). *Business research methods*. McGraw-Hill Education.
- Cooper, D., Schindler, P., & Blumberg, B. (2014). *Business research methods*. McGraw-Hill Education.
- Daj, A. (2013). Economic and legal aspects of introducing novel TCT instruments: Integrating sound into social media marketing- from audio branding to soundscaping. *Economic Sciences*, 6(2), 15–24.
- David, S., Czellar, S., & Spangenberg, E. (2009). The Importance of a General Measure of Brand Engagement on Market Behavior: Development and Validation of a Scale. *Journal of Marketing*, 46(1), 92–104. doi:10.1509/jmkr.46.1.92
- Department of Statistics Malaysia. (2019). *Department of Statistics Malaysia Official Portal*. Available at: https://www.dosm.gov.my/v1/index.php?r=column/cthemByCat&cat=448&bul_id=VmZsbTU4NDlFcFZRdVF6ZDF3OW4zZz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09
- Derksen, M., Vikkelsø, S., & Beaulieu, A. (2012). Social technologies: Cross-disciplinary reflections on technologies in and from the social sciences. *Theory & Psychology*, 22(2), 139–147. doi:10.1177/0959354311427593
- Dessart, L., Veloutsou, C., & Morgan-Thomas, A. (2015). Consumer engagement in online brand communities: A social media perspective. *Journal of Product and Brand Management*, 24(1), 28–42. doi:10.1108/JPBM-06-2014-0635

- Di Gangi, P. M., & Wasko, M. M. (2016). Social Media Engagement Theory: Exploring the Influence of User Engagement on Social Media Usage. *Journal of Organizational and End User Computing*, 28(2), 53–73. doi:10.4018/JOEUC.2016040104
- Ding, C., Cheng, H. K., Duan, Y., & Jin, Y. (2017). The power of the “like” button: The impact of social media on box office. *Decision Support Systems*, 94, 77–84. doi:10.1016/j.dss.2016.11.002
- Dominici, G., & Palumbo, F. (2013). ‘How to build an e-learning product: Factors for student/customer satisfaction’. *Business Horizons*, 56(1), 87–96. doi:10.1016/j.bushor.2012.09.011
- Elsayed, A. M. (2016). The use of academic social networks among Arab researchers: A survey. *Social Science Computer Review*, 34(3), 378–391. doi:10.1177/0894439315589146
- Eriksson, M., & Schuster, C. (2009). Customer loyalty in internet banking. *International Business and Economic Program*. Available at: <https://pdfs.semanticscholar.org/b80e/c00595e88cef0a1ea78fd6336e93789602ad.pdf>
- Fellows, R., & Liu, A. (2015). *Research Methods for Construction* (4th ed.). Wiley Blackwell.
- Fielding, K. S., McDonald, R., & Louis, W. R. (2008). Theory of planned behaviour, identity and intentions to engage in environmental activism. *Journal of Environmental Psychology*, 28(4), 318–326. doi:10.1016/j.jenvp.2008.03.003
- Fox, S., & Rainie, L. (2014). *The web at 25 in the U. S. Pew Research Center Internet and America Life Project*. Academic Press.
- Ganiyu, R. A., Uche, I. I., & Adeoti, O. E. (2012). Is customer satisfaction an indicator of customer loyalty? *Australian Journal of Business and Management Research*, 2(7), 14–20.
- Geissinger, A., & Laurell, C. (2016). User engagement in social media: An explorative study of Swedish fashion brands. *Journal of Fashion Marketing and Management*, 20(2), 177–190. doi:10.1108/JFMM-02-2015-0010
- Gerlitz, C., & Helmond, A. (2013). The like economy: Social buttons and the data-intensive web. *New Media & Society*, 15(8), 1348–1365. doi:10.1177/1461444812472322
- Gonzalez, C. (2010). *Social Media Best Practices for Communication Professionals through the Lens of the Fashion Industry* (MA thesis). The University of Southern California.
- Gracia, A., & de Magistris, T. (2013). Organic food product purchase behaviour: A pilot study for urban consumers in the south of Italy. *Spanish Journal of Agricultural Research*, 5(4), 439–451. doi:10.5424jar/2007054-5356
- Gruber, D. A., Smerek, R. E., Thomas-Hunt, M. C., & James, E. H. (2015). The real-time power of Twitter: Crisis management and leadership in an age of social media. *Business Horizons*, 58(2), 163–172. doi:10.1016/j.bushor.2014.10.006
- Hague, P., & Hague, N. (2016). *Customer Satisfaction Survey: The customer experience through the customer’s eyes*. Cogent Publication.
- Hamid, F. S. (2011). Measuring service quality in the takaful industry. *SEGi Review*, 4(1), 118–124.

Han, H., Hsu, L.-T. J., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management*, 31(3), 325–334. doi:10.1016/j.tourman.2009.03.013

Han, H., & Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust and price reasonableness. *Tourism Management*, 46, 20–29. doi:10.1016/j.tourman.2014.06.003

Hanif, M., Hafeez, S., & Riaz, A. (2010). Factors affecting customer satisfaction. *International Research Journal of Finance and Economics*, 60(1), 44–52.

Hao, J. X., Yu, Y., Law, R., & Fong, D. K. C. (2015). A genetic algorithm-based learning approach to understand customer satisfaction with OTA websites. *Tourism Management*, 48, 231–241. doi:10.1016/j.tourman.2014.11.009

Harvey, C. G., Stewart, D. B., & Ewing, M. T. (2011). Forward or delete: What drives peer-to-peer message propagation across social networks? *Journal of Consumer Behaviour*, 10(6), 365–372. doi:10.1002/cb.383

Hashim, Y. (2010). Determining Sufficiency of Sample Size in Management Survey Research Activities. *International Journal of Organisational Management & Entrepreneurship Development*, 6(1), 119–130.

Haven, B. (2007). *Marketing's new key metric: Engagement*. Forrester Research.

Heizer, J., & Render, B. (2011). *Principles of Operations Management*. 8. Prentice Hall.

Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The impact of new media on customer relationships. *Journal of Service Research*, 13(3), 311–330. doi:10.1177/1094670510375460

Hofmann, S., Beverungen, D., Räckers, M., & Becker, J. (2013). What makes local governments' online communications successful? Insights from a multi-method analysis of Facebook. *Government Information Quarterly*, 30(4), 387–396. doi:10.1016/j.giq.2013.05.013

Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. doi:10.1016/j.intmar.2013.12.002

Huang, J., Baptista, J., & Galliers, R. D. (2013). Reconceptualizing rhetorical practices in organizations: The impact of social media on internal communications. *Information & Management*, 50(2), 112–124. doi:10.1016/j.im.2012.11.003

Huang, Y., Huo, S., Yao, Y. C., Hanif, N., Wang, Y., Grygiel, J., & Sawyer, S. (2016). Municipal police departments on Facebook: What are they posting and are people engaging? *Proceedings of the 17th Annual International Conference on Digital Government Research*. 10.1145/2912160.2912189

Hysenlika, V. (2012). *Communicating During an Organizational Crisis: Using Facebook as a Relationship Management Tool*. South Florida.

Itzhakov, G., & Latham, G. (2018). The Moderating Effect of Performance Feedback and the Mediating Effect of Self-Set Goals on the Primed Goal-Performance Relationship. *Applied Psychology*.

- Jani, D., & Han, H. (2013). Personality, social comparison, consumption emotions, satisfaction, and behavioral intentions: How do these and other factors relate in a hotel setting? *International Journal of Contemporary Hospitality Management*, 25(7), 970–993. doi:10.1108/IJCHM-10-2012-0183
- Jha, R., Shah, D. K., Basnet, S., Paudel, K.R., Sah, P., Sah, A., & Adhikari, K. (2016). *Facebook use and its effect on the life of health science students in a private medical of Nepal*. Academic Press.
- Jiang, H., Luo, Y., & Kulemeka, O. (2016). Social media engagement as an evaluation barometer: Insights from communication executives. *Public Relations Review*, 42(4), 679–691. doi:10.1016/j.pubrev.2015.12.004
- Kane, G. C., Alavi, M., Labianca, G., & Borgatti, S. P. (2014). What's different about social media networks? A framework and research agenda. *Management Information Systems Quarterly*, 38(1), 275–304. doi:10.25300/MISQ/2014/38.1.13
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. doi:10.1016/j.bushor.2009.09.003
- Kapoor, K. K., Tamilmani, K., Rana, N. P., Dwivedi, Y. K., Nerur, S., & Patil, P. (2017). Advances in Social Media Research: Past, Present and Future. *Information Systems Frontiers*, 1–28.
- Kashif, M., Altaf, U., Ayub, H. M., Asif, U., & Walsh, J. C. (2014). Customer satisfaction at public hospitals in Pakistan: PAKSERV application. *Global Business Review*, 15(4), 677–693. doi:10.1177/0972150914543556
- Kaura, V., & Datta, S. K. (2012). Role of customers and employees in service delivery and customer satisfaction: Survey evidence from banks in Rajasthan. *IUP Journal of Bank Management*, 11(4), 121–126.
- Keith, T. Z. (2014). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling*. Routledge. doi:10.4324/9781315749099
- Khan, I. (2012). Impact of customer satisfaction and retention on customer loyalty. *International Journal of Scientific and Technology Research*, 1(2), 106–110.
- Khattak, N. A. (2010). Customer satisfaction and awareness of Islamic banking system in Pakistan. *African Journal of Business Management*, 4(5), 662–671.
- Khristianto, W., Kertahadi, I., & Suyadi, I. (2012). The influence of information, system and service on customer satisfaction and loyalty in online shopping. *International Journal of Academic Research*, 4(2), 28–32.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social Media? Get Serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. doi:10.1016/j.bushor.2011.01.005
- Kim, J. (2012). *Developing an Empirical Model of College Students' Online Shopping*. Academic Press.
- Kim, K., Oglesby-Neal, A., & Mohr, E. (2017). *2016 Law Enforcement Use of Social Media Survey*. Academic Press.
- King, D. L. (2015). Why use social media? *Library Technology Reports*, 51(1), 6–9.

- Kirakosyan, K. (2014). Social Media Usage in Banking Industry and its Managerial View: Case Study for Mexican Banking System. *Journal of Economic and Social Development*, 2(1), 34–43.
- Koo, Ch., Wati, Y., & Jung, J. J. (2011). Examination of how social aspects moderate the relationship between task characteristics and usage of social communication technologies (SCTs) in organizations. *International Journal of Information Management*, 31(5), 445–459. doi:10.1016/j.ijinfomgt.2011.01.003
- Kotler, P., & Armstrong, G. (2012). *Principle of Marketing* (14th ed.). Pearson Education Inc.
- Kumar, V., Kumar, U., & Persaud, A. (1999). Building Technological Capability through Importing Technology: The Case of Indonesian Manufacturing Industry. *Journal of Technology Transfer*, 24, 81–96.
- Kutner, M. H., Nachtsheim, C. J., & Neter, J. (2004). *Applied Linear Regression Models* (4th ed.). McGraw-Hill Irwin.
- Lee, H. S. (2013). Major moderators influencing the relationships of service quality, customer satisfaction and customer loyalty. *Asian Social Science*, 9(2), 1–11. doi:10.5539/ass.v9n2p1
- Lee, J., Agrawal, M., & Rao, H. R. (2015). Message diffusion through social network service: The case of rumor and non-rumor related tweets during Boston bombing 2013. *Information Systems Frontiers*, 17(5), 997–1005. doi:10.1007/10796-015-9568-z
- Lee, S.-Y., Hansen, S. S., & Lee, J. K. (2016). What makes us click “like” on Facebook? Examining psychological, technological, and motivational factors on virtual endorsement. *Computer Communications*, 73, 332–341. doi:10.1016/j.comcom.2015.08.002
- Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2019). Social Media in Tourism and Hospitality: A Literature Review. *Journal of Travel & Tourism Marketing*, 30(1-2), 3–22. doi:10.1080/10548408.2013.750919
- Lev-On, A., & Steinfeld, N. (2015). Local engagement online: Municipal Facebook pages as hubs of interaction. *Government Information Quarterly*, 32(3), 299–307. doi:10.1016/j.giq.2015.05.007
- Lewis, P., Saunders, M., & Thornhill, A. (2016). *Research Method for Business Students* (7th ed.). Pearson Education Limited.
- Lim, L. S. (2017). An empirical study on the impact of patient perceived value on patient satisfaction in private hospitals in Klang Valley, Malaysia. *South East Asia Journal of Contemporary Business. Economics and Law.*, 13(2), 71–77.
- Ling, K. C., Daud, D. B., Piew, T. H., Keoy, K. H., & Hassan, P. (2011). Perceived risk, perceived technology, online trust for the online purchase intention in Malaysia. *International Journal of Business and Management*, 6(6), 167–182.
- Liobikiene, G., Mandravickaite, J., & Bernatoniene, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. *Ecol. Econ.*, 125, 38–46.
- Liu, I., Pan, H., & Zheng, S. (2019). Tourism Development, Environment and Policies: Differences between Domestic and International Tourists. *Economics and Management School*, 11.

- Lowisz, S. (2014). *The influence of Social Media on Today's Culture*. Stevelowisz.com/wp.../02/The-Influence-of-Social-media-in-Todays-Culture-wp.pdf
- Mainika, A., Hartmann, S., Stock, W. G., & Peters, I. (2015). Looking for friends and followers: A global investigation of governmental social media use. *Transforming Government: People, Process and Policy*, 9(2), 237–254.
- Malthouse, E. C., Calder, J. C., Kim, S. J., & Vandenbosch, M. (2016). Evidence that user-generated content that produces engagement increases purchase behaviors. *Journal of Marketing Management*, 32(5–6), 427–444. doi:10.1080/0267257X.2016.1148066
- Marbach, J., Lages, C. R., & Nunan, D. (2016). Who are you and what do you value? Investigating the role of personality traits and customer-perceived value in online customer engagement. *Journal of Marketing Management*, 32(5–6), 502–525. doi:10.1080/0267257X.2015.1128472
- Martin, E. J. (2014). The state of social media. *EContent (Wilton, Conn.)*, 37(1), 21–21.
- Martz, E. (2013). *No Matter How Strong*. Correlation Still Doesn't Equal Causation.
- Matikitia, R., Krugerb, M., & Saaymanc, M. (2016). The usage of social media as a marketing tool in two Southern African countries. *Development Southern Africa*, 33(5), 740–755. doi:10.1080/0376835X.2016.1204228
- McColl-Kennedy, J. R. (2015). Customer satisfaction, assessment, intentions and outcome behaviors of dyadic service encounters: A conceyfual model. In *Proceedings of the 1998 Academy of Marketing Science (AMS) Annual Conference* (pp. 48-54). Springer International Publishing. 10.1007/978-3-319-13084-2_10
- McKinsey and Company. (2014). *Digital Banking in Asia*. Available at: <https://www.mckinsey.com/singapore/our-insights/digital-banking-in-asia-winning-approaches-in-a-new-generation-of-financial-services>
- Michalska, K. K., Lilleker, D., & Michalski, T. (2016). Social Media Affordances, Election Campaigns and Follower Interactions. *Proceedings of the 112th Annual Meeting of the American Political Science Association*.
- Mishra, P. (2015). Motivator of Online Shopping: The Income Factor. *Asian Journal of Research in Marketing*, 4(6), 62–75.
- Momtaz, H., Islam, M. A., Ariffin, K. H. K., & Karim, A. (2011). Customers Satisfaction on Online Shopping in Malaysia. *International Journal of Business and Management*, 6(10). Advance online publication. doi:10.5539/ijbm.v6n10p162
- Muniady, R., Al-Mamun, A., Yukthamarani, P. P., & Zainol, N. R. (2014). Factors Influencing Consumer Behavior: A Study among University Students in Malaysia. *Asian Social Science*, 10(9), 18–25. doi:10.5539/ass.v10n9p18
- Munusamy, J., Annamalah, S., & Chelliah, S. (2012). A study of users and non- users of internet banking in Malaysia. *International Journal of Innovation, Management and Technology*, 3(4), 452–458. doi:10.7763/IJIMT.2012.V3.274

- Munusamy, J., Chelliah, S., & Mun, H. W. (2010). Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia. *International Journal of Innovation, Management and Technology*, 1(4), 398–404.
- Naik, C. K., Gantasala, S. B., & Prabhakar, G. V. (2010). Service quality (SERVQUAL) and its effect on customer satisfaction in retailing. *European Journal of Soil Science*, 16(2), 231–243.
- Noreen, T., & Han, S. (2015). Exploratory Study of the Impact of Social Media Marketing on Consumer Purchase Intention. *AMJ*, 17(3), 53.
- Oliver, R. L. (2014). *Satisfaction: A Behavioral Perspective on the Consumer*. Routledge. doi:10.4324/9781315700892
- Olotewo, J. (2016). Social Media Marketing in Emerging Markets. *International Journal of Online Marketing Research*, 2(2), 10. doi:10.5455/IJOMR.2016254411
- Ong, T. S., Hong, Y. H., Teh, B. H., Soh, P. C. H., & Tan, C. P. (2014). Factors that affect the adoption of internet banking in Malaysia. *International Business Management*, 8(2), 55–63.
- Osman, Z., Mohamad, L., & Mohamad, R. K. (2015). An empirical study of direct relationship of service quality, customer satisfaction and bank image on customer loyalty in Malaysian Commercial Banking Industry. *American Journal of Economics*, 5(2), 168–176.
- Otugo, N. E., Uzuegbunam, C. E., & Obikeze, C. O. (2015). Social Media Advertising/ Marketing: A Study of Awareness, Attitude and Responsiveness by Nigerian Youths, *International Conference on Communication, Media, Technology and Design*, Dubai, UAE.
- Paine, K. D. (2011). *Measure what matters: Online tools for understanding customers, social media, engagement, and key relationships*. Wiley.
- Parasuraman, A. (2010). Service productivity, quality and innovation. *International Journal of Quality and Service Sciences*, 2(3), 277–286. doi:10.1108/17566691011090026
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Patch, C. S., Tapsell, L. C., & Williams, P. G. (2005). Attitudes and intentions toward purchasing novel foods enriched with omega-3 fatty acids. *Journal of Nutrition Education and Behavior*, 37(5), 235–241. doi:10.1016/S1499-4046(06)60277-7 PMID:16053811
- Penaflorida, R. (2020). *The Impact of Technology on the Customer Experience* | Reviewtrackers. Available at: <https://www.reviewtrackers.com/blog/technology-customer-experience/>
- Pew Research Center. (2018). *A majority of Facebook, Snapchat and Instagram users visit these platforms on a daily basis*. Author.
- Quinlan, C. (2011). *Business Research Methods* (1st ed.). Cengage Learning EMEA.
- Ramey, K. (2012). *Modern Technology Advantages and Disadvantages*. Academic Press.

Razak, M. I. M., Idris, R., Yusof, M. M., Jaapar, W. E., & Ali, M. N. (2013). Acceptance determinants towards Takaful products in Malaysia. *International Journal of Humanities and Social Science*, 3(17), 243–252.

Risius, M., & Beck, R. (2015). Effectiveness of corporate social media activities in increasing relational outcomes. *Information & Management*, 52(7), 824–839. doi:10.1016/j.im.2015.06.004

Rosman, R., & Stuhura, K. (2013). The Implications of Social Media on Customer Relationship Management and the Hospitality Industry. *Journal of Management Policy and Practice*, 14(3).

Ruddell, R., & Jones, N. (2013). Social media and policing: Matching the message to the audience. *Safer Communities*, 12(2), 64–70. doi:10.1108/17578041311315030

Sakhaei, S. F., Afshari, A. J., & Esmaili, E. (2014). The Impact of Service Quality on Customer Satisfaction in Internet Banking. *J Math Computer Sci*, 9(01), 33–40. doi:10.22436/jmcs.09.01.04

Scheers, L., & Prinsloo, C. (2012). Investigating Word of Mouth as Advertising Tool for Mobile devices in South Africa. *International Journal of Academic Research in Business & Social Sciences*, 4(11). Advance online publication. doi:10.6007/IJARBS/v4-i11/1315

Schirr, G. (2013). Community-Sourcing a New Marketing Course: Collaboration in Social Media. *Marketing Education Review*, 23(3), 225–240. doi:10.2753/MER1052-8008230302

Schneider, C. J. (2016). Police presentational strategies on Twitter in Canada. *Policing and Society*, 26(2), 129–147. doi:10.1080/10439463.2014.922085

Scott, J., & Carrington, P. J. (2011). *The SAGE Handbook of Social Network Analysis*. London: SAGE.

Sekaran, U. (2003). *Research Methods for Business: A Skill-Building Approach* (4th ed.). John Wiley and Sons, Inc.

Sekaran, U. (2003). *Research Methods for Business A Skill-Building Approach* (4th ed.). John Wiley & Sons.

Sekaran, U., & Bougie, R. (2010). *Research methods for business. A skill-building approach*. John Wiley & Son Ltd.

Sekaran, U., & Bougie, R. (2013). *Research Methods for Business A Skill- Building Approach* (6th ed.). Wiley.

Sekaran, U., & Bougie, R. J. (2017). *Research Methods for Business 7E Wiley Plus Learning Space Student Package*. John Wiley & Sons, Limited.

Shahid, A., Saeed, H., & Tirmizi, S. M. A. (2015). Economic development and banking sector growth in Pakistan. *Journal of Sustainable Finance and Investment*, 5(3), 121–135.

Shively, K. (2014). *How top brand marketers used Twitter during Q4 of 2013*. Academic Press.

Skaržauskienė, A., Tamošiūnaitė, R., & Žalėnienė, I. (2013). Defining Social Technologies: Evaluation of social collaboration tools and technologies. *The Electronic Journal Information Systems Evaluation*, 16(3), 232–241.

Skrbina, D. (2015). *The Metaphysics of Technology*. Routledge.

Smith, A., and Anderson, M. (2018). *Social Media Use 2018: Demographics and Statistics*. Pew Research Center.

StatCounter. (2019). *Social Media Stats Malaysia*. StatCounter Global Stats.

Statista. (2019). *Malaysia: social media penetration 2018 Statistic*. Author.

Statista Research Department. (2019). *Malaysia: social media penetration 2018*. Statista.

Suki, N. M. (2013). Consumer shopping behaviour on the Internet: Insights from Malaysia. *Electronic Commerce Research*, 13(4), 477–491. doi:10.1007/10660-013-9131-2

Tanupabrungsun, S., Hemsley, J., Semaan, B., & Stromer-Galley, J. (2016). Noisy candidates and informative politicians: Analyzing changes in tweet behavior using tweet quality assessment framework. *Proceedings of the 2016 iConference*. 10.9776/16235

Tao, F. (2014). Customer Relationship management based on Increasing Customer Satisfaction. *International Journal of Business and Social Science*, 5(5), 256–263.

Tariq, W., Mehboob, M., Khan, A., & Ullah, F. (2012). The Impact of Social Media and Social Networks on Education and Students of Pakistan. *International Journal of Computer Science Issues*, 9(4), 3.

Tateke, T., Woldie, M., & Ololo, S. (2012). Determinants of patient satisfaction with outpatient health services at public and private hospitals in Addis Ababa, Ethiopia. *African Journal of Primary Health Care & Family Medicine*, 4(1), 1–11. doi:10.4102/phcfm.v4i1.384

Ting, H., Wong, W., De Run, E.C., & Lau, S.Y.C. (2015). Beliefs about the use of Instagram: An exploratory study. *International Journal of Business and Innovation*, 2(2), 15-23.

Trainor, K. J., Andzulis, J., Rapp, A., & Agnihotri, R. (2014). Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of Business Research*, 67(6), 1201-1208.

Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behaviour: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266. doi:10.1177/1094670510375599

Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A Work-In-Process Literature Review: Incorporating Social Media in Risk and Crisis Communication. *Journal of Contingencies and Crisis Management*, 19(2), 110–122. doi:10.1111/j.1468-5973.2011.00639.x

Verhoef, P. C., Reinartz, W. J., & Krafft, M. (2010). Customer engagement as a new perspective in customer management. *Journal of Service Research*, 13(3), 247–252. doi:10.1177/1094670510375461

Volti, R. (2009). *Society and Technological Change* (7th ed.). Worth Publishers.

Walaski, P. (2013). Social Media. *Professional Safety*, 58(4), 40–49. PMID:23288529

Wang, Y. H. (2017). Expectation, service quality, satisfaction and behavioural intention-evidence from Taiwan's medical tourism industry. *Advances in Management and Applied Economics.*, 7(1), 1–16.

- Warr, P., & Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person-job fit. *Journal of Occupational Health Psychology, 17*(2), 129–138. doi:10.1037/a0026859 PMID:22308964
- Wee, C. S., Ariff, M. S., Zakuan, N., Tajudin, M. N., Ismail, K., & Ishak, N. (2014). Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products. *Review of Integrative Business and Economics Research, 3*(2), 378–397.
- White, C. (2015). The Impact of Motivation on Customer Satisfaction Formation: A Self-Determination Perspective. *European Journal of Marketing, 49*(11/12), 1923–1940. doi:10.1108/EJM-08-2014-0501
- Wirtz, J., Den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., van de Klundert, J., & Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management, 24*(3), 223–244. doi:10.1108/09564231311326978
- Wolf, D. M., Wenskovitch, J., & Anton, B. B. (2016). Nurses' use of the Internet and social media: Does age, years of experience and educational level make a difference? *Journal of Nursing Education and Practice, 6*(2), 68–75.
- Wolf, M. V., Sims, J., & Yang, H. (2017). *Value Creation Through Relationships Building On Private And Public Social Media*. Paper presented at the 11th Multi Conference on Computer Science and Information Systems (MCCSIS 2017), Lisbon, Portugal.
- Wu, C. C. (2011). The impact of hospital brand image on service quality, patient satisfaction and loyalty. *African Journal of Business Management, 5*(12), 4873–4882.
- Yelkikalan, N., Hacioglu, G., Kiray, A., Ezilmez, B., Soylemezoglu, E., Cetin, H., Sonmez, R., & Özturk, S. (2012). Emotional intelligence characteristics of students studying at various faculties and colleges of universities. *European Scientific Journal, 8*(8), 33–50.
- Yeoh, E., Othman, K., & Ahmad, H. (2013). Understanding medical tourists: Word-of-mouth and viral marketing as potent marketing tools. *Tourism Management, 34*, 196–201. doi:10.1016/j.tourman.2012.04.010
- Zeithaml, V., Bitner, M. J., & Gremler, D. D. (2013). *Services Marketing: Integrating Customer Focus across the Firm* (6th ed.). Mc-Graw Hill.
- Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2013). *Business Research Methods*. CENGAGE Learning Custom Publishing.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Method* (9th ed.). Thomson South-Western.
- Zolkepli, I. A., & Kamarulzaman, Y. (2015). Social media adoption: The role of media needs and innovation characteristics. *Computers in Human Behavior, 43*, 189–209. doi:10.1016/j.chb.2014.10.050

KEY TERMS AND DEFINITIONS

Customer Satisfaction: Focus of customer satisfaction is on the reflection of the gap between the customers' visualization of the anticipated product and the customers' perception of the distributed product.

Hospitality Industry: Wide-ranging category of fields within the service industry that comprises lodging, food and drinks service, event planning, theme parks and transportation.

Social Media Engagement: An online platform where users can chat, share videos and pictures, companies use for marketing purposes and others. These activities are superficial as measures of engagement in social media.

Social Media Tools: The types of platforms or applications that are used to social commitment, path interaction, swiftness of feedback and erecting of connection.

Social Technology Approach: The online social interaction empowered by the computer code and the services which are basically the made from 40 years of technology evolution and the accomplishment of an extended-held imaginative and prescient of what computer systems and digital era should do.

Chapter 15

E-Loyalty Towards Mobile Applications in Online Food Ordering Business Model

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ABSTRACT

Within the mobile commerce space across the world, a major visible trend is the usage of mobile apps in food and beverage industry. Despite the rapid interest in mobile apps and their potential marketing effects, there is limited research on the usage of mobile apps as a convincing marketing channel for online food ordering. This study used the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as a theoretical foundation to explore the main factors influencing the customers' e-loyalty towards mobile food ordering applications in Indonesia. Quantitative methodology was used, and data from a total of 358 questionnaires were used for analysis. The findings showed that habit along with social influence, performance expectancy, and facilitating conditions has positively influenced customers' e-loyalty towards mobile food ordering apps.

INTRODUCTION

The rapid growth of communication and information technologies have greatly transformed the market dynamics. This has led to transition of many business activities that were previously carried out through physical interactions to virtual interactions of many types. One example is physical stores innovating their business models by incorporating e-commerce and m-commerce. From the customer's perspective, the widespread adoption of mobile technology, particularly mobile application software, have significantly changed the way customers interact with many marketers, in the process of acquiring products and ser-

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vices. This technological evolution and resultant market dynamics has left marketers with no choice but to embrace technological applications in their endeavor to maintain brand reputation, achieve marketing aims and enhance customer satisfaction and retention (Alalwan et al., 2017).

Within the mobile commerce space across the world, one of the major visible trends is the usage of mobile applications in the food and beverages industry. Food companies and restaurants have begun to take into consideration mobile commerce as a new system to engage potential customers or to retain customer contentment and loyalty. A recent report shows that food and beverages is one of top ten most popular apps categories to be downloaded by Apple users (Statista, 2020a).

Despite its popularity and acceptance, mobile commerce business scenario is not free from challenges. While mobile apps development is estimated to grow over 581 billion U.S Dollars in 2020 (Statista, 2019), many customer facing ones are not economically successful, reason being the incapability of the apps to generate and maintain customer interest. To be successful, it is essential for app developers to comprehend the customers' perceptions about mobile applications and its use, and come up with fitting strategies that increases customer's engagement with apps. An analysis of literature in the area of mobile applications in general and online food ordering in particular, shows that the past studies focused primarily on customers' initial adoption or intention and behavior towards technology acceptance. For example, application of antecedent frameworks such as Theory of Planned Behavior (Ajzen,1991) or Technology Acceptance Model (Davis,1989). But as customers have already adopted mobile applications and are using it for various purposes in their everyday life (Sanakulov & Karjaluoto, 2015), there is a need to look at more specific aspects of mobile applications usage. This paper looks beyond initial adoption and aim to explore the main factors influencing the customer's continuous usage and e-loyalty towards mobile food ordering apps. As factors describing consumer behavior could not be generalized across different geographical regions due to variations in cultural, technological and economic contexts, this paper focuses on a developing economy context that fast embraces technology in business. Indonesia was selected for conducting this empirical study as acceptance of mobile food ordering applications has shown a promising trend in the Indonesian market.

In Indonesia, a country with a total population of 268.2 million people, the smartphone user penetration is around 60% in 2019 (Statista, 2020b), and it is interesting to note that people are spending on an average 3 hours and 40 minutes a day on mobile phone apps (Appannie, 2020). These numbers indicate the extent to which mobile applications have become an integral part of an Indonesian's day to day life. Specifically, online food ordering apps have become very popular in Indonesia and it has even influenced people's food consumption behavior, making them more consumptive. Customers use mobile food ordering apps to discover the restaurants nearby, choose the restaurants, look through the menu, and then order the food, all with a few finger slides and taps. Lately, many innovative attributes are incorporated into these apps which helps to minimize issues like miscommunication problems, delayed delivery, or dealing with customer complaints, making it more user friendly and hassle free.

BACKGROUND

Mobile food ordering apps are mobile applications which users can download to their mobile devices and use it to order food, make advance payments, takeout food without having to visit restaurants or wait in line (Wang et al, 2019). Despite the extensive adoption of m-commerce by food and beverage industry, only limited academic research has been undertaken in the area, which uncovers the relationships

and impact of many variables affecting the consumer's behavior. This paper explores the main factors predicting customers' e-loyalty towards mobile food ordering apps in Indonesia.

The concept of e-loyalty extends the traditional loyalty concept to online customer behavior. E-loyalty can be described as customers' intention to revisit and repurchase from an e-commerce platform (Purani et al., 2019). Generally, customer loyalty refers to a supportive behavior from customer towards a product or a brand (Uncles et al., 2003) and usually it is marketer generated and controlled. On the other hand, e-loyalty is technology facilitated and customer controlled. Despite customer loyalty is heavily discussed in the marketing literature, the conceptual definition of e-loyalty is still very much ambiguous and yet to be well defined (Luarn & Lin, 2003). It should be noted that this paper looks at customer loyalty towards mobile food ordering apps and not customers' overall loyalty towards food and beverage marketer. As e-loyalty is technology facilitated and customer controlled, the factors influencing it can be different from those that affect brand loyalty. Most of the researchers in the area have focused more on the customers' objective to accept mobile commerce, rather than customers' loyalty towards m-commerce. While there is a clear difference between customers' loyalty and customers' acceptance, evaluating behavioral intention towards m-commerce usage can be further stretched to evaluate the success of m-commerce and customer's loyalty (Shafiee & Bazargan, 2017). It is customer's acceptance that lead to continuous usage of mobile commerce by them ultimately leading to building of customer loyalty.

This study uses the Unified Theory of Acceptance and Use of Technology 2 (UTAUT2) as a theoretical foundation to examine the predictors of customers' e-loyalty towards mobile food ordering applications. The original Unified Theory of Acceptance and Use of Technology (UTAUT) was developed by Venkatesh et al. in 2003 to explain acceptance and use of technology from an employee context, in an organizational setting. Basically UTAUT model is an integrated model which consolidates the constructs of eight other significant models that earlier research had employed to explain technology usage behaviour (Technology Acceptance Model, Theory of Reasoned Action, Theory of Planned Behavior, Motivational Model, a combined theory of planned behavior/technology acceptance model, Model of PC Utilization, Innovation Diffusion Theory, and Social Cognitive Theory) (Ali et al, 2016; Okumus et al, 2018). UTAUT used four key constructs to explain the behaviour: performance expectancy, effort expectancy, social influence and facilitating conditions. In 2012, UTAUT model was further expanded to explore technology acceptance and use in a consumer context and three additional constructs; hedonic motivation, price value and habit were added to tailor it to a consumer use context (Venkatesh et al. 2012). As UTAUT was developed to explain technology acceptance and use in an organizational setting, it emphasized on the utilitarian value (extrinsic motivation to accept and use technology). But UTAUT2 looks at consumer use context, where intrinsic motivation also plays an important role in influencing behavioural intention. Hedonic motivation is regarded as a major predictor variable in much of the consumer behavior research and hence it has been added as a predictor variable in UTAUT2. Second, in organizational settings, employees assess time and effort involved to form their views on effort expectancy but in a customer setting, price also can be an important factor which influences behavioural intention as the customer has to bear the costs involved in usage of technology. Hence Price Value is included as a construct in UTAUT2. Many of the determinants mentioned in the UTAUT2 model have been tested in prior studies in the mobile food ordering apps context such as price value (Cho et al., 2019; Wang et al., 2019), performance expectancy, effort expectancy, social influence (Okumus et al., 2018), and hedonic motivation (Yeo et al., 2017). Some studies have found another variable, collaboration, as an important predictor that could affect customers' mobile apps usage behavior (Kapoor & Vij, 2018; Cho et al., 2019; Wang et al., 2019) and this has been added along with the seven constructs of UTAUT2.

model, in this study. Collaboration is the association between online food aggregators and other related e-commerce players to provide better benefits and rewards to the customers.

Performance Expectancy (PE) indicates the extent to which customers benefit from using technology while conducting certain activities (Venkatesh et al., 2012). Customers will be motivated to adopt new technologies if they see it is beneficial and useful for them to perform their daily activities (Venkatesh et al., 2003). For example, users of mobile food ordering apps can place their food order through the apps at any place, anytime and pay through the mobile apps without having to physically visit the restaurants. And while they wait for the food to arrive, they could use the time to focus on other important activities. The construct of performance expectancy has deemed to have a significant effect on customer behavior related to technological usage (Venkatesh et al., 2012; Rana et al., 2016; Alalwan et al., 2017; Shareef et al., 2018). It has also been used by several researchers to study customer behavior towards online food ordering decisions (Okumus et al., 2018; Wang et al., 2018; Yeo et al., 2017). It can be presumed that if customers acknowledge the benefits of using mobile food ordering apps, it may lead to continuous usage of the apps and increased customer e-loyalty. Hence it is hypothesized that: Performance expectancy positively influence customer's e-loyalty.

Effort Expectancy (EE) refers to the degree of easiness in using the technology (Venkatesh et al., 2003). Effort Expectancy also corresponds with perceived ease of use in TAM (Davis et al., 1989), where the individuals' acceptance of technology is not only measured by the positive value of the technology but also the ease of using the technology. The continuous evolution of smartphone technologies and addition of many user-friendly app features makes it much easier to use the applications. Effort Expectancy in the context of mobile food ordering apps is the ease of using apps in searching, ordering and paying for food and beverages. Numerous researchers have found that effort expectancy is an important determinant of customers' behavior (Alalwan et al., 2017; Shaw & Sergueeva, 2016) and it can be presumed that higher the ease of using mobile food order apps, higher the possibility of customers using them continuously. Hence it is hypothesized that: Effort expectancy positively influence customer's e-loyalty.

Prior empirical studies have broadly examined and validated the effect of social influence on customer behavior (Huang & Kao, 2015). In the technology acceptance scenario, it has been identified as an important determinant of the acceptance and usage of technology products in different fields (Venkatesh et al., 2012; Phang et al., 2018). Social Influence (SI) refers to the extent to which individuals perceive that others close to them in the society believe that they should engage with a certain technology (Venkatesh et al., 2012). Individuals tend to go back to their social environment in order to obtain more information, raise awareness or seek a social approval for their technology usage decision (Verkijika, 2018; Khalilzadeh et al., 2017). Thus, the encouragement and information from the surrounding social environment (friends, family, relatives, colleagues) can play a significant role in customers' behaviour towards technology usage (Alalwan et al., 2017; Okumus et al., 2018). This indicates that social influencers can increase the customers' loyalty by encouraging users to use and order food and beverages using mobile food ordering apps. Prior empirical studies related to online food ordering have shown the significance of social influence on customer behaviour (Okumus et al., 2018). Hence it is hypothesized that: Social influence positively influence customer's e-loyalty.

Facilitating Condition (FC) construct refers to the extent an individual perceives that human support and technology infrastructure are available for the usage of a particular technology (Venkatesh et al., 2003). For food ordering apps, the application can only be used in smart phones and the performance is dependent on the quality of internet connectivity. Customers will also look for the application's capability to work steadily without having much technical problems. Besides the technical aspects, human support

also plays an important role in delivering facilitating conditions, like customer service, delivery services, and call center support. Facilitating condition has been widely confirmed by researchers to have a significant effect on the customers' intention and actual usage behavior (Khalilzadeh et al., 2017; Verkijika, 2018). Hence it is proposed that customers are more likely be motivated to use the mobile application if they have certain level of support and resources. A positive experience will enhance their e-loyalty and this leads to the next hypothesis: Facilitating Conditions positively influence customer's e-loyalty.

Hedonic Motivation (HM) is the pleasure feeling caused by using technology products, services, and applications (Venkatesh et al., 2012). Besides extrinsic motivation (perceived usefulness, performance expectancy), intrinsic motivation elements (e.g. fun, enjoyment, pleasure) has constantly been deemed as an important determinant of technology acceptance and usage (Alalwan et al., 2017), especially in a consumer context. Mobile apps have now become an essential part of common man's daily life and customer facing apps like mobile food ordering apps have incorporated so many innovative features making it's use an enjoyable and fulfilling experience to the user. These functions and features that customer finds as fun, entertaining, and enjoyable contributes to the hedonic motivation aspect. Yeo et al. (2017) found that hedonic motivation has a positive effect customers' usage of online food order delivery system. This leads to the hypothesis: Hedonic motivation positively influence customer's e-loyalty.

Price Value (PV) has its origin from perceived value, which often considered as a critical indicator in predicting customers' purchase behavior. Price value can be defined as a tradeoff of perceived benefits received by using the technology and costs incurred for using the technology (Venkatesh et al., 2012). In the mobile food apps context, the applications are free to download and using mobile food ordering apps will save customers from other financial and nonfinancial costs. For example, customers can save time and energy as they need not physically visit the restaurants. And more and more restaurants have started providing customers with free delivery, discounts etc. if they use mobile food order apps rather than visiting the restaurant. All these benefits could further motivate customers to use the apps as they see the price value is positive. So, when the benefits of using technology is greater than the cost involved, there is price value and it will have a positive effect on customer's e-loyalty. Hence the hypothesis: Price value positively influence customer's e-loyalty.

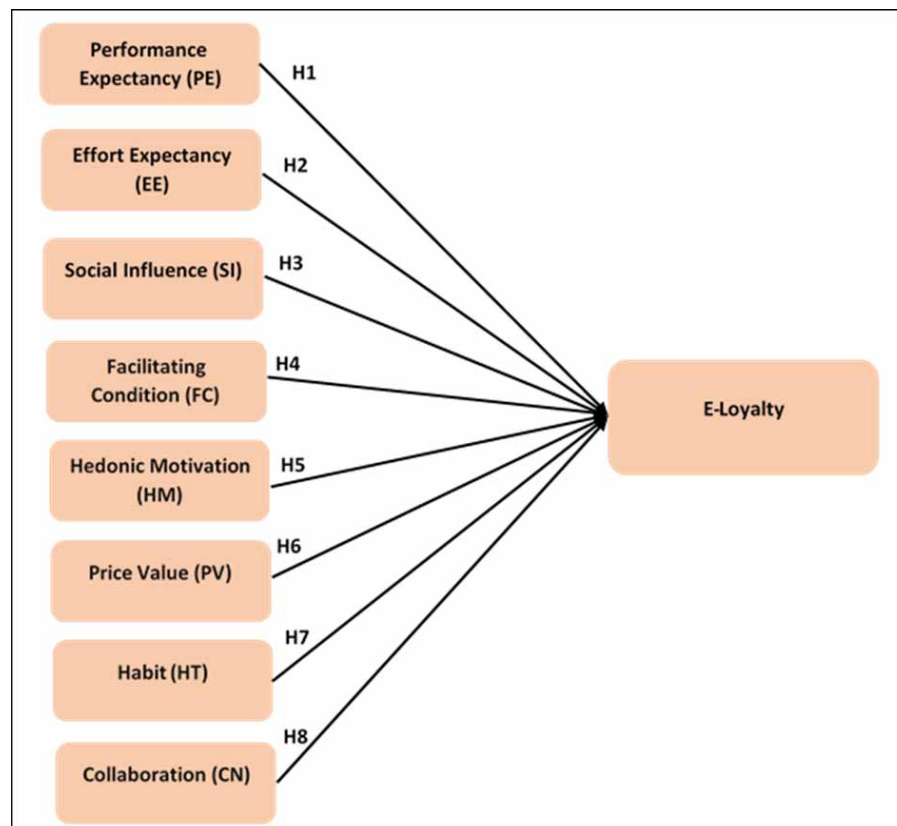
The construct Habit (HT) has been widely examined across different contexts such as customers' behavior, psychology, health science etc. (Huang & Kao, 2015). There are two theoretic viewpoints of habit construct (Kim et al., 2005; Limayem et al., 2007). Limayem et al. (2007) defined habit construct as Habit Automaticity Perspective (HAP) or individuals tend to perform behaviours as an automatic response based on learning. While Kim et al. (2005) viewed habit construct as Instant Activation Perspective (IAP) or an outcome based from cognitive processing. Several researchers have tested the role of habit construct in mobile commerce field (Yen & Wu, 2016; Sun & Chi, 2017). In the mobile food ordering apps context, habit is viewed from the automaticity perspective and it is assumed that the automaticity will take charge to predict customers' continued usage intention in the same manner as previously and it can be assumed that this continuous usage behavior will lead to higher customers e-loyalty. Hence the hypothesis: Habit positively influence customer's e-loyalty.

Another important element that could affect customers' mobile apps usage behavior is collaboration (CN) (Kapoor & Vij, 2018). Collaboration can be viewed as an association between online food aggregators and other e-commerce players in the business field to provide better benefits and rewards to the customers (Kapoor & Vij, 2018). Many of the online food aggregators have associations with other e-commerce platforms resulting in providing extra discounts, promotion, or even cash back to make the customers use their mobile apps more frequently. For example, GrabFood in Indonesia has a collaboration

with ovo where when customer order foods on GrabFood app and make the final purchase with ovo, they get discounts or cash back. However, these cashback and discount can only be redeemed when they order through the mobile app again. Customers are more likely to use apps frequently if they were provided with such benefits and this will definitely lead to enhanced customer e-loyalty (Osuna et al., 2015). This leads to the last hypothesis to be tested: Collaboration positively influence customer's e-loyalty.

Based from the review and discussions above, a conceptual framework has been developed. The framework contains seven factors from UTAUT2 model as proposed by Venkatesh et al. (2012), and one additional construct related to mobile apps attributes as suggested by Kapoor & Vij (2018).

Figure 1. Conceptual framework



METHODOLOGY

As the study takes a positivist view, quantitative methodology was used to investigate the impact of the antecedent factors on customers' e-loyalty, using the UTAUT2 elements (PE, EE, SI, FC, HM, PV, HT) and collaboration. Data was collected from samples obtained from two major cities in Indonesia: Jakarta and Surabaya. Jakarta, with a population of 8.5 million, is the capital and most populated city in Indonesia and Surabaya, with a population of 2.3 million, is the second largest city. These two cities were chosen because of their cosmopolitan nature and we believe that the samples taken from these cities

will give a true representation of the Indonesian population. Convenience sampling was used, and data was collected using self-administered online questionnaires. A total of 479 responses were received of which 358 were usable. The responses came from respondents of different demographic backgrounds, such as gender, age, and occupation.

Table 1. Questionnaire item generation sources

Construct	Source
PE (Performance Expectancy)	Venkatesh et al. (2012)
EE (Effort Expectancy)	Venkatesh et al. (2012)
SI (Social Influence)	Venkatesh et al. (2012); Leong et al. (2013)
FC (Facilitating Condition)	Venkatesh et al. (2012)
HM (Hedonic Motivation)	Venkatesh et al. (2012)
PV (Price Value)	Venkatesh et al. (2012)
HT (Habit)	Venkatesh et al. (2012); Verplanken & Orbell (2003)
CN (Collaboration)	Kapoor & Vij (2018)
E-Loyalty	Venkatesh et al. (2012); Akour (2010)

The survey used structured questionnaires with closed ended type of questions to gather data. The questionnaire was distributed online through social media and e-mail. The questionnaire started off with screening questions to ensure that only participants who had some experience with mobile food ordering apps were included in the survey. The items in the questionnaire were adapted from Venkatesh et al. (2012) and Kapoor & Vij (2018). It included 33 measurement items. A 6-point Likert scale was used to record the responses ranging from “1 - strongly disagree” to “6 - strongly agree”. Reliability was ensured by running Cronbach’s alpha reliability test with all values higher than 0.7 (Hair et al, 2014). The relationships between the independent variables (performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, and collaboration) and the dependent variable (customers’ e-loyalty) was tested using correlation and multiple regression analysis.

FINDINGS

Data was analyzed using SPSS. The survey yielded 479 responses but only 74.7% of the responses were usable after the data cleaning process. The demographical analysis found that more than half of the respondents were female (62.6%) and 37.4% respondents, male. Vast majority of the respondents were within the age group of 21 to 30 years (66.8%), followed by 21.5% within the age group of 18 to 20 years, 4.5% in the age above 50 years, 4.2% within the age group of 41 to 50 years, and the smallest percentage of 3.1% in the age group 31 to 40 years. Occupation wise, 44.3% were employed, 40.5% are students, 12% are self-employed and the balance 3.2% were in ‘others’ category including housewives, freelancers and unemployed. Using screening questions, it was ensured that all the respondents had some experience in using mobile food ordering apps and 41.9% of the respondents had more than one-year experience in using food ordering apps.

Cronbach's alpha reliability test was performed to measure the reliability of the questionnaire and it produced the following results: PE (0.87), EE (0.88), SI (0.87), FC (0.87), HM (0.87), PV (0.87), HT (0.87), CN (0.87), EL (0.85). The value of Cronbach's Alpha should be more than 0.7 to be considered acceptable and if the values are closer to 0.9, it signifies good internal consistency and high reliability (Hair et al. 2014, George & Mallery, 2003). The results indicate that the constructs have good reliability to proceed with further analysis.

Correlation analysis provides a measure of the strength and direction of relationships between the variables. Pearson's correlation coefficient is widely used for parametric data. According to Evans (1996), there are four classifications to describe the strength of correlation by looking at the value of r or Pearson correlation coefficient: 0.00 – 0.19 “very weak”, 0.20 – 0.39 “weak”, 0.40 – 0.59 “moderate”, 0.60 – 0.79 “strong”, and 0.80 – 1.00 “very strong”. The result of Pearson correlation analysis between all independent variables and e-loyalty are as follows: PE (0.600), EE (0.371), SI (0.625), FC (0.523), HM (0.552), PV (0.516), HT (0.804), CN (0.544). The analysis result shows that all the independent variables have a positive correlation with the dependent variable and are statistically significant.

Table 2 Multiple regression analysis

Hypothesis	Variables	Standardized Coefficients Beta	Sig. value	Decision
H1	PE	0.10	0.01	Supported
H2	EE	0.04	0.22	Not Supported
H3	SI	0.15	0.00	Supported
H4	FC	0.10	0.01	Supported
H5	HM	0.07	0.06	Not Supported
H6	PV	0.03	0.45	Not Supported
H7	HT	0.56	0.00	Supported
H8	CN	0.03	0.36	Not Supported

Multiple regression analysis helps to identify the independent variables which have the most effect on the dependent variable. The efficiency of estimation is measured by coefficient of determination (R^2). The analysis produced a coefficient of determination (R^2) of 0.743 which means that 74.3% the variation in customer's e-loyalty (dependent variable) can be justified by performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value, habit, and collaboration (independent variables). Table 2 summaries the result of multiple regression analysis. At a confidence level of 95%, it can be confirmed that PE, SI, FC and HT are statistically significant predictors with a positive relationship to customer's e loyalty. This indicates that H1, H3, H4, and H7 are supported. The standardized beta coefficients value of PE, SI, FC, and HT are 0.10, 0.15, 0.10, and 0.56 respectively. This means that Habit (HT) is the strongest predictor with positive influence on customers' e-loyalty towards mobile food ordering apps, then followed by SI, PE, and FC. On the other hand, EE, HM, PV, and CN constructs do not contribute significantly to customer's e-loyalty. Thus, H2, H5, H6, and H8 are not supported. The respective value of standardized beta coefficients for EE, HM, PV, and CN are 0.03, 0.03, 0.04, and 0.07 respectively.

Habit is found to be the strongest and the most influential predictor of customers' loyalty. Generally, users who are pleased with the outcome of their experience in using apps or any other technological platform are potential repeat users leading to habitual usage. The objective for the marketers here would be to make the users contented with the experience of using the apps. The finding underlines the importance of habitual behavior in cultivating e-loyalty towards mobile food ordering apps. Similar results were obtained in studies conducted by Phang et al. (2018) and Yuan et al. (2015).

Social influence is the second strongest predictor of customer's e-loyalty. The results show that societal elements exert much influence in Asian context on customer decision making process. The reason could be the 'collectivist' nature of the Asian population where most of the decisions are influenced by family and friends' recommendations and suggestions. These social elements are very powerful influencers and their opinions will highly affect the user's behavior and result in being loyal to a particular platform. This finding is in agreement with a recent study which explored the impact of social influence on customers' mobile shopping apps usage behavior (Phang et al., 2018).

Performance expectancy indicates the extent to which customers benefit from using technology while conducting certain activities. From the analysis results, it can be concluded that PE positively influence customer's e-loyalty. This finding aligns with the results of studies by Purani et al. (2019), Rahi et al. (2018), and Alalwan (2018). When the users are convinced of the benefits derived from using the technology, it will lead to continuous usage and ultimately will end up in enhanced e-loyalty. It is important that mobile food ordering apps providers should incorporate features that convince the users, that it provides them with better efficiency in terms of time and effort compared to traditional routes. Another important observation from the findings is that performance expectancy seems to be more important than the ease of use (effort expectancy). This indicates that users may not use mobile food ordering apps if it is not considered beneficial to their life, no matter how effortless it is to use the apps.

Facilitating Condition refers to the extent an individual perceives that human support and technology infrastructure are available for the usage of a particular technology. In this case, it is the extent to which availability human support and technology infrastructure influence users to use mobile food ordering apps. Statistical results of this study confirm that facilitating condition positively influence e-loyalty. If resources, facilities, skills, and support that are essential to use mobile food ordering apps effectively are not readily available, people may shy away from using the platform. The support infrastructure and facilities that are necessary for the smooth functioning of mobile food ordering apps include internet connectivity, security, customer services, delivery service, call center support etc. Thus, if the customers have the required resources and support that facilitate smooth service delivery through the apps, they are more likely to use the apps regularly leading to enhanced e-loyalty. This result aligns with the findings of Hew et al. (2015) and Gharaibeh et al. (2018).

The influence of effort expectancy gives a surprising result. It shows that ease of use (effort expectancy) does not significantly influence customer's e-loyalty. Result shows that the effect of effort expectancy is lesser than performance expectancy. It has been argued that effort expectancy may not be a significant factor that contributes to customer's usage behavior if the perceived usefulness or benefits received by using the apps is higher in comparison with the ease of using the apps (Davis et al, 1992). The high-quality facilitating conditions combined with high performance expectations can nullify the importance of ease of usage. Another fact to be considered is that people now are generally well accustomed to using mobile apps and other platforms in smart phones and hence ease of operation may not be a relevant factor to be considered.

Hedonic motivation refers to aspects of mobile food order apps that users consider as fun, entertaining, and enjoyable. The analysis result shows that hedonic motivation is not a significant predictor of customers e-loyalty towards mobile food ordering apps and this is in agreement with the findings of Gaitan et al. (2015) and Gharaibeh et al. (2018). In the case of technology products, innovation or design of the apps may be important contributors to the users' usage behavior, in the initial adoption stages. However, as experience increases, the attractiveness of the novelty factors diminishes and users will use technology products for more pragmatic reasons such as effectiveness, efficiency and productivity (Venkatesh et al, 2012). This could be a reason for the result obtained from this study. Majority of the respondents who participated in this study are people who have experienced using mobile food ordering apps for more than a year which indicates that they are more likely using it for practical purposes (e.g performance expectancy) than novelty reasons. The finding that the effect of performance expectancy to customers' e-loyalty (0.10) is higher than the hedonic motivation (0.07) supports this argument.

Price value also is not a significant predictor of e-loyalty towards mobile food ordering apps. It can be assumed that the users are not giving much weightage on the price value factor as the apps and its services are always provided for free and there is no compulsion to use it to avail the desired service i.e. buying food. The findings align with the results of other studies as well (Hew et al. 2015). This finding should be read together with what has been observed in the case of ease of use construct. When the users get used to using the apps and once they start using it continuously, ease of use and price value may not be much relevant to them for continued usage of the apps. Although users perceive that the benefits of using mobile food ordering apps they received exceed the monetary value paid, this might not be a persuading factor for continued usage of apps.

In the context of this study, collaboration refers to an association of a certain online food aggregator and e-commerce players in the business field to provide discounts, cashback, and other benefits to users of online food ordering apps. The analysis result failed to establish that collaboration plays a role in developing customers' e-loyalty. The finding shows that most of users are not influenced by discounts, coupons and other benefits provided by food order apps in collaboration with other e-commerce players. One of the possible reasons could be that the benefits are not persuasive enough for the users as majority of respondents were in a better income bracket and they may not be price sensitive. Another reason could be the related inconvenience whereby the users have to subscribe to more than one apps (ones who collaborate with the food ordering apps to provide the benefits) to avail the benefits offered. Not many customers may be willing to download other apps or join an account just to receive some discounts, cashback or coupons. For example, GrabFood in Indonesia has partnered with ovo, a smart payment application and when GrabFood users order food, they have to pay through ovo for them to get more discounts or cashbacks. This result aligns with the findings of Shamout (2016).

DISCUSSION

The findings of this study provide a deeper understanding of the factors required for the successful implementation of mobile food ordering apps that influence the customers e-loyalty, particularly from a fast-developing economy perspective. Prior studies conducted on mobile food ordering apps in the region primarily focused on the customer intention and initial adoption of mobile applications, and this study focused on a specific factor, e – loyalty. The study also looked at the role of collaboration as an influencing factor on e-loyalty. Hence the study has gone beyond mere application of UTAUT 2

(Venkatesh et al., 2012) in the mobile food ordering apps scenario. Besides academic contribution, the results provide more clarity and deeper understanding of the factors influencing e-loyalty for business practitioners in the food and beverage industry and players to develop better strategies. As seen from the results, the aspect of habit and social influence should be given more attention by industry players. App developers should come up with ways to strengthen users' habit with continuous upgrades in the areas of information design, visual design or provide more benefits compared to their competitors to make the customers contented. One example could be incorporating features, like providing credible nutritional information, related to healthy diet and eating habits as more and more customers are getting concerned about healthy eating when it comes to their food choices. App designers should give attention to factors such as apps functionality, reliability and providing timely technological and human support when needed. Customer comments and feedbacks should be given serious consideration and they should be given credible and reliable information as these can influence customer's continual usage decisions.

Results shows that social influence is the second strongest predictor and marketers must give due attention to this. Celebrity endorsements, opinion leaders etc. can play a vital role here. Social media platforms, media sharing, and mobile messaging are effective in spreading positive word of mouth. Mobile food ordering apps providers should also emphasize more on attributes such as responsiveness, connectivity, personalization, and active control to enhance user experience. Operators could update their historical customer data to achieve personalization.

CONCLUSION

The study explored factors that influence e-loyalty of online food ordering apps customers, from a fast-growing economy perspective. UTAUT2 model was used as a theoretical framework. Results shows that habit is the most prominent influencing factor on customer's e-loyalty, followed by social influence, performance expectancy, and facilitating conditions. Effort expectancy, price value, hedonic motivation, and collaboration did not show a significant impact on influencing customer's e-loyalty towards mobile food ordering apps. It indicates that regular and continued usage behavior along with influence of social influencers are the strongest predictors leading to enhanced customer loyalty towards use of mobile food ordering apps. The study used convenience sampling and the general limitation of convenience sampling is applicable to this study also. There could have been many other factors which are not considered in this study which may have an influence on customer's e-loyalty. As a continuation to this study, it is recommended to undertake a qualitative study to gain a deeper understanding of customers' attitudes towards mobile food ordering apps.

REFERENCES

- 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
- Alalwan, A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*, 42, 65–77. doi:10.1016/j.ijinfomgt.2018.06.001

Alalwan, A., Dwivedi, Y., & Rana, N. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. doi:10.1016/j.ijinfomgt.2017.01.002

Appannie. (2020). *The State of Mobile in 2020: How to Win On Mobile*. Available from: <https://www.appannie.com/en/insights/market-data/state-of-mobile-2020/>

Cho, M., Bonn, M., & Li, J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108–116. doi:10.1016/j.ijhm.2018.06.019

Cohen, J. (2013). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Taylor and Francis. doi:10.4324/9780203771587

Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *Management Information Systems Quarterly*, 13(3), 319–339. doi:10.2307/249008

Davis, F., Bagozzi, R., & Warshaw, P. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. doi:10.1287/mnsc.35.8.982

Davis, F., Bagozzi, R., & Warshaw, P. (1992). Extrinsic and Intrinsic Motivation to Use Computers in the Workplace1. *Journal of Applied Social Psychology*, 22(14), 1111–1132. doi:10.1111/j.1559-1816.1992.tb00945.x

Evans, J. D. (1996). *Straightforward statistics for the behavioral sciences*. Brooks/Cole Publishing.

Gaitan, J., Peral, B., & Jeronimo, M. (2015). Elderly and internet banking: An application of UTAUT2. *Journal of Internet Banking and Commerce*, 20(1).

George, D., & Mallery, P. (2003). *SPSS for Windows step by step*. Allyn and Bacon.

Gharaibeh, M., Arshad, M., & Gharaibeh, N. (2018). Using the UTAUT2 Model to Determine Factors Affecting Adoption of Mobile Banking Services: A Qualitative Approach. *International Journal of Interactive Mobile Technologies*, 12(4), 123. doi:10.3991/ijim.v12i4.8525

Hair, J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis* (7th ed.). Pearson Education Limited.

Hew, J., Lee, V., Ooi, K., & Wei, J. (2015). What catalyses mobile apps usage intention: An empirical analysis. *Industrial Management & Data Systems*, 115(7), 1269–1291. doi:10.1108/IMDS-01-2015-0028

Huang, C., & Kao, Y. (2015). UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP. *Mathematical Problems in Engineering*, 2015, 1–23. doi:10.1155/2015/571594

Kapoor, A., & Vij, M. (2018). Technology at the dinner table: Ordering food online through mobile apps. *Journal of Retailing and Consumer Services*, 43, 342–351. doi:10.1016/j.jretconser.2018.04.001

Khalilzadeh, J., Ozturk, A., & Bilgihan, A. (2017). Security-related factors in extended UTAUT model for NFC based mobile payment in the restaurant industry. *Computers in Human Behavior*, 70, 460–474. doi:10.1016/j.chb.2017.01.001

Kim, S., Malhotra, N., & Narasimhan, S. (2005). Research Note—Two Competing Perspectives on Automatic Use: A Theoretical and Empirical Comparison. *Information Systems Research*, 16(4), 418–432. doi:10.1287/isre.1050.0070

Leong, L., Ooi, K., Chong, A., & Lin, B. (2013). Modeling the stimulators of the behavioral intention to use mobile entertainment: Does gender really matter? *Computers in Human Behavior*, 29(5), 2109–2121. doi:10.1016/j.chb.2013.04.004

Limayem, H., Hirt, & Cheung. (2007). How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance. *Management Information Systems Quarterly*, 31(4), 705. doi:10.2307/25148817

Luarn, P., & Lin, H. (2003). A Customer Loyalty Model for E-Service Context. *Journal of Electronic Commerce Research*, 4(4), 156–167.

Okumus, B., Ali, F., Bilgihan, A., & Ozturk, A. (2018). Psychological factors influencing customers' acceptance of smartphone diet apps when ordering food at restaurants. *International Journal of Hospitality Management*, 72, 67–77. doi:10.1016/j.ijhm.2018.01.001

Okumus, B., & Bilgihan, A. (2014). Proposing a model to test smartphone users' intention to use smart applications when ordering food in restaurants. *Journal of Hospitality and Tourism Technology*, 5(1), 31–49. doi:10.1108/JHTT-01-2013-0003

Osuna, I., González, J., & Capizzani, M. (2015). Which Categories and Brands to Promote with Targeted Coupons to Reward and to Develop Customers in Supermarkets. *Journal of Retailing*, 92(2), 236–251. doi:10.1016/j.jretai.2015.12.002

Phang, I., Zaiton, O., & Cheuk, C. (2018). Young Adult Malaysian Consumers' Intention to Shop via Mobile Shopping Apps. *Asian Journal of Business Research*, 8(1). Advance online publication. doi:10.14707/ajbr.180041

Purani, K., Kumar, D., & Sahadev, S. (2019). e-Loyalty among millennials: Personal characteristics and social influences. *Journal of Retailing and Consumer Services*, 48, 215–223. doi:10.1016/j.jretconser.2019.02.006

Rahi, S., Ghani, M. & Ngah, A. (2018). A structural equation model for evaluating user's intention to adopt internet banking and intention to recommend technology. *Accounting*, 139-152.

Rana, N., Dwivedi, Y., Williams, M., & Weerakkody, V. (2016). Adoption of online public grievance redressal system in India: Toward developing a unified view. *Computers in Human Behavior*, 59, 265–282. doi:10.1016/j.chb.2016.02.019

Sanakulov, N., & Karjaluo, H. (2015). Consumer adoption of mobile technologies: A literature review. *International Journal of Mobile Communications*, 13(3), 244. doi:10.1504/IJMC.2015.069120

Shafiee, M., & Bazargan, N. (2017). Behavioral Customer Loyalty in Online Shopping: The Role of E-Service Quality and E-Recovery. *Journal of Theoretical and Applied Electronic Commerce Research*, 13(1), 26–38. doi:10.4067/S0718-18762018000100103

- Shamout, M. (2016). The Impact of Promotional Tools on Consumer Buying Behavior in Retail Market. *International Journal of Business and Social Science*, 7(1).
- Shareef, M., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. *Journal of Retailing and Consumer Services*, 43, 54–67. doi:10.1016/j.jretconser.2018.03.003
- Shaw, N., & Sergueeva, K. (2016). Convenient or Useful? Consumer Adoption of Smartphones for Mobile Commerce. *Association for Information Systems, DIGIT Proceedings*, 3.
- Shaw, N., & Sergueeva, K. (2019). The nonmonetary benefits of mobile commerce: Extending UTAUT2 with perceived value. *International Journal of Information Management*, 45, 44–55. doi:10.1016/j.ijinfomgt.2018.10.024
- Statista. (2015). *Mobile Phone Penetration Worldwide 2013-2019*. Available from: <https://www.statista.com/statistics/470018/mobile-phone-user-penetration-worldwide/>
- Statista. (2019). *Worldwide mobile app revenues in 2014 to 2023 (in billion U.S. dollars)*. Available from: <https://www.statista.com/statistics/269025/worldwide-mobile-app-revenue-forecast/>
- Statista. (2020a). *Apple: Most Popular App Store Categories*. Available from: <https://www.statista.com/statistics/270291/popular-categories-in-the-app-store/>
- Statista. (2020b). *Indonesia Smartphone Penetration (Share of Population)*. Available from: <https://www.statista.com/statistics/321485/smartphone-user-penetration-in-indonesia/>
- Sun, J., & Chi, T. (2017). Key factors influencing the adoption of apparel mobile commerce: An empirical study of Chinese consumers. *Journal of the Textile Institute*, 109(6), 785–797. doi:10.1080/00405000.2017.1371828
- Uncles, M., Dowling, G., & Hammond, K. (2003). Customer loyalty and customer loyalty programs. *Journal of Consumer Marketing*, 20(4), 294–316. doi:10.1108/07363760310483676
- Venkatesh, M., Morris, Davis, & Davis. (2003). User Acceptance of Information Technology: Toward a Unified View. *Management Information Systems Quarterly*, 27(3), 425. doi:10.2307/30036540
- Venkatesh, T., Thong, & Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *Management Information Systems Quarterly*, 36(1), 157. doi:10.2307/41410412
- Verkijika, S. (2018). Factors influencing the adoption of mobile commerce applications in Cameroon. *Telematics and Informatics*, 35(6), 1665–1674. doi:10.1016/j.tele.2018.04.012
- Wang, Y., Tseng, T., Wang, W., Shih, Y., & Chan, P. (2019). Developing and validating a mobile catering app success model. *International Journal of Hospitality Management*, 77, 19–30. doi:10.1016/j.ijhm.2018.06.002
- Yen, Y., & Wu, F. (2016). Predicting the adoption of mobile financial services: The impacts of perceived mobility and personal habit. *Computers in Human Behavior*, 65, 31–42. doi:10.1016/j.chb.2016.08.017

Yeo, V., Goh, S., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services*, 35, 150–162. doi:10.1016/j.jretconser.2016.12.013

Yuan, S., Ma, W., Kanthawala, S., & Peng, W. (2015). Keep Using My Health Apps: Discover Users' Perception of Health and Fitness Apps with the UTAUT2 Model. *Telemedicine Journal and e-Health*, 21(9), 735–741. doi:10.1089/tmj.2014.0148 PMID:25919238

KEY TERMS AND DEFINITIONS

Collaboration (CN): A partnership between the online platform and other related e-commerce platforms, to provide additional rewards to the customer.

E-Loyalty: Customers' intention to revisit and repurchase from an e-commerce platform.

Effort Expectancy (EE): The degree of ease in using the technology.

Facilitating Conditions (FC): Customer's perception of the human support and technology infrastructure available for the usage of a technology.

Habit (HT): The degree to which people tend to perform behaviors automatically.

Hedonic Motivation (HM): The pleasure feeling caused by using technology products, services, and applications.

Mobile Commerce: Commercial transactions undertaken through mobile devices and wireless networks.

Performance Expectancy (PE): The extent to which customers benefit from using technology while conducting certain activities.

Price Value (PV): A tradeoff of perceived benefits received, and costs incurred for using the technology.

Social Influence (SI): The extent to which individuals perceive that others close to them in the society believe that they should engage with a certain technology.

Technology Acceptance Model (TAM): A framework used to explain an individual's technology acceptance behaviour.

Unified Theory of Acceptance and Technology: A model that aims to explain user intentions to use technology and subsequent usage behavior, in an organizational setting.

Unified Theory of Acceptance and Use Technology 2: An extended UTAUT model with three additional constructs that aims to explain user intentions to use technology and subsequent usage behavior, from a consumer's perspective.

Chapter 16

Factors Affecting Online Consumer Buying Behavior Towards Essential Oils in Penang

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ABSTRACT

The purpose of this chapter is to determine the factors influencing the online consumer buying behavior towards essential oils in Penang as there is dissonance between what the consumers want and what has been made available in the purchase of essential oils. There are four factors influencing the online consumer buying behavior that are being evaluated in this research which are brand image, price, quality, and online advertisement. Past literatures have been reviewed on the factors to understand consumers' preferences that leads to consumer buying decision. This study adopted the theory of reasoned action (TRA) as the grounded theory. Questionnaires will be used to collect consumers' response for further testing and analysis to test the relationship and strength of factor variables by using the outlined research methodology.

INTRODUCTION

Consumer purchasing power is on the rise these days and there has been a growing interest in recognizing the importance of consumer actions in the field of marketing (Auf et. al., 2018). Consumer buying behaviour is the personality and perspective of the consumer that could lead to the purchase of a good or service on the market (Nathwani, 2017). In today's world where consumer has many options in choosing a certain product or service and yet many companies are still struggling to keep up with consumer's

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demands and satisfaction (Kumar and Taunk, 2018). This is very different from the previous generation in the 1990s, since the tastes and desires of the new generation are evolving, resulting in a transition in consumer demands (Chander and Raza, 2015). In order to keep up to date, the marketing team needs to understand the relationship between consumer purchasing process and buying decision (Khaniwale, 2015). A way to identify these factors is through research on consumers' buying behavior as the knowledge on consumers' preferences will ensure current marketing strategies to be aligned with consumers' preferences (Auf et. al., 2018). Besides that, market research also helps in understanding past trends and predicting future trends (Nathwani, 2017). By analyzing consumer buying behavior, more detailed insights can be extracted to improve products and services, changing prices and proposing new marketing channels which are essential in meeting and satisfying customers' needs and preferences (Santpal and Pradeep, 2015). Therefore, being well-grounded on consumer behavior is the key to marketers' success in influencing purchase behavior (Stankevich, 2017). Although good comprehension in buying behavior is crucial in a successful business venture, it is more complex than it seems (Hanaysha, 2018). This is because factors such as cultural, social, personal and psychological background heavily influences a consumer's buying behavior (Madhavan and Chandrasekar, 2015). If marketers have an access to these insights, marketers are able to predict future trends and demands of consumers' preferential products or services (Khaniwale, 2015).

The presence of the Internet transforms the environment that consumers buy via social media platform (Nash, 2019). Rising fame of social media platforms such as Facebook, Twitter, Instagram, WhatsApp, and YouTube enable consumers to communicate with convenience (Zulkefli et al.). Social media changes the consumers behave and their decision making (Ringim and Reni, 2019). It has been identified that social media influences the interaction between consumers and sellers that determines consumers' behavior, awareness and attitudes (Nash, 2019). Hence, high acceptability of social media platform usage for online buying does not exclude for essential oil products in Malaysia.

Essential oils can be defined as volatile liquid taken out from the plant source (Mazlan and Diah, 2017). These essential oils provide countless benefits for human health which include act as anti-viral, anti-bacterial, anti-diabetic and anti-oxidant agents (Tanu and Harpreet, 2016). Due to the lifestyle and behaviours of the new era of consumers, they have a better understanding and awareness of health as well as concerns of the adverse effects of certain traditional medicines (Yan et al., 2019). As a result, essential oils become highly sought products as an alternative medicine among consumers (Liu et al., 2019). According to Kunal Ahuja (2019), in the world of essential oils market, Asia Pacific has been listed as the fastest growing region in the year 2018. As essential oil industry is growing in business industries, therefore, a further study is required to comprehend the buying behaviour of online consumers on essential oils. There is a lack of understanding on how consumers behave online towards the purchase of essential oils in Penang which resulted to the growth in the industry. Although online consumer buying behavior has been extensively researched around the world, however the studies on essential oils context is still limited in Penang. Through this research it would be useful knowing the motivations of online consumer buying behaviour which consequently enable marketers to increase the repurchasing rate through good leadership strategies.

From the above discussions, it has become clear that notwithstanding the conceptual and empirical research efforts addressed at a wide assortment of instigators that pushes online consumers into purchasing essential oils, issues and numerous rooms for enhancement can still be acknowledged. This study is specifically attentive on the area that are relevant in identifying the online consumer buying behavior. According to Attreya (2018), once the aims are recognized, subsequently, the objectives are formed.

The main foundation of this study is to identify how impactful the issue of brand image, price, quality and online advertisement can affect the online consumer buying behavior.

The findings from this present study will help the researchers to identify the online consumer buying behavior by addressing a vital knowledge gap through the most significant factors among the brand image, price, quality and online advertisement that lead to consumers to buy essential oils in social media platform. Similarly, researches may explore further on online consumer buying behavior using the Theory of Reasoned Action beyond the existing researches by referring to research questions in this study. Consequently, knowledge about the significant relationship between the variables able to be gained and the benefits of the theory of application can be extended. Moreover, through this research, it can bring out business ethic issues that can be further explain in other research purposes (Attreya, 2018).

The knowledge that retained from this research can be applied into industrial practice by allowing essential oil industry to identify the common stimuli and the significance of each stimuli in determining the online consumer buying behavior towards essential oils. This research provides a lending hand to the industry in terms of understanding the way consumers behave as well as their expectation so that the industry can position and focus the essential oils to targeted group of people. Furthermore, the marketing strategy can be enhanced by penetrating new market and retaining the existing customers after addressing the significant factors. Although this study is focused on essential oils, the findings from consumers' driven reasons can be applied to almost all related health products and services via social media platform (Attreya, 2018).

The rest of the paper organized as follows: The paper will continue with the discussion of the relevant literature and the methodology of the study, followed by the discussion of the finding as well as the limitations and areas for future research.

LITERATURE REVIEW

Theoretical Perspective

Theory of reasoned action (TRA) has been used in predicting behavioral intention (Hosseini et al., 2015). TRA's main study is to understand individuals' intention in terms of willingness or readiness to engage in behavior under consideration. Within the TRA framework, behavioral intention is an additive function of two variables which are attitudes and subjective norms (Ajzen and Fishbein, 1977). Attitude is further defined as a person's belief whether the outcome of his or her behavior will be positive or negative (Montano and Kasprzyk, 2015). In the theory, there are two types of attitude including affective and cognitive components of attitude which correlate with one-another but can be discriminated based on their underlying belief systems, experimental manipulations and empirical differences (Teeny, 2015). Ajzen and Fishbein (1977) mentioned that consumers constantly are faced with many choices among shops, goods, brands, models and colors during purchasing.

Meanwhile, subjective norm is defined as normative beliefs about how they should act around the people who are important to them and motivation to comply with the normative belief by acting with others' expectations (Lindsey, 2017). Situational involvement always has a risk of mispurchase that prolongs the decision making process (Mittal, 2015) This may make ambivalence worse as consumers are overwhelmed with a great amount of information and being in tug of war with themselves (Harreveld et al., 2012). Beliefs are basic formation of attitudes and behaviour is the product of knowledge, attitudes

and subjective norms (Ajzen and Fishbein, 1977). Knowledge is a crucial cause in TRA and therefore, consumers need to understand their desires, costs and judgement behind purchasing goods and services (Tsai, Chen and Chien, 2012). The theory is a form of problem-solving in the sense that consumers will solve their issues by taking part in many steps to enhance their enjoyment and satisfaction (Voorn et al., 2018). Hence, TRA is advantageous at explaining psychological and cognitive processes to grasp consumers' contextual buying behavior (Vazifehdoust et al., 2013)

Consumer Buying Behavior

Consumer buying behavior is the study on processes of picking, consuming and disposing goods and services among the consumers along with the consequences that brings impact to the society as defined by Deshpande and Saxena (2017). Consumers have the purchasing power in deciding the type of product or services to be purchased, the product or service vendors and the date in purchasing it (Santpal and Pradeep, 2015). Strong consumer's impulse and motives may lead to stronger decision in purchasing a specific product (Feng et al., 2016).

There are five stages during decision making process towards a product (Qazzafi, 2019). However, Kotler (2017) stated that consumer may skip one or more stages. The first stage is need recognition and this occurs when a decision is initiated based on expectation gap between a consumer's perception of an ideal outcome in using a product versus actual outcome of the product usage (Santpal and Pradeep, 2015). The second stage is information search where consumers find and look for sources before trying out a new product (Clow and Baack, 2016). In this stage, there are many types of sources where information can be obtained such as personal sources, commercial sources, public sources, social media and experimental sources (Kotler, 2017). Once the information has been collected, consumers will be at the evaluation of alternatives which they will evaluate alternative brands of a particular product before purchasing (Sachdeva and Goel, 2015). The fourth stage of consumer buying decision-making process is most important which the purchase decision is when consumers tend to purchase the brand or product which is ranked highest during the evaluation stage (Ramya and Ali, 2016). Lastly, the fifth stage of consumer buying decision-making process is post-purchase decision (Qazzafi, 2019). According to Sachdeva and Goel (2015), consumers may feel pleased with their purchase and likely to return if their expectations are filled and also may abandon their newly purchased product if they feel unsatisfied.

Social Media

Alsubagh (2015) explained that internet plays a big impact on daily lives of world population by forming a new communication through social networking sites where similar minds individuals would engage in endless sharing information, updates and perspectives on all goods, services and activities. Any information can be shared and re-shared, consequently become viral within minutes on many types of social media platforms (Alhabash and McAlister 2015). The term 'social media' is used where it is focused on user-created information and interactions (Reiter, et al., 2017). Nolcheska (2017) showed that a positive relationship between the number of hours that consumers spend online via social network and the level of influence of the social network on purchasing decision is formed due to more interesting and informative facts available compared to mass media.

Social media has grown from family and friendly interactions to a platform where information about retail trends and new products are easily gained and sharing opinions about reviewed products (Tzavara et al., 2019). Ashman et al. (2015) added that 'participatory culture' exist where like-minded individuals take part in endless cycles from sharing information, checking on updates and requesting ratings on various products displayed that makes purchasing decision process to be convenient compared to those who relies on other sources. Hur et al. (2017) stated that most respondents are pushed by positive reviews about displayed goods in social media in purchasing decision due to the trustworthiness. It was proven by Voramontri and Klieb (2018) that consumers have acquired greater confidence and satisfaction during the online buying process. According to Aragoncillo and Orus (2018), online purchases are driven due to less human contact which makes consumers feel less pressured when it is appeared as anonymous. Meanwhile, some shop online to distract themselves from daily routine as it allows them to exercise control over online communication and gaining attention, satisfaction from the process of bargaining and purchasing products (Al-Zyoud, 2018).

Brand Image

Marta (2016) stated that most buyers have a higher preference for branded goods and services represents a symbol of quality. In the study conducted by Ku and Lin (2018), the research model contains five main constructs which are individual value, social influence, luxury brand image, brand attachment and purchase intention. The results revealed that the influence of luxury brand image on purchase intention are the highest compared to other variables. Gentina et al. (2016) also found that young generation highly depend on their friends for information towards luxury brands and this communication develops a materialistic value among the younger generations. The confidence in a certain brand is the result of the relationship between the brand status and the brand name (Letchumanan and Sam, 2016).

On the other hand, brand switching happens when a consumers want to weigh all available alternatives in the marketplace because of changes in competitors' activities (Matzler et al., 2015). Brand symbol offers the alignment of a brand personality that is well-matched with their self-concept (Appiah et al., 2019). Chovanová et al. (2015) stated that branding is important in creating values, images and maintaining competitive advantages. Sabri (2019) mentioned that by focusing onto attractive images, consumers able to visualize their ambitions of achieving a luxury lifestyle. Meanwhile, according to Oke et al. (2016), based on brand association, a positive relationship is found between value perceived and decision making. Thus, this leads to a significant influence of decision making towards repurchase behavior because a good brand image strengthens the benefits from the next potential purchase (Jiménez-Parra et al. 2014). Based on previous literatures it can be concluded that brand image plays a crucial factor in determining the online consumer buying behavior towards essential oils. Therefore, the existing study suggests to test the direct relationship between brand image of the essential oils and online consumer buying behavior towards essential oils, and this leads to the construction of first hypothesis:

H1: Brand image has a significant influence on Penang online consumer buying behavior towards essential oils.

Price

Price is a marketing communication tool that speeds up the decision making process (Erdil, 2015). Results showed that functional value price, functional value quality, social value identity, social value responsibility, emotional value and conditional value affects consumers' behaviour while making choices positively due to inflation and stagflation (Rahnama and Rajabpour 2016). Danish et al. (2019) stated that during purchasing goods based on green choice behaviour, it is driven by the green perceived values, environmental needs, consumers' expectations and desires. Consumers are aware that eco-friendly products should be paid in premium prices (Rahnama and Rajabpour, 2016) as they evaluate value and product characteristics in the green products. Situations like cash rebates, discounts and subsidies may affect consumers' behavior towards environmental friendly products (Rahman and Noor, 2016). Marakanon and Panjakajornsak (2017) also discovered that consumer volunteer to pay more for green electronics' quality not only in high-income countries but also in developing and emerging economies.

Moreover, Salih and Ahmed (2019) mentioned that pricing will affect the consumers' perception which means that it is not the actual money price that makes people buy goods and services but it is about their perception of price. Findings by Aslam et al. (2018) has shown that price has a vital role on purchase decision besides cultural, social, brand image and trust. Studies conducted by Al-Msallam and Alhaddad (2016) mentioned that a price is considered as cheap if the value received by consumers is greater than the price set and they would be committed based on the hospitality industry context. These results reinforce the research results of Hidayat et al. (2019) that concluded price puts a positive impact on consumers' loyalty. Therefore, the current study proposes to examine the direct relationship between price and consumer's buying behaviour towards essential oils in Malaysia, and this leads to the construction of second hypothesis:

H2: Price has a significant influence on Penang online consumer buying behaviour towards essential oils.

Quality

Ganesh and Vakayil (2018) stated that regardless of any production, quality is substantial. Consumers always cannot judge the quality of products before purchasing and only to use clues like brands, or labels in buying decisions (Grunert and Aachmann, 2016). Therefore, consumers frequently analyze the price, quality and packaging aspects before purchasing. Hasan and Khan (2010) mentioned that packaging characteristics has eight different dimensions such as different types of sizes shapes, safety, lifespan, convenience of storage and package attractiveness. Oladele et al. (2015) stated that packaging of a product is significant in projecting a brand's image. Zekiri and Hasani (2015) mentioned that four main marketing functions by packaging, which were to protect, promote, allow easier usage and facilitates recycling thus reduces environmental damage.

Customers' ratings of the quality of a product are formed based on comparison between assumptions and the reality of the product quality a customer receives (Lu et al., 2015) and the results showed that quality has an effect upon consumers' satisfaction. Faisal-E-Alam (2020) stated that a product is viewed as low quality if it unable to hit customer's expectations. According to Mashao and Sukdeo (2018), durability and reliability are the major aspects of purchasing good quality products. Findings conducted by Johar (2015) highlighted that 71% of the female respondents thought of quality as their most urging reason in their purchasing decision making. Therefore, the quality of the essential oils influences the online consumer buying behavior and this leads to the construction of third hypotheses:

H3: Quality has a significant influence on Penang online consumer buying behavior towards essential oils.

Online Advertisement

Modern advertising is soaring high in the late 19th and early 20th centuries with rising mass productions (Priya, 2019). Online advertising is defined as a marketing strategy that uses Internet for promotion, targeting on large consumers (Dhore and Godbole, 2018). According to Kumar and Mehrotra (2018), consumers often purchase products after being exposed to online advertisements due to the combination of exclusive qualities of print, sound and visual that makes them to be easily remembered. These findings are consistent with a study conducted by Aqsa and Kartini (2015) where online advertisements bring good perception towards online users and influenced significantly on consumers' attitudes during purchasing products. Similarly, Kumar and Mehrotra (2018) proved that young consumers can recall online advertisements better due to high exposure of online media.

Other than that, social media advertising is also a type of Internet advertising but consumers may have different perceptions and experiences interacting with social media advertisements (Alalwan, 2018). This is because social media highlights on engagement such as liking, re-sharing, commenting and posting specific advertisements (Tuten and Solomon, 2017). Such media advertisements come with various methods which include micro blogging, social blogs, social bookmarking, rating, weblogs and pictures (Hanaysha, 2016). These advertisements influence highly on consumers' response on the product (Hee and Yen, 2018). Hence, the present study proposes to examine the significant influence between online advertisement and online consumer buying behavior. This leads to the fourth hypothesis:

H4: Online advertisement has a significant influence on Penang online consumer buying behavior towards essential oils.

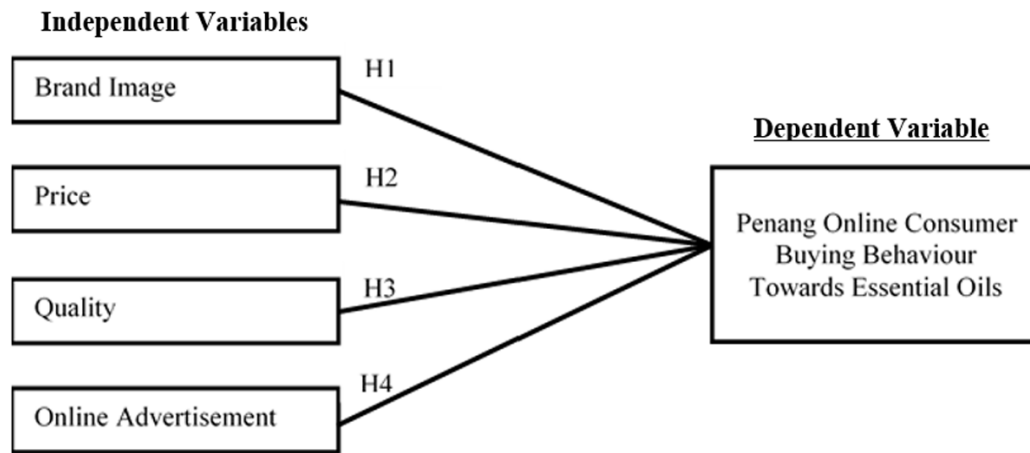
CONCEPTUAL FRAMEWORK

The variables labelled in the previous section have been used to form an illustrative view of the research framework (Figure 1) and presents the hypothesis to be tested.

RESEARCH METHODOLOGY

As the research is quantitative, questionnaires are the most appropriate approach (Rahi, 2017). Questionnaires are used to collect data from respondents, varying between descriptive and explanatory data for analysis and derivation of findings (Saunders et al., 2016). The form of questions is closed-ended in order to increase better understanding among respondents and a shorter time duration in completing the questionnaire (Zikmund et al., 2013). The following sub-sections describe the data collection method and measures of constructs.

Figure 1. Conceptual Framework



Data Collection Method

The technique applicable in this research is non-probability convenience sampling method. These questionnaires are created using Google Form and are distributed using social media. A total of 502 questionnaires are collected from the target and out of those collected questionnaires 452 responses are usable whereas the balance of 50 are not usable as the respondents does not have the intention in continue purchasing the essential oils.

The arrangement of the questionnaire in this research is divided into three parts. In the first part, participants would be requested to provide relevant demographic information which are significant to this research. Next, participants are required to provide feedback associated with the dependent variable. In the final part, participants would be requested to provide feedback about reasons prompting the online buying behavior towards essential oils in Penang. In this research, the interval-Likert scale is used except nominal data questions related to respondent's demographic profile. According to Rahi (2017), Likert-type scale can make the responses rate higher in quality with a highlight in lowering the respondents' level of dissatisfaction.

Pilot study is performed to minimize the probability of failure by testing the reliability of techniques and questionnaires used besides ethical and practical issues that could interfere the study (Doody and Doody, 2015). The number of respondents for the pilot test is 40. Table 1 shows the summary of the pilot study.

Table 1. Pilot study

Variables	Cronbach's Alpha	N of Items
Online Consumer Buying Behaviour	0.661	5
Brand Image	0.887	4
Price	0.892	4
Quality	0.838	4
Online Advertisement	0.876	4

The Cronbach's Alpha test is conducted on each variable to determine the reliability of the pilot test. The values of Cronbach's Alpha ranged between 0.661 and 0.892. A given variable is considered as having a high internal consistency when the Cronbach's Alpha value is approaching 1 (Sekaran and Bougie, 2016). However, a Cronbach's Alpha value of 0.6 can be considered as acceptable when the sample size is small (Hair et al., 2014).

RESULTS AND DISCUSSION

There are a lot of types of measurement tools in carrying out tests and Statistical Package Social Sciences (SPSS) is used in analyzing the relationship between variables and interpret the results into meaning secondary data (Babin and Zikmund, 2015). The following section is presented in two parts: descriptive analysis and multiple regression analysis, which tested hypotheses H1, H2, H3 and H4.

Table 2. Descriptive Analysis

Respondents Background		Frequency	Percentage	Cumulative percentage
Gender of respondent				
	Male	86	19.03	19.03
	Female	366	80.97	100.00
Age of respondents				
	25 years or under	79	17.48	17.48
	26 – 35 years	86	19.03	36.51
	36 – 45 years	129	28.54	65.05
	46 years or above	158	34.95	100.00
Educational background				
	Diploma	77	17.04	17.04
	Undergraduate	151	33.41	50.45
	Postgraduate	20	4.42	54.87
	Others	204	45.13	100.00
Income				
	Less than RM3,000	131	28.98	28.98
	Between RM3,001 to RM5,000	108	23.89	52.87
	Above RM5,001	213	47.13	100.00
Frequency of purchasing online				
	Once a month	159	35.18	35.18
	Twice a month	162	35.84	71.02
	Once in two months	131	28.98	100.00
Total		452	100	

Factor Analysis is an essential test to Reliability test (Zikmund et al., 2013). A Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity were conducted to verify if the data set was suitable for factor analysis (Zulkepli et al., 2017). As the KMO values are greater than 0.6, the values are acceptable, indicating that there is relevancy of the variables in this study (Howard, 2016). Based on the Table 3, the KMO values for all the variables are greater than 0.6. This demonstrates the sample adequacy for validity and supported the suitability of using validity to examine the underlying factors. Furthermore, the result of the Bartlett's Test of Sphericity is predominantly significant as it has a significant p-value of 0.000, hence, the null hypothesis which states that the 21 important attributes are uncorrelated in the population are rejected.

Table 3. KMO and Bartlett's Test of Sphericity

		Online Consumer Buying Behaviour	Brand Image	Price	Quality	Online Advertisement
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.716	.794	.817	.703	.746
Bartlett's Test of Sphericity	Approx. Chi-Square	1271.858	581.103	923.793	959.259	552.201
	df	10	6	6	6	6
	Sig.	.000	.000	.000	.000	.000

Factor loading and reliability analysis are essential in further ensuring the consistency of the variables (Sekaran and Bougie, 2016). According to Mooi et al. (2018), all the factor loading with the designated factor must always above the acceptable level of 0.50. Table 4 shows the factor loading and Cronbach's Alpha coefficient values. On communalities value, all items have a factor loading of greater than 0.5 which meet the minimum requirement.

Multiple Regression analysis tests the association between the independent variables and dependent variable and R² is the coefficient of determinant that predicts goodness of fit of the model with the value of more than 0.5 or else the model is unfit for the research (Sekaran and Bougie, 2016).

Based on the Table 5, the R value is 0.853, showing a good level of prediction. The multiple regression model has an adjusted R square value of 0.724. This indicates that the independent variables in this research explains 72.4% of the variability of the dependent variable. Based on Sekaran and Bougie (2016), the remaining 27.6% variation could not be explained by the predictors but other factors that have not been studied in this research. Meanwhile, F score of the ANOVA analysis is 297.34 which has a p value of 0.00. Among the four variables, price ($\beta = .806$, $p < .001$), quality ($\beta = .069$, $p < .05$), and online advertisement ($\beta = .105$, $p < .001$) significantly influences the dependent variable and makes the strongest unique contribution in explaining online buying behaviour as compared to brand image.

Multicollinearity can be defined as the assessment of correlation among the input variables and ultimately determine the skewness of the data (Saunders et al., 2016). The Variance Inflation Factor (VIF) portrays the effect on the standard error of the regression coefficient for each independent variables (Sarstedt and Mooi, 2019). A well distributed dataset can be achieved when the VIF is as low as possible, with a maximum value of 10 (Sekaran and Bougie, 2016). From the analysis, all VIFs value that is less than 2, showing that the data is well distributed.

Factors Affecting Online Consumer Buying Behavior Towards Essential Oils in Penang

Table 4. Factor loading and Cronbach Alpha's result

Variable	No.	Questions	Factor Loading	Cronbach Alpha
Online Consumer Buying Behaviour	CBB1.	I choose essential oils mainly due to social media that discuss on the effects on chemicals on humans and environment.	0.586	.843
	CBB2.	I purchase essential oils to satisfy my interest and curiosity.	0.673	
	CBB3.	I purchase essential oils to complement medical treatment.	0.557	
	CBB4.	I purchase essential oils to enhance my existing health.	0.754	
	CBB5.	I usually use people's recommendations to purchase essential oils on social media.	0.551	
Brand Image	B1.	Symbol of the brand can built recognition to me.	0.667	.804
	B2.	The value of this brand give me confidence to its Product.	0.562	
	B3.	The opinion that the social media has about the brand is important for me.	0.614	
	B4.	I prefer to buy products available in a limited edition.	0.711	
Price	P1.	Price of the essential oils is an important criterion for making purchase.	0.685	.866
	P2.	I think price of essential oils currently are affordable for consumers.	0.778	
	P3.	I compare prices of many other brands of essential oils before buying.	0.625	
	P4.	I am more attracted to purchase essential oils when there are sales/offers/incentive given.	0.805	
Quality	Q1.	I will always consider quality of the essential oils before making purchase.	0.639	.845
	Q2.	Since the essential oils are extracted from natural plants, the quality is good.	0.705	
	Q3.	Good packaging product is equally important as the extract of the essential oil itself.	0.788	
	Q4.	My health is always on check when using essential oils.	0.617	
Online Advertisement	O1.	Online advertisement influences me to search more about information on essential oils immediately.	0.643	.794
	O2.	I will click on the online advertisement if the advertisement has driven my interest first rather than my need towards the essential oils.	0.554	
	O3.	Online advertisement influences me to change my perception towards the essential oils.	0.715	
	O4.	The information contained in online advertisement helps me to know what I want on the product	0.568	

DISCUSSION AND IMPLICATION

This research aims to find out the relationship between brand image, price, quality and online advertisement towards Penang online consumer buying behavior on the purchase of essential oils. The researcher has formed 4 research objectives and 4 hypotheses to test the parameters before the data collection started. The analysis results show that Penang online consumers have different perception when mak-

ing purchases towards essential oils. Firstly, the findings have proven to reject the foremost hypothesis which stated brand image that has a significant influence on Penang online consumer buying behavior towards essential oils. This is inconsistent with the previous literature studies that has been presented. As explained by Neupane (2015), brand image is the mental image imprinted in the mind of consumers promises that are made from the brand. However, previous studies conducted by Foster (2016) found that brand image had only contributed a total of 7% on purchasing decision of mineral water among the consumers, indicating that there are greater influencing variables rather than sole brand image factor. Another studies conducted by Setiawan et al. (2017) also found that brand image is not significant to the interest of buying online smartphone products among the consumers but online perceived quality and online brand personality instead. Other than that, a study conducted by Torlak et al., (2014) found that electronic word-of-mouth has a significant impact on brand image which means that consumers consider the reviews obtained from electronic word-of-mouth channels, leading them to form a brand image perception before purchasing cellular phones, however the researcher emphasized that it depends on the type of product groups. This also explains why brand image is the least considerable factor to be taken into for purchasing essential oils among Penang consumers since the findings have shown that 45.13% respondents are occupied without tertiary educational background. The results are consistent with a study conducted by Mityko (2012) stated that education plays a role in how consumers perceive the products, which could be indirectly related to the web experience they have such as uncertainty towards product attributes, benefits and quality. Shopping online is slightly different from physical stores as consumers form early impression based on the online reviews of buyers and more attention is paid to the negative reviews during evaluation phase (Jiang, 2015). This is further supported with previous studies had proven that consumer review mechanism showed a great impact towards consumers' trust, perceived usefulness, and quality effectiveness of product (Benlian et al., 2012).

Table 5. Multiple Regression Analysis

Independent Variables	β	Sig
Brand Image	-.017	.517
Price	.806	.000
Quality	.069	.014
Online Advertisement	.105	.000
R	.853	
R ²	.727	
Adj R ²	.724	
F	297.336	

Secondly, price found to be the most influential factor to be considered by consumers before purchasing essential oils. This is consistent with the findings from Amron (2018) that price is the greatest effect in influencing consumers' purchasing decision compared to other three independent variables which are brand image, brand trust and product quality. Aslam and Frooghi (2018) also supports that price impacts consumers buying behaviour positively. Due to financial issues and responsibilities, consumers

may resort to cheaper products or buying in bulks due to the benefits they found in essential oils which explains the expenditure effect where buyers are price-sensitive as stated by Faith and Edwin (2014). The average purchase of essential oils recorded is twice a month with a percentage of 35.84% which could be influenced from discount pricing and bundle pricing strategies but Al-Salamin and Al-Hassan (2016) mentioned that there are no significant differences in pricing strategies among consumers like age, gender, marital status and qualification.

Thirdly, quality has found to be significant on online consumer's buying behavior towards essential oils. It is consistent with the findings from Anggita and Ali (2017) who found that product quality is significantly and positively affecting purchase decision. The study also revealed that the service efficiency such as guaranteed package delivery process along with the lowest price makes them to make repeated online purchases (Al-Jahwari et al., 2018). Floh and Madlberger (2013) observed that product and web quality had brought significant impact on shoppers' emotions, bringing spontaneous effect. In addition, Loureiro et al. (2013) supported that elements like web visuals, display and layout clearly brings consumers feeling of pleasure due to enhanced design and navigability. Although older consumers were less likely to search for a product online, they are more likely to buy it online more than younger shoppers because of user-friendly and language friendly online business platforms that allowed them to have easy access and purchase things online regardless of their education level (Nawi et al., 2019).

Finally, the result confirms online advertisement has a significant influence on Penang online consumer buying behavior towards essential oils. This is consistent with the experiment conducted by Lin and Kim (2016), and Jan et al., (2019) where the usefulness and features of advertisement can impact consumer purchase behavior towards products. The research results here have shown that most respondents buying essential oils online are not occupied with tertiary educational background, aligning with what is stated by Lakshmi (2016) that online shoppers are not necessarily more educated since online shopping has been considered as an easy activity since consumers have made decisions mostly based on the information that provided by online retailer. However, educated people are more likely to do more detailed purchasing decision process for education influences directly on the product perception such as looking for information about the product, where to buy and how to buy (Mityko, 2012).

According to Noel (2017), consumer buying behavior is the most important aspect in business education because attracting and retaining customers through marketing strategies is the key of a successful business by knowing, serving and influencing consumers well. Based on the findings, the highest beta coefficient value is price, online advertisement and lastly followed by product quality. The result of this research helps the essential oil industries to instill appropriate actions based on the findings in order to increase both future and existing sales among online consumers in Malaysia. Since the price is the highest influencing factor for consumers, the organizations can design more price-effective strategic plans by giving cashbacks for existing consumers or even a referral program to attract more consumers since most of them are influenced by reviews and feedbacks. Besides, consumers are more attracted to buy the products when there is an integration of coupon and bundle discounts (Jiang et al., 2018). Shamout (2016) has mentioned that by applying to numerous promotion tools, consumers' behavior can be positively persuaded towards purchasing products.

Besides, as online advertisement is the second most influential factor, therefore, marketers should work on the design of website that provides full and honest information of the products. This is because Ha (2012) has mentioned that the prerequisite for fruitful online presence is to have an effective website design. This is further supported by Agift et al. (2014) which demonstrate that website design is among the most vital factors in influencing buying behavior. The website design artefacts such as visual design,

information design and navigation design able to build faith among the consumers and thus, increase their buying intention (Hasan, 2016). Consumers depend heavily on the transparency of the site's design to determine the quality and appearance of the product (Wells et al. 2011). Abou-Shouk and Khalifa (2017) also stated that details and contents available in the websites can positively affect consumer buying behavior. The convenience of information searching, navigation as well as the website design able to attract and retain online consumers (Nuryakin and Farida, 2016). Therefore, marketers can acquire graphic designers by introducing specific colors and designs which can boost consumers' mood to shop online as well. Cool colors are recommended on the website design as these colors inspire consumers to have a joyful feeling, leading them to spend more time exploring the products and thus making purchases (Putri and Balqiah, 2017).

Furthermore, the essential oil industries should perform more researches on how to reduce the probability of skin allergies occurrence in essential oil products and always ensure that their products are based on the safety guidelines by the Ministry of Health Malaysia as consumers have perceived essential oils as the alternative way for them in keeping their health on track. Consumers have considered quality as one of the important factor in purchasing essential oils.

Nevertheless, there are some limitations and several suggestions are provided to offer opportunities for future research. Since online questionnaires are used for this research, the main disadvantage is lacking number of knowledgeable respondents in computing and Internet skills (Nayak and Narayan, 2019). Online surveys also cannot capture responses from those who do not have Internet access such as those with lower incomes, those who live in remote place or the elderly (Ball, 2019). Moreover, it may create bias since respondents may make assumptions if there are any ambiguous terms since the researcher is not in presence to explain immediately. Potential Spamming and Survey Fraud phenomena are another disadvantages where respondents repeatedly submitting the same opinion that alters the results (Bohannon, 2016). This can be solved by using a software that limits one response per phone user. It would be best to use paper questionnaires in bilingual language to promote better understanding among respondents. Researchers could also further improve this research by adding religion variable in demographic variables to find the relationship between sociocultural values and the online essential oil purchases. According to Ackerman and Chopik (2020), individuals who are religious tend to purchase essential oils as they are more engaged in restorative health behaviors. Researchers can provide some questions regarding on the frequency of spending time online in terms of online purchases based on the monthly income for better understanding on consumer buying behavior in essential oils. Wu and Tsai (2017) has mentioned that consumers who frequently shop online are mostly influenced by website characteristics which promote better emotions leading to more online purchases.

CONCLUSION

Finally, the results of this study indicate the emergence of a valid and reliable variables that affect decisions of consumer to choose essential oils. This study emphasizes and create a deeper clarification on the impacts of online consumer buying behavior against the brand image, price, quality and online advertisement of essential oils in market. With this research findings, essential oils companies can utilize such data to further strengthen their justification in marketing essential oils, thus bringing a verified reference on an industry with different buying behavior and marketing techniques. Scholars interested

in the essential oils industry can also further develop their researched based around the findings of this research in context to their research.

REFERENCES

- Abou-Shouk, M., & Khalifa, G. (2016). The influence of website quality dimensions on e-purchasing behaviour and e-loyalty: A comparative study of Egyptian travel agents and hotels. *Journal of Travel & Tourism Marketing*, 34(5), 608–623. doi:10.1080/10548408.2016.1209151
- Ackerman, L., & Chopik, W. (2020). Individual differences in personality predict the use and perceived effectiveness of essential oils. *PLoS One*, 15(3), e0229779. doi:10.1371/journal.pone.0229779 PMID:32163451
- Agift, A., Rekha, V., & Nisha, C. (2014). Consumers attitude towards online shopping. *Research Journal of Family. Community and Consumer Sciences*, 2(3), 4–7.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888–918. doi:10.1037/0033-2909.84.5.888
- Al-Jahwari, N. S., Khan, F. R., Al Kalbani, G. K., & Al Khansouri, S. (2018). Factors influencing customer satisfaction of online shopping in Oman: Youth perspective. *Humanities and Social Science Reviews*, 6(2), 64–73. doi:10.18510/hssr.2018.628
- Al-Msallam, S., & Alhaddad, A. (2016). Customer satisfaction and royalty in the hotel industry: The mediating role of relationship marketing (PLS Approach). *Journal of Research in Business and Management*, 4(5), 32–42.
- Al-Salamin, H., & Al-Hassan, E. (2016). The impact of pricing on consumer buying behaviour in Saudi Arabi: Al-Hassa case study. *European Journal of Business and Management*, 8(12), 62–73.
- Al-Zyoud, M. F. (2018). Does social media marketing enhance impulse purchasing among female customers case study of Jordanian female shoppers. *The Journal of Business and Retail Management Research*, 13(2), 135–151. doi:10.24052/JBRMR/V13IS02/ART-13
- Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*, 42, 65–77. doi:10.1016/j.ijinfomgt.2018.06.001
- Alhabash, S., & McAlister, A. R. (2015). Redefining virality in less broad strokes: Predicting viral behavioral intentions from motivations and uses of Facebook and Twitter. *New Media & Society*, 17(8), 1317–1339. doi:10.1177/1461444814523726
- Alsubagh, H. (2015). The impact of social networks on consumer behavior. *International Journal of Business and Social Science*, 6(1), 209–216.
- Amron, A. (2018). Effects of product quality, price, and brand image on the buying decision of city car product. *Archives of Business Research*, 6(4), 1–8. doi:10.14738/abr.64.4374

Anggita, R. & Ali, H. (2017). The influence of product quality, service quality and price to purchase decision of SGM Bunda Milk (Study on PT. Sarihusada Generasi Mahardika Region Jakarta, South Tangerang District). *A Multidisciplinary Journal*, 3(6), 261-272.

Appiah, D., Ozuem, W., Howell, K., & Lancaster, G. (2019). Brand switching and consumer identification with brands in the smartphones industry. *Journal of Consumer Behaviour*, 18(6), 463–473. doi:10.1002/cb.1785

Aqsa, M., & Kartini, D. (2015). Impact of online Advertising on consumer attitudes and interests buy online: Survey on students of internet users in Makassar. *International Journal of Scientific and Technology Research*, 4(4), 230–236.

Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: An online-offline comparative and the impact of social media. *Spanish Journal of Marketing*, 22(1), 42–62. doi:10.1108/SJME-03-2018-007

Ashman, R., Solomon, M. R., & Wolny, J. (2015). An old model for a new age: Consumer decision-making in participatory digital culture. *Journal of Customer Behaviour*, 14(2), 127–146. doi:10.1362/147539215X14373846805743

Aslam, W., Arif, I., Farhat, K., & Khursheed, M. (2018). The role of customer trust, service quality and value dimensions in determining satisfaction and loyalty: An empirical study of mobile telecommunication industry in Pakistan. *Global Business Review*, 30(2), 177–193.

Aslam, W., & Frooghi, R. (2018). Switching behaviour of young adults in cellular service industry: An empirical study of Pakistan. *Global Business Review*, 19(3), 1–15. doi:10.1177/0972150917713886

Attreya, B. (2018). Consumer buying behaviour. *Journal of Advances and Scholarly Researches in Allied Education*, 15(9), 1–4. doi:10.29070/15/57885

Auf, M., Meddour, H., Saoula, O., & Majid, A. (2018). Consumer buying behaviour: The roles of price, motivation, perceived culture importance, and religious orientation. *The Journal of Business and Retail Management Research*, 12(04). Advance online publication. doi:10.24052/JBRMR/V12IS04/ART-18

Babin, B., & Zikmund, W. (2015). *Exploring Marketing Research* (11th ed.). South-Western College Pub.

Ball, H. L. (2019). Conducting online surveys. *Journal of Human Lactation*, 35(3), 413–417. doi:10.1177/0890334419848734 PMID:31084575

Benlian, A., Titah, R., & Hess, T. (2012). Differential effects of provider recommendations and consumer reviews in e-commerce transactions: An experimental study. *Journal of Management Information Systems*, 29(1), 237–272. doi:10.2753/MIS0742-1222290107

Bohannon, J. (2016). Survey fraud test sparks battle. *Science*, 351(6277), 1014. doi:10.1126/science.351.6277.1014 PMID:26941296

Chander, S., & Raza, M. (2015). Consumer buying behaviour: A comparative study of male and female users of electronics. *Abasyn Journal of Social Sciences*, 8(1), 47–61.

Chovanová, H., Korshunov, A., & Babčanová, D. (2015). Impact of brand on consumer behaviour. *Procedia Economics and Finance*, 34, 615–620. doi:10.1016/S2212-5671(15)01676-7

- Clow, E. K., & Baack, D. (2016). *Integrated Advertising, Promotion, and Marketing Communications* (7th ed.). Pearson Education.
- Danish, M., Ali, S., Ahmad, M., & Zahid, H. (2019). The influencing factors on choice behaviour regarding green electronic products: Based on the green perceived value model. *Economies*, 7(4), 99. doi:10.3390/economies7040099
- Deshpande, A., & Saxena, T. (2017). Effects of consumer buying behaviour durable sellers. *International Journal of Management Sciences*, 8(1), 32–44.
- Dhore, A., & Godbole, S. (2018). A descriptive study of the effectiveness of internet advertising on consumer buying behavior in Nagpur City. *International Journal of Latest Engineering and Management Research*, 3(5), 1–12.
- Doody, O., & Doody, C. M. (2015). Conducting a pilot study: Case study of a novice researcher. *British Journal of Nursing* (Mark Allen Publishing), 24(21), 1074–1078. doi:10.12968/bjon.2015.24.21.1074 PMID:26618678
- Erdil, T. S. (2015). Effects of customer brand perceptions on store image and purchase intention: An application in apparel clothing. *Procedia: Social and Behavioral Sciences*, 207, 196–205. doi:10.1016/j.sbspro.2015.10.088
- Faisal-E-Alam, M. (2020). The influence of quality on consumers' purchase intention between local and multinational cosmetic firm. *Journal of International Business and Management*, 3(1), 1–11. doi:10.37227/jibm-2020-63
- Faith, D. O., & Edwin, A. M. (2018). A Review of the effect of pricing strategies on the purchase of consumer goods. *International Journal of Research in Management. Science and Technology*, 2(2), 88–102.
- Feng, X., Fu, S., & Qin, J. (2016). Determinants of consumers' attitudes toward mobile advertising: The mediating roles of intrinsic and extrinsic motivations. *Computers in Human Behavior*, 63, 334–341. doi:10.1016/j.chb.2016.05.024
- Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behaviour. *Electronic Commerce Research and Applications*, 12(6), 425–439. doi:10.1016/j.elerap.2013.06.001
- Foster, B. (2016). Impact of brand image on purchasing decision on mineral water product “Amidis” (Case Study on Bintang Trading Company). *American Research Journal of Humanities and Social Sciences*, 2(1), 1–11.
- Ganesh, R. S., & Vakayil, S. (2018). Consumer buying behaviour of virgin edible oils: A literature survey and conceptual framework. *International Journal of Management*, 10(4), 141–151.
- Gentina, E. G., Shrum, L. J., Lowrey, T. M., Vitell, S. J., & Rose, G. M. (2016). An integrative model of the influence of parental and peer support on consumer ethical beliefs: The mediating role of self-esteem, power, and materialism. *Journal of Business Ethics*, 150(4), 1173–1186. doi:10.1007/10551-016-3137-3
- Grunert, K. G., & Aachmann, K. (2016). Consumer reactions to the use of EU quality labels on food products: A review of the literature. *Food Control*, 59, 178–187. doi:10.1016/j.foodcont.2015.05.021

Ha, H. (2012). The effects of online shopping attributes on satisfaction–purchase intention link: A longitudinal study. *International Journal of Consumer Studies*, 36(3), 327–334. doi:10.1111/j.1470-6431.2011.01035.x

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. R. (2014). *Multivariate Data Analysis* (7th ed.). Prentice Hall.

Hanaysha, J. (2016). The importance of social media advertisements in enhancing brand equity: A study on fast food restaurant industry in Malaysia. *International Journal of Innovation, Management and Technology*, 7(2), 46–51. doi:10.18178/ijimt.2016.7.2.643

Hanaysha, J. (2018). An examination of the factors affecting consumer's purchase decision in the Malaysian retail market. *PSU Research Review*, 2(1), 7–23. doi:10.1108/PRR-08-2017-0034

Harreveld, F. V., Schneider, I. K., Nohlen, H., & Plight, J. V. D. (2012). The dynamics of ambivalence: Evaluative conflict in attitudes and decision making. Cognitive consistency: A fundamental principle in social cognition, 267-284.

Hasan, B. (2016). Perceived irritation in online shopping: The impact of website design characteristics. *Computers in Human Behavior*, 54, 224–230. doi:10.1016/j.chb.2015.07.056

Hasan, S. A., & Khan, M. Z. (2010). The impact of packaging characteristics on consumer brand preference. *South Asian Journal of Management Sciences*, 3(1), 1–10.

Hee, O. C., & Yen, W. S. (2018). The influence of advertising media towards consumer purchasing behavior in the food and beverage Industry in Malaysia. *International Journal of Human Resource Studies*, 8(2), 148–163. doi:10.5296/ijhrs.v8i2.12877

Hidayat, A., Adanti, A., Darmawan, A. & Setyaning, A. (2019). Factors influencing Indonesian customer satisfaction and customer loyalty in local fast-food restaurant. *International Journal of Marketing Studies*, 11(3), 131-139.

Hosseini, Z., Gharghani, Z. G., Mansoori, A., Aghamolaei, T., & Nasrabadi, M. M. (2015). Application of the theory of reasoned action to promoting breakfast consumption. *Medical Journal of the Islamic Republic of Iran*, 29, 289. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4764274/> PMID:26913252

Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve? *International Journal of Human-Computer Interaction*, 32(1), 51–62. doi:10.1080/10447318.2015.1087664

Hur, K., Kim, T. T., Karatepe, O. M., & Lee, G. (2017). An exploration of the factors influencing social media continuance usage and information sharing intentions among Korean travellers. *Tourism Management*, 63, 170–178. doi:10.1016/j.tourman.2017.06.013

Jan, M., Haque, A., Abdullah, K., Anis, Z., & Faisal-E-Alam, F.-E.-A. (2019). Elements of advertisement and their impact on buying behaviour: A study of skincare products in Malaysia. *Management Science Letters*, 9(10), 1519–1528. doi:10.5267/j.msl.2019.5.033

Jiang, X. D. (2015). What is the most helpful product review? The effect of online reviews' quantitative and textual features on its helpfulness. *Foreign Economics and Management*, 37(4), 41–55.

Jiang, Y., Liu, Y., Wang, H., Shang, J., & Ding, S. (2018). Online pricing with bundling and coupon discounts. *International Journal of Production Research*, 56(5), 1773–1788. doi:10.1080/00207543.2015.1112443

Jiménez-Parra, B., Rubio, S., & Vicente-Molina, M. A. (2014). Key drivers in the behaviour of potential consumers of remanufactured products: A study on laptops in Spain. *Journal of Cleaner Production*, 85, 488–496. doi:10.1016/j.jclepro.2014.05.047

Johar, S. (2015). To Study The Consumer decision making behavior to purchase of durable goods. *International Journal of Applied and Pure Science and Agriculture*, 1(12), 85–92.

Khaniwale, M. (2015). Consumer buying behaviour. *International Journal of Innovation and Scientific Research*, 14(2), 278–286.

Kotler, P. (2017). *Principles of Marketing* (7th European Ed.). Pearson Education.

Ku, T. H., & Lin, T. L. (2018). Effects of luxury brand perceptions on brand attachment and purchase intention: A comparative analysis among consumers in China, Hong Kong and Taiwan. *South African Journal of Business Management*, 49(1), 1–9. doi:10.4102/ajbm.v49i1.6

Kumar, V., & Mehrotra, S. (2018). Print vs. online advertising: Impact on buying behavior of youth. *Global Media Journal*, 16(31), 1–3.

Kumar, V., & Taunk, A. (2018). Factors influencing buying behaviour of the consumers: A study of four wheeler passenger tourist cab state of Uttarakhand. *International Journal of Research in Humanities and Social Studies*, 5(4), 36–40.

Kunal Ahuja, S. (2020). *Essential Oils Market size to exceed \$15bn by 2026*. Global Market Insights, Inc. Retrieved 1 February 2020, from <https://www.gminsights.com/pressrelease/essential-oil-market>

Lakshmi, S. (2016). Consumer buying behaviour towards online shopping. *International Journal of Research –Granthaalayah, A Knowledge Repository*, 4(8), 60-65.

Letchumanan, G., & Sam, C. Y. (2016). A study on the influence of brand name on purchase of automobiles in Malaysia. *Global Business and Management Research*, 8(3), 15–29.

Lin, C. A., & Kim, T. (2016). Predicting user response to sponsored advertising on social media via the technology acceptance model. *Computers in Human Behavior*, 64, 710–718. doi:10.1016/j.chb.2016.07.027

Lindsey, L. L. (2017). The influence of persuasive messages on healthy eating habits: A test of the Theory of Reasoned Action when attitudes and subjective norm are targeted for change. *Journal of Applied Biobehavioral Research*, 22(4), e12106. Advance online publication. doi:10.1111/jabr.12106

Liu, J., Cai, S., Chen, D., Wu, K., Liu, Y., Zhang, R., Chen, M., & Li, X. (2019). Behavioral and neural changes induced by a blended essential oil on human selective attention. *Behavioural Neurology*, 2019, 1–8. doi:10.1155/2019/5842132 PMID:31737125

Loureiro, S. M. C., Almeida, M., & Rita, P. (2013). The effect of atmospheric cues and involvement on pleasure and relaxation: The spa hotel context. *International Journal of Hospitality Management*, 35, 35–43. doi:10.1016/j.ijhm.2013.04.011

- Lu, C., Berchoux, C., Marek, M. W., & Chen, B. (2015). Service quality and customer satisfaction: Qualitative research implications for luxury hotels. *International Journal of Culture, Tourism and Hospitality Research*, 9(2), 168–182. doi:10.1108/IJCTHR-10-2014-0087
- Madhavan, M., & Chandrasekar, K. (2015). Consumer buying behavior- An overview of theory and models. *St. Theresa. Journal of the Humanities and Social Sciences*, 1(1), 74–112. <http://www.stic.ac.th/ojs/index.php/sjhs/article/view/6/50>
- Marakanon, L., & Panjakajornsak, V. (2017). Perceived quality, perceived risk and customer trust affecting customer loyalty of environmentally friendly electronics products. *Kasetsart Journal of Social Sciences*, 38(1), 24–30. doi:10.1016/j.kjss.2016.08.012
- Marta, K. (2016). Influence of the Brand on Purchase Decision. *Academica Brancusi Publisher*, 6, 54–57.
- Mashao, E. T., & Sukdeo, N. (2018). Factors that influence consumer behavior in the purchase of durable household products. *Proceedings of the International Conference on Industrial Engineering and Operations Management*.
- Matzler, K., Strobl, A., Thurner, N., & Fuller, J. (2015). Switching experience, customer satisfaction, and switching costs in the ICT industry. *Journal of Service Management*, 26(1), 117–136. doi:10.1108/JOSM-04-2014-0101
- Mazlan, M., & Diah, N. M. (2019). Woman and essential oil usage: A literature review. *The Malaysian Journal of Soil Science*, 3(1), 27–36.
- Mittal, B. (2015). Self-concept clarity: Exploring its role in consumer behaviour. *Journal of Economic Psychology*, 46, 98–110. doi:10.1016/j.joep.2014.11.003
- Mityko, D.S.V. (2012). Consumers' education level impact on the perception of the search experience credence products-empirical evidence. *Journal of Internet and e-Business Studies*, 1-8. doi:10.5171/2012.617588
- Montano, D. E., & Kasprzyk, D. (2015). *Theory of Reasoned Action, Theory of Planned Behaviour, and The Integrated Behavioural Model. Health Behaviour: Theory, Research and Practice*. Jossey-Bass A Wiley Imprint.
- Mooi, E., Sarstedt, M., & Mooi-Reci, I. (2018). *Principal Component and Factor Analysis in Market Research*. Springer.
- Nash, J. (2019). Exploring how social media platforms influence fashion consumer decisions in the UK retail sector. *Journal of Fashion Marketing and Management*, 23(1), 82–103. doi:10.1108/JFMM-01-2018-0012
- Nathwani, D. (2017). Impact of sales promotion on consumer buying behaviour. *Journal for Contemporary Research in Management*, 4(1), 1–11.
- Nawi, N. C., Al Mamun, A., Hamsani, N. H. B., & Muhayiddin, M. N. B. (2019). Effect of consumer demographics and risk factors on online purchase behaviour in Malaysia. *Societies (Basel, Switzerland)*, 9(1), 1–11. doi:10.3390/soc9010010

- Nayak, S. D. P., & Narayan, K. A. (2019). Strengths and weakness of online surveys. *Journal of the Humanities and Social Sciences*, 24(5), 31–38.
- Neupane, R. (2015). The effects of brand image on customer satisfaction and loyalty intention in retail super market chain UK. *International Journal of Social Sciences and Management*, 2(1), 9–26. doi:10.3126/ijssm.v2i1.11814
- Noel, H. (2017). *Basics marketing 01: Consumer behaviour*. Bloomsbury Publishing.
- Nolcheska, V. (2017). The influence of social networks on consumer behaviour. *Balkan and Near Eastern Journal of Social Sciences*, 3(4), 75–87.
- Nuryakin & Farida, N. (2016). Effects of convenience online shopping and satisfaction on repeat purchase intention among students of higher institutions in Indonesia. *Journal of Internet Banking and Commerce*, 21(2), 1–19.
- Oke, A., Popoola, O., Kamolshotiros, P., Ajagbe, M., & Olujobi, O. (2016). Consumer behaviour towards decision making and loyalty to particular brands. *International Review of Management and Marketing*, 6(48), 43–52.
- Oladele, P. O., Olowookere, B., Okolugbo, C. N., & Adegbola, E. A. (2015). Product packaging as a predictive factor of consumer patronage of toothpaste in Ado-Ekiti, Nigeria. *British Journal of Marketing Studies*, 3(3), 12–28.
- Priya, N. (2019). Studying the impact of internet advertising on consumer buying behavior. *International Journal of Management and Social Sciences*, 7(9), 44–52.
- Putri, K. D., & Balqiah, T. E. (2017). Do web atmospherics affect purchase intention? The role of color and product display. *Journal of Management and Marketing Review*, 2(2), 79–86.
- Qazzafi, S. (2019). Consumer buying decision process toward products. *International Journal of Scientific Research and Engineering Development*, 2(5), 30–133.
- Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics and Management Sciences*, 6(2), 1–5. doi:10.4172/2162-6359.1000403
- Rahman, K., & Noor, N. (2016). Evaluating gaps in consumer behaviour research on organic foods: A critical literature review under Bangladesh context. *Journal of Marketing and Consumer Behaviour in Emerging Markets*, 1(3), 42–49.
- Rahnama, H., & Rajabpour, S. (2016). Identifying effective factors on consumers' choice behaviour toward green products: The case of Tehran, the capital of Iran. *Environmental Science and Pollution Research International*, 24(1), 911–925. doi:10.1007/11356-016-7791-x PMID:27761861
- Ramya, N., & Ali, S. (2016). Factors affecting consumer buying behaviour. *International Journal of Applied Research*, 2(10), 76–80.

- Reiter, L., McHaney, R., & Connell, K. Y. H. (2017). Social media influence on purchase intentions: Instrument validation. *International Journal of Web Based Communities*, 13(1), 54–72. doi:10.1504/IJWBC.2017.082719
- Ringim, K. J., & Reni, A. (2019). Mediating effect of social media on the consumer buying behaviour of cosmetic products. *Advances in Economics. Business and Management Research*, 92, 291–308.
- Sabri, E. (2019). Consumer's purchase intention towards luxury retailer's social media advertisements —A Case Study of a Shoe Retail—UAE-Dubai Mall. *Social Networking*, 8(1), 39–51. doi:10.4236n.2019.81003
- Sachdeva, I., & Goel, S. (2015). Retail store environment and customer experience: A paradigm. *Journal of Fashion Marketing and Management*, 19(3), 290–298. doi:10.1108/JFMM-03-2015-0021
- Salih, D., & Ahmed, A. (2019). The impact of organizational values on employee performance, an empirical study on banking industry in Kurdistan Region. *Management Science Letters*, 1199-1206. doi:10.5267/j.msl.2019.4.021
- Santpal & Pradeep. (2015). Consumer buying behaviour: An empirical study on personal computer. *International Journal of Research in Commerce and Management*, 6(3), 54–58. https://ijrcm.org.in/article_info.php?article_id=5287
- Sarstedt, M., & Mooi, E. (2019). Regression Analysis. In *A Concise Guide to Market Research*. Springer. doi:10.1007/978-3-662-56707-4_7
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson Education Limited.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-building Approach* (7th ed.). Haddington: John Wiley and Sons.
- Setiawan, B., & Wiet Aryanto, V. D. (2017). The effects of brand image on online perceived quality, online brand personality and purchase intention. *International Journal of Economics and Business Administration*, 5(3), 70–80. doi:10.35808/ijeba/136
- Shamout, M. D. (2016). The impact of promotional tools on consumer buying behavior in retail market. *International Journal of Business and Social Science*, 7(1), 75–85.
- Stankevich, A. (2017). Explaining the consumer decision-making process: Critical literature review. *Journal of International Business Research and Marketing*, 2(6), 7–14. doi:10.18775/jibrm.1849-8558.2015.26.3001
- Tanu, B., & Harpreet, K. (2016). Benefits of Essential Oil. *Journal of Chemical and Pharmaceutical Research*, 8(6), 143–149.
- Teeny, J. (2015). *Perceived Affect and Cognition as Antecedents to Advocacy* (Master Thesis). Ohio State University. Retrieved from <https://etd.ohiolink.edu/>
- Torlak, O., Ozkara, B. Y., Tiltay, M. A., Cengiz, H., & Dulger, M. F. (2014). The effect of electronic word of mouth on brand image and purchase intention: An application concerning cell phone brands for youth consumers in Turkey. *Journal of Marketing Development and Competitiveness*, 8(2), 61–68.

- Tsai, M. T., Chen, K. S., & Chien, J. L. (2012). The factors impact of knowledge sharing intentions: The theory of reasoned action perspective. *Quality & Quantity*, 46(5), 1479–1491. doi:10.1007/11135-011-9462-9
- Tuten, T. L., & Solomon, M. R. (2017). *Social media marketing*. Sage.
- Tzavara, D., Clarke, P., & Misopoulos, F. (2019). An investigation of the impact of Facebook and Instagram on consumer buying behaviour: The case of retail fashion consumers in Rhodes, Greece. *International Journal of Business and Economic Sciences Applied Research*, 12(2), 81–87. doi:10.25103/ijbesar.122.07
- Vazifehdoust, H., Taleghani, M., Esmaeilpour, F., Nazari, K., & Khadang, M. (2013). Purchasing green to become greener: Factors influence consumers' green purchasing behaviour. *Management Science Letters*, 3(9), 2489–2500. doi:10.5267/j.msl.2013.08.013
- Voorn, R., Veen, G. V. D., Rompay, T. V., & Pruyn, A. (2018). It takes time to tango: The relative importance of values versus traits in consumer brand relationships. *Journal of Consumer Behaviour*, 17(6), 532–541. doi:10.1002/cb.1737
- Voramontri, D., & Klieb, L. (2018). Impact of social media on consumer behaviour. *International Journal of Information and Decision Sciences*, 11(3), 1–25. doi:10.1504/IJIDS.2019.10014191
- Wells, J. D., Valacich, J. S., & Hess, T. J. (2011). What signal are you sending? How website quality influences perceptions of product quality and purchase intentions. *Management Information Systems Quarterly*, 35(2), 373–396. doi:10.2307/23044048
- Wu, S. I., & Tsai, H. T. (2017). A comparison of the online shopping behavior patterns of consumer groups with different online shopping experiences. *International Journal of Marketing Studies*, 9(3), 24–38. doi:10.5539/ijms.v9n3p24
- Yan, M. R., Wang, C. H., Cruz Flores, N. J., & Su, Y. Y. (2019). Targeting open market with strategic business innovations: A case study of growth dynamics in essential oil and aromatherapy industry. *Journal of Open Innovation*, 5(1), 7. doi:10.3390/joitmc5010007
- Zekiri, J., & Hasani, V. V. (2015). The role and impact of the packaging effect on consumer buying behaviour. *Ecoforum Journal*, 4(1), 232–240.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Methods* (8th ed.). South-Western.
- Zulkefli, N. A., Iahad, N. A., & Yusof, A. F. (2018). Benefits of social media platform in healthcare. *International Journal of Innovative Computing*, 8(3), 59–63. doi:10.11113/ijic.v8n3.201
- Zulkepli, M., Sipan, I., & Jibril, J. D. (2017). An exploratory factor analysis and reliability analysis for green affordable housing criteria instrument. *International Journal of Real Estate Studies*, 11(4), 10–21.

KEY TERMS AND DEFINITIONS

Brand Image: Brand image is how customers think of a brand. It can be defined as the perception of the brand in the minds of the customers. This image develops over time. Customers form an image based on their interactions and experience with the brand. These interactions take place in many forms and not necessarily involve the purchase or use of products and services.

Consumer Buying Behavior: Consumer buying behavior refers to the actions taken (both on and offline) by consumers before buying a product or service. This process may include consulting search engines, engaging with social media posts, or a variety of other actions. It is valuable for businesses to understand this process because it helps businesses better tailor their marketing initiatives to the marketing efforts that have successfully influenced consumers to buy in the past.

Essential Oils: Essential oils are compounds extracted from plants. The oils capture the plant's scent and flavor, or "essence." Unique aromatic compounds give each essential oil its characteristic essence. Essential oils are obtained through distillation (via steam and/or water) or mechanical methods, such as cold pressing. Once the aromatic chemicals have been extracted, they are combined with a carrier oil to create a product that's ready for use.

Online Advertisement: Online advertisement, also known as online marketing, Internet ads, interactive advertising, or web advertising, is a method of marketing and advertising that uses the Internet to send promotional marketing messages to customers. Some users find web ads intrusive and have gradually turned to advertising blockers for a number of reasons.

Price: Price is the rate of money or reward received by one party to another in exchange for one unit of products or services. The price is determined by the cost of manufacturing, the availability of the requested commodity and the market for the good. The price may be dictated by the monopoly or may be imposed on the company by market conditions.

Quality: Value is a perceptual, conditional, and rather intangible attribute that can be interpreted differently by different individuals. Consumers can rely on the specification of the standard of the product/service or on how to compare it with the competitors on the market. Producers can calculate the level of conformity or the degree to which the product/service has been generated correctly. Help staff can assess quality to the extent that the commodity is reliable, usable or sustainable.

Social Media: Social media are collaborative computer-based technologies that promote the development or exchange of content, thoughts, job preferences and other modes of expression across virtual communities and networks. E.g. Yes. Yahoo, Instagram, Twitter, Tik Tok, Pinterest, LinkedIn...

Chapter 17

Online Consumer Behaviors Trigger Drastic Distribution Changes: The Case of Japan

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ABSTRACT

In this chapter, the author investigated the characteristics of online consumer behavior regarding the grocery retail market and their impact on retailers' distribution channel strategies. It examined the impact of recent innovations and the globalization of online technology on retail strategy. To achieve these goals, this study analyzed case studies of online consumer behavior in the Japanese online grocery market. Not only has there been a dramatic increase in sales over the last decade, but there have also been significant changes in both online technology and distribution channel strategy in this market. Underlying this transformation is the influence of Japan's characteristic online consumer behavior. Based on an empirical analysis of Japanese consumers and several case studies, this chapter predicts the future features of the online grocery market.

INTRODUCTION

The global rapid expansion of online grocery markets has heightened the need to characterize this promising market. On a technological basis, online grocery markets differ relatively little between countries (Hasan & Dista, 1999). However, online grocery business models vary from country to country because the optimal e-business model in each country differs depending on differences in consumer characteristics (Ogawara & Zhang, 2003). Therefore, it can be expected that differences in the behavior of consumers online have a significant impact upon the choice of business model and its subsequent performance (Anckar, et al., 2002; Gsken, et al., 2019).

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The Japanese grocery market is regarded as very competitive, consisting mainly of small and medium-sized enterprise (SME) retailers (Hirogaki, 2020). The market contrasts greatly with those of the United Kingdom (UK) and other Western countries. The online grocery market is similar, with a large number of online grocery retailers competing.

However, the market structure has recently been changing due to global retailers entering the Japanese market. Okado in the UK introduced its technology and partnered with Japanese mega-retailers. Amazon.com in the United States (US) has partnered with an SME Japanese retailer to support its online grocery. Under these conditions, the online grocery business model is currently undergoing a major transformation. Mega-retailers have initiated major investments in facilitating specialized distribution centers to reduce picking and shipping costs. Since a large up-front investment is required for these reductions, this trend might potentially transform Japan's online grocery market into an oligopolistic structure (Hirogaki, 2015).

There are few empirical studies on online Japanese consumer behavior, which will be one of the most important factors for predicting the future of this market. However, most previous research is limited to case studies with few focusing on consumer preferences for online grocery services. Other aspects are also examined, such as the kind of delivery system that should be constructed according to consumer needs and desires. Consumer impact on the distribution system is significant since the market size is very important on a global basis. The Japanese online grocery market is ranked third in size, followed by the US and China, ranked second and first, respectively, and market forecasts predict that Japan will maintain this rank for several years (IGD, 2018). This chapter empirically examines the characteristics of Japanese consumers' online behavior and how it affects online grocery business models.

BACKGROUND

Japan's Online Grocery Market History

The online grocery market emerged in Japan in 2000 when one of the largest retailers, Seiyu Co.Ltd, pioneered an experimental online retail business. In 2001, Ito-Yokado entered as the second retailer in the online market. Izumiya, a local supermarket chain, also entered in 2001 (Gotou, 2010; Kawabe, 2011; Watanabe, 2014).

During the early 2000s, online grocery distribution was at an experimental stage for many retailers. For retailers, this business was yet another opportunity to compensate for declining sales due to Japan's longest recession since 1992. Consumers were not motivated to use online groceries at that time (Gotou, 2010). However, this situation changed dramatically for both retailers and consumers by 2009. At this time, major and semi-major Japanese supermarkets had already entered the online grocery business and had sufficient capacity to respond to orders. In 2008, Aeon and Daiei, who held the largest market share, entered the market and UNY entered in 2007.

According to Kawabe (2011), between 2008 and 2010, there was a convergence of factors that promoted increasing commodity purchases through online groceries. He argued that the prolonged economic stagnation following the 2009 market crash led prompted consumers to reduce impulse purchases through brick-and-mortar shopping. Additionally, conditions such as record-high gasoline prices in 2008, the 2009 H1N1 flu epidemic, and a record-breaking heatwave in 2010 were major catalysts for the proliferation of online supermarkets (Kawabe, 2011).

Characteristics of two distribution models for online grocery services

As Parker and Funkhouser (1987) have argued, consumers and retailers share several distribution functions such as logistics and information flow. In this perspective, the biggest difference between online and regular grocery stores is in the final stage of distribution (Takahashi, 2016). In the case of shopping in a physical supermarket, consumers share the commercial, logistic, and information functions (i.e., secondary information). They contribute to commercial functions such as the selection of this shopping location/product, purchase, payment, inventory formation; logistics functions as in movement, handling, and storage; and finally, information functions like reading promotions, inquiries, and the like (Granzin & Bahn, 1989).

In online shopping, retailers gather the orders, process the bills, and then pack and deliver them. The costs of these distribution functions are shared by the retailer (Takahashi, 2016). Two distribution systems have been developed for online supermarkets—the store-based delivery model and the center-based delivery model. Both models are designed to perform the aforementioned distribution functions on behalf of the consumers. They differ, however, in terms of their capacity to handle orders and costs.

Store-Based Model

In this delivery model, the entire process from order acceptance to delivery takes place at the retail store. After receiving an order from a consumer via the Internet or other means, the order is channeled to the store nearest the customer through the company's system. The order is then collected from in-store inventory by staff (this process is known as "picking"). In many cases, the staff walk around the store's aisles, pick, and collect the goods ordered. The items are then gathered in the store's backyard and packed. The packaged items are then be delivered to the consumer's doorstep by staff or delivery agents. This in-store delivery model has been adopted by a wide range of grocery chains from SMEs to large chains.

Cost Characteristics

In the store-based model, the initial investment is relatively low. Actual store inventory can be used as inventory for the online grocery and storage space is used for online grocery's order-taking, packaging, and delivery operations. The low initial investment means that the online grocery business can be profitable with a relatively small number of customers. According to Shimizu et al. (2012), an online grocery store can be profitable if it can gain just a few hundred members. Aeon Net Super (i.e., Aeon online grocery), one of the largest retail chain stores, could be profitable if it receives at least 120 orders per store with an average order value of 5,000 yen (¥) per order (Kawabe, 2011; Nikkei MJ, 2009). In SME chain stores, such as Oakwa, it is possible to generate profit if there are at least 50 orders per day (Kawabe, 2011). However, the second cost characteristic of the store-based model is its high variable costs. Due to the limited space in physical stores, many tasks of online grocery stores such as ordering and packaging are difficult to mechanize (specialized facilities are required for such activities) and depend on the manual labor of staff. Therefore, as membership grows and order volumes increase, additional staff must be hired. These increased staffing costs are directly related to the model's increased variable costs.

Order Processing Capacity

The order processing capacity of the store-based model is limited because existing retail space and staff are used as a base for the online grocery business. As a result, order volumes and the coverage area are limited. In most cases, the coverage area for delivery must be within a few kilometers of the store. In addition, sharing inventory with physical stores might result in lost sales opportunities due to out-of-stock items (NikkeiXtech, 2017).

Service Level

Compared to the warehouse shipment type, the store-based delivery model is superior in terms of convenience, such as shorter lead time from ordering to receiving (NikkeiXtech, 2017). The reason is the assigned limited area wherein the service can be provided by the store. This enables them to respond quickly and promptly.

Center-Based Delivery Model (Dark-Store Model)

In this model, instead of a retail store, a specialized distribution center (called a “warehouse”) is established where orders are accepted and processed. The warehouse then serves as the delivery base and handles all operations, including order receiving, processing, picking, packing, and delivery. This model is used by both large and medium-sized retailers.

The warehouse delivery model’s characteristics are opposite to those of the store-based delivery model. That is, compared to the store-based model, (1) the initial investment and barriers to entry are high, (2) it has an excellent order-processing capability and covers a wider area, and (3) the ordering/delivery response and lead-time are inferior, but the order processing/delivery cost per house can be kept low. In the early 2000s, a number of companies started warehouse-type online groceries that did not have actual, brick-and-mortar stores. However, they were all forced to pull out within two years (Gotou, 2010). For example, “Okaimono-net,” an online grocery started by Softbank, one of the largest telecommunication companies in Japan, in partnership with Sunkus and Associates.co.ltd and Hikari Tsushin.co.ltd, ended its business after only a year (LOGI-BIZ, 2001) because they could not ensure enough orders to make it profitable (Gotou, 2010). However, in recent years, many retailers have begun investing in businesses based on the warehouse-based delivery model.

Cost Characteristics, Order Processing Capacity, and Service level

With the warehouse model, a large amount of ordering and shipping can be processed efficiently by using specialized equipment. On the other hand, the utilization rate must be increased to recover the fixed cost of specialized equipment. In some reports, it is necessary to secure at least 5,000 regular online users per day in order to profit from such specialized equipment (Nikkei MJ, 2009; Shimizu et. al, 2012). In addition to high order processing capacity, automation by specialized equipment makes it possible for variable costs such as labor to be less affected by the size of the order quantity. Therefore, if the sales volume increases, the profit growth will be larger than that of the store type. This is because it is not necessary to increase the staff.

Online Consumer Behaviors Trigger Drastic Distribution Changes

Table 1 summarizes the online grocery services and their service levels in several representative companies. Among them, Seiyu Co. Ltd .offers services that combine store-based and warehouse-based services. We can conclude that store-based type offers prompt and superior service convenient for the customers.

Table 1. Online grocery services in Japan

Online grocery (Company's name)	Shipping type	The number of product lines	Delivery time (Shortest time)	Receiving method	Business hours for Shipping/ (Hour allowance for delivery)	Shipping charges (free options)
AEON net super(AEON)	Store-based	12,000	3 hours	By hand or delivery box	12am-8pm (2 hours allowance)	¥ 324(free over ¥5,000)
Ito-Yokado net super(Ito-Yokado)		30,000	4 hours	By hand only	11am-10pm (2 hours)	¥ 324(free over ¥5,000)
Maruetsu net super(Maruetsu)		5000-6000	3 hours	By hand only	12am-8pm(2or3 hours)	¥ 216(free over ¥1,944)
Summit net super(Summit)	Warehouse- based	5000	The next day or later (If customers choose the Evening/Night shipping option, customers can receive their orders within 6 hours of ordering.)	By hand or delivery box	8am-12am/1pm- 5pm/8pm-10pm/ Discount option:11am- 7pm (6 hours)	¥ 500(free over ¥5,000) ¥ 300(fee applicable for ¥3000-5000)) ¥ 400(fee applicable for discount option) Additional ¥300 if you choose "Night shipping option"
Everyday Fresta (Fresta)		3000	The next day or later	By hand only	9am-5pm	¥ 210(free over ¥2000)
Rakuten mart (none)		2000-3000	9 hours	By hand or delivery box	9am-9pm (3-4 hours)	¥ 324(free over ¥3000) ¥ 162(the fee applicable for households with children below 4 years old and adults 65 years old and above free over ¥3000)
SEIYU.com (SEIYU)	Store-based	10,000	5 hours	By hand only	10am-10pm (2 hours)	¥ 324(free over ¥5000)
	Warehouse- based	20,000	The next day or later	By hand only	8am-9pm (1-4 hours)	¥ 324(free over ¥2138)

(Source: Hirogaki, 2016)

CASE STUDIES: ONLINE GROCERY RETAILERS

Some cases of online grocery retail players in are presented below. In recent years, there has been a shift in strategy from store-based delivery service to delivery service from a specialty warehouse.

Aeon Net Super

Aeon is the largest supermarket chain in Japan managing store-based online supermarkets. In November 2019, the company signed an exclusive partnership with Ocado Solution (Ocado Group, UK) to start a warehouse delivery model online grocery based on technical support using an Okado technological solution. In 2023, they plan to open a Customer Fulfillment Center (CFC) in Chiba prefecture, a suburb of the Tokyo metropolitan area. The warehouse features total floor space of 43,070 square meters (m), making it the largest warehouse of all Japanese online grocery stores. They plan to build additional distribution centers in other areas and expect sales of 600 billion yen by 2030. The reason for setting up a distribution center is that online grocery sales have been increasing by approximately 20% per year over the past few years and they expect it to reach 10% of store sales. Recently, they are sometimes unable to fill customer orders as the volume of orders due to the 2020 pandemic was 60% higher than the previous year.

Ito-Yokado

Seven and Ai Net Super is an online grocery provided by Ito-Yokado, one of the largest retail chains in Japan. In the past, they used a store-based delivery model, but in 2015 they built a relatively small dedicated online grocery warehouse in the Tokyo metropolitan area that can handle 2,000 orders per day. Ito-Yokado calls this warehouse a “dark store,” which is a relatively small, specialized physical warehouse. They expanded their service to areas that are outside the service area of most actual stores.

The service radius is 7 kilometers (km) and it targets approximately 1.18 million people and 670,000 households. It handles 10,000 items and has its own line-up such as frozen items in large packages. Ito-Yokado started an online grocery in 2001 and provided services at 146 stores nationwide. The Nishi-Nippori store is its first dedicated warehouse for online grocery service and operations started on March 8, 2015. In this warehouse, fresh products (e.g., meat, fish, poultry, sushi, etc.) are processed after receipt of the order to promote freshness. An extremely small space is used as a physical store to enable handling licensed products such as alcoholic beverages and pharmaceuticals. Online supermarkets are legally required to have an in-house store.

Todock (Coop Sapporo)

T According to Yano Research Institute, the market scale of the entire food delivery market exceeded 2 trillion yen as of fiscal year (FY) 2018. About 1.3 trillion yen is occupied by the co-op delivery business. Co-op home delivery businesses invested in distribution centers before other online groceries (Ryutsuu.biz, 2020). The co-op “Coop Sapporo” is one of the largest co-ops in Japan and operates an online grocery called “Todock.”

In 2012, Todock built the Ebetsu distribution center and some supporting centers through a joint investment with “Ace,” capable of processing between 30,000 and 40,000 daily orders for retail stores and as many as 80,000 during the busy season. They process, sort, and ship to 30 distribution centers for home delivery service and each actual store.

Co-op Sapporo is a cooperative organization based in Hokkaido, a region in the northernmost part of Japan. The island is divided into retail markets with the three large-scale retailers, namely, Aeon, Arcs,

and Co-op Sapporo. The total retail sales share of the three companies is over 80%. The concentration of retailers is much higher than in other Japanese regions.

Since this company cannot operate outside of the island due to the Consumer Cooperatives Act, it is promoting diversification ahead of other mega-retailers in Japan, including with the home delivery business. As of 2020, sales total 300 billion yen and sales at actual stores total 190 billion yen, including sales of mobile grocery stores with 100 vehicles in operation. The home-delivery business is over 100 billion yen and slightly under 10 billion yen from various businesses such as insurance, dinner delivery, hospital meals, renewable energy power supply, and funeral services. Its number of union members has reached 1.8 million, which is 34% of Hokkaido's 5.2 million residents. In 2006, they integrated all divisions into one delivery service named "Todock." It is used by 11-12% of Hokkaido's 2.64 million households, delivering products to 280,000 households weekly.

Warehouse Shipment Model in Small and Medium Enterprises: "Every Day Fresta"

"Every Day Fresta" is the online grocery division of an SME supermarket chain called "Fresta" the first supermarket in Hiroshima, which opened in 1960 and is headquartered there. As of 2011, it has about 60 branches with annual sales of 65.5 billion yen. They started an online grocery business in 2001, expecting that the introduction of the warehouse delivery model will require over 5,000 users per day, making it necessary to attract new customers who did not shop at brick-and-mortar Fresta stores. As of 2011, 53% of users do not shop at actual Fresta stores.

Every Day Fresta has introduced its own delivery policy called "Yokomochi houshiki" (horizontal holding method). Horizontal holding method means moving goods from warehouse to warehouse, but for Fresta, the horizontal holding method means consolidating physical distribution functions into one warehouse for efficiency since Fresta has only one warehouse. For areas where coverage is insufficient, cargo that has been packed and sorted in advance is loaded onto a large shipment truck that substitutes for the distribution center to cover a wider delivery area. This has succeeded in increasing the sales area and volume while avoiding the corresponding increase in fixed costs that would result from maintaining multiple distribution centers (Shimizu et al; 2012).

EMPIRICAL ANALYSIS OF CONSUMER PREFERENCES: CONVENIENCE OR AFFORDABILITY?

This section reviews the characteristics of Japanese consumers in relation to online grocery service based on Hirogaki (2015) by focusing on whether consumers accord more importance to convenience or affordability since that preference is very significant in determining the shipping model adopted by retailers.

Several studies like as Punakivi and Saranen (2001) listed the factors that satisfied both customers and retailer cost limitations, namely, order deadline, delivery time (same or next day shipping), reception system (manned or unmanned using a reception box), and delivery time window. Like other foreign country's grocers, these four services promote competition among retailers because these factors might attract more customers (Gotou, 2010). Levels of each service attribute might be expected to positively influence customer evaluations of the online retailer. On this basis, the following hypotheses are presented:

Hypothesis 1: The delivery time attribute is positively related to customer satisfaction.

Hypothesis 2: The receiving method attribute is positively related to customer satisfaction.

Hypothesis 3: The shipping attribute (i.e., business hours) is positively related to customer satisfaction.

Shipping fees affect customer evaluations of an online grocery service. Several studies have examined the effect of fee-required and shipping-free options as a strategic marketing variable (Becerril-Arreola et al., 2013; Gümüş et al., 2013; Jiang et al., 2013; Ogawara et al., 2003). Liu et al. (2013) found that compared to Taiwan, shipping and handling fees have a significantly higher impact on Japanese consumer purchase intentions, a trend that carries over into the online grocery sector (Gotou, 2010). Additionally, consumer research reports (MyVoice, 2013) as well as interviews conducted for this study indicate that many consumers require a free shipping option. Based on these studies, the following hypothesis is presented:

Hypothesis 4: The shipping charges attribute is positively related to customer satisfaction.

From the consumers' perspective, home-delivery services offer enhanced convenience to consumers who have difficulty shopping at regular supermarkets or grocery stores because of physical and/or time constraints (Morganosky & Cude, 2000). For example, online grocery stores and linked home delivery services offer more convenience to consumers who do not have time to purchase groceries, such as single-parent households, families with infants or younger children, dual-income families, elderly people, and those with disabilities (Gotou, 2010; Hong, 2013). Therefore, many Japanese online grocery retailers have assumed that the value of the reservation for home delivery service is high for such consumers facing shopping difficulty (Shimizu et al., 2012). Online grocery stores provide convenience and get paid for providing this convenience. A research agency that conducts surveys has discovered a similar tendency. A high percentage of consumers evaluate online grocery services as offering the following specific benefits: longer business hours (18.4% of all respondents), delivery services (54.4%), and saving shopping time (34.8%) (MyVoice, 2013).

Based on these studies, the following hypothesis is presented:

Hypothesis 5: Consumers place more importance on attributes concerning convenience than on attributes associated with shipping charges.

Consumers can be segmented according to several characteristics, such as being users and non-users of delivery services. According to one survey (MyVoice, 2013), consumers' prior experience using online grocery stores affected their service attribute perceptions and the relative importance they attached to various online grocers' service quality attributes.

However, in our interviews, some consumers mentioned that they used online grocers continuously and changed them only on the basis of the priority service they provided.

On this basis, the following hypothesis is presented:

Hypothesis 6: Differences in customer usage experiences with online grocers affect their relative ranking of attributes' importance.

Other factors also contribute to the choice of online grocery service. Usability emerged as a prime concern for online grocery systems (Freeman, 2009). E-service quality levels linked to usability, such as levels of efficiency, system availability, and website privacy were positively related to factors such as levels of perceived value (Marimon et al., 2010), store loyalty and trust in related offline chains (Nicholls et al., 2003), payment method, and (Ogawara et al., 2002) assurance of the quality of perishable food (Ogawara et al., 2003).

EMPIRICAL METHODS

The conjoint analysis method was applied to the study to estimate the structure of consumer preferences for online groceries. In applied marketing research, this method is commonly used to estimate the structure of consumer preferences, namely, estimating part-worth, importance weights, importance weights of attribute levels, and ideal points (Adegbola, et. al, 2019).

Marketers can use this analysis not only to reveal their consumer preferences but also to obtain beneficial information for marketing decisions. For example, this method identifies what consumers are thinking and the rankings that they assign to various attributes. It also determines if they will make a trade-off between service elements and which elements they will prioritize. Based on those findings, marketers can choose an optimized-marketing mix strategy based on the consumer's preferences as well as its cost.

According to Adegbola, et al. (2019), the approach is also beneficial for decision-making regarding other marketing strategies, such as simulating how much market share a product will receive between several competitive products and deciding how to design promotional strategies.

After conducting interviews with online grocery managers and their customers and considering previous survey research results regarding Japanese online grocery business models (Hirogaki, 2015), the authors determined four characteristic features, and their corresponding attributes, of online grocery services to consider in this conjoint experiment.

Delivery time attribute: The delivery time attribute features two specifications: 4 hours (h) and 2 h. This attribute indicates the amount of time that will pass between when the customer orders and receives the goods.

Receiving method attribute: The receiving method attribute features two specifications: in-person only and in-person or home delivery box (consumers can select either). This attribute represents different methods by which the customer can receive their goods.

Business hours for shipping attribute: The business hours for the shipping attribute feature three specifications: 14:00–20:00, 11:00–21:00, and 08:00–24:00.

Shipping charges attribute: The shipping charges attribute specifications denotes shipping charges per order, including free shipping options: ¥315 and no free shipping option; ¥315 and free shipping options, free for over ¥5,000; and ¥315 and free shipping options, free for over ¥1,000.

Using Fisher's factorial design, 36 possible combinations are reduced to 11 combinations. In this procedure, it is easier for the respondent to evaluate each online grocery service plan. This process was conducted using IBM SPSS Conjoint (Version 19) software.

Respondents were asked to evaluate 11 possible online grocery service plans. Based on a five-point scale, the questions ranged from "Would you choose this online grocery" to "Would you not choose this grocery" on the basis of the four features presented.

Empirical results were calculated using IBM SPSS Conjoint software and all results are shown in Table 2. In Model 1, both Pearson's R and Kendall's tau are high significant (sig. < 0.000). These results indicate a high level of validity and reliability for the calculation results for partial utility values.

Table 2. Attributes and levels of the conjoint study

Attribute	Level
Delivery time	4 hours/2 hours
Receiving method	By hand only/By hand or delivery box
Business hours for shipping	14:00–20:00/11:00–21:00/08:00–24:00
Shipping charges per shipping (free options)	¥315/ ¥315(free over ¥5,000)/ ¥315(free over ¥1,000)

The model for consumers' utility derived from online grocery services is given in Equation (1):

$$U = \beta_0 + \beta_D \times \text{Delivery time} + \beta_R \times \text{Receiving method} + \beta_B \times \text{Business hours} + \beta_S \times \text{Shipping charges} \quad (1)$$

In this equation, the dependent variable “ U ” represents the consumer's utility function. On the right side, D , R , B , and S are independent variables and affect the consumer's utility. D denotes Delivery time, R denotes the Receiving method, B denotes Business hours for shipping, and S denotes Shipping charges. The authors assume that the consumer's total utility is the sum of the independent variables.

We also calculated the average importance of each attribute with Equation (2).

$$I_i = \beta / (\beta_D + \beta_R + \beta_B + \beta_S) \times 100 \quad (2)$$

Each attribute's average importance (I_i) is calculated in Equation (2).

I_i is the average importance of attribute i and B_i is the value range of the utility of i 's factors. The subscript i for D , R , B , and S denote the attributes of delivery time, receiving method, business hours, and shipping charges, respectively. This indicates each attribute's degree of influence and is expressed as a percentage (total 100%).

DATA

The survey was conducted between May 31 and June 10, 2013. The survey area was the Tokyo metropolitan area (Syuto-ken: Japanese capital area), which contains Tokyo and three satellite prefectures, Kanagawa, Chiba, and Saitama prefectures. The questionnaire took the form of a web-based survey.

The questionnaire contents were as follows. First, respondents were asked about their demographic variables, including their gender, age, and residential area. In addition, they were presented with a list combining the attributes of an online grocery service. Details of the statistical data are summarized in Table 3. The total number of respondents was 1,117 (a total of 3,000 respondents were asked to answer the questionnaire). We used 415 samples out of the 1,117 respondents because they answered the entire

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survey. Of these, 39.3% (163) were answered by men and 60.7% (252) by women. There is a gender disparity in the responses, but it accurately reflects the gender distribution of online grocery users.

Two data segments—all questionnaire respondents and online grocery users—were analyzed and examined, using IBM SPSS Conjoint (Version 19) calculation model.

Table 3. Survey respondents' demographic profile (N = 415)

Characteristic		Frequency (Percentage)
Gender	Male	163 (39.3%)
	Female	252 (60.7%)
Age Group	20-29	48 (11.6%)
	30-39	116 (28.0%)
	40-49	106 (25.5%)
	50-59	59 (14.2%)
	60-69	72 (17.3%)
Household Size	1	62 (14.9%)
	2	113 (27.2%)
	3	113 (27.2%)
	4	96 (23.1%)
	5>	31 (7.5%)
Age of youngest child	0-1	8 (1.9%)
	2-3	23 (5.5%)
	4-5	8 (1.9%)
Market area	Tokyo City (23 special wards)	228 (54.9%)
	Yokohama City	133 (32.0%)
	Saitama City	30 (7.2%)
	Chiba City	24 (5.8%)
Occupation	Corporate worker	148 (35.7%)
	Company executive	4 (1.0%)
	Government servant	9 (2.2%)
	Self-employed worker	24 (5.8%)
	Non-regular worker	44 (10.6%)
	Specialist personnel	9 (2.2%)
	Student	7 (1.7%)
	Full-time homemaker	132 (31.8%)
	Inoccupation and other	38 (9.2%)
Online grocery user	Yes	97 (23.3%)

EMPIRICAL RESULTS AND DISCUSSION

Results for all Respondents

First, the impact of the delivery time attribute, i.e., two-hour high service level and four-hour low service level, was analyzed for consumer utility. Low service level shown a negative to consumer utility, -0.032 . On the contrary, the high service level had a positive effect on consumer utility, $+0.032$. This finding supports Hypothesis 1. The average importance of the effect of delivery time on consumer utility was the lowest among all attributes. It contributed only 10.63% importance to consumer utility. Thus, the effect was relatively small. In conclusion, the findings indicate that the delivery time attribute does not have a strong effect.

Second, receiving method attribute was analyzed. This attribute also has two different levels of service i.e., the high level (the user can choose both delivery either in-person or the delivery box); and, the low level (in person only). The high level of service had a positive effect on consumer utility, $+0.099$. The low level of service had a negative effect, -0.099 . These results support Hypothesis 2. Regarding this attribute, the impact on consumer utility was not high, because the average importance was 13.56% and shows the second worse impact on consumer utility. Accordingly, the receiving method attribute has little effect.

Third, the effect of the business hours for shipping attribute on consumer utility was examined. The attribute consists of three levels; the high service level, 08:00–24:00, the middle service level, 11:00–21:00, and the low service level, 14:00–20:00. Each value has $+0.044$, $+0.036$, and -0.080 impact on consumer utility, respectively. This results reinforces Hypothesis 3. Among all of the attributes, this factor's average importance is 18.558%, and the attribute is the second most important on consumer utility.

Last, the free shipping options attribute on consumer utility is examined. This attribute's impact on consumers is very important. The attribute has three different levels that is, high (¥315 and free over ¥1,000), middle (¥315 and free over ¥5,000), and low (¥315 and free over ¥5,000). When the level of the shipping option is high, the effect on utility was positive, $+0.904$. Middle-level shipping options had a negative value, -0.233 . Additionally, offering no free shipping options (low level) had a negative impact, -0.671 . Overall, the average importance of this factor is 57.248%. This means that the attribute has the greatest degree of importance of all of the attributes. This finding supports Hypothesis 4. However, as the importance of this attribute is over 50%, Hypothesis 5 is rejected.

Results of Online Grocery Users

The empirical results of the respondents of online grocery service users are also examined and shown in the right side of Table 4.

In the attribute of Delivery Time, the low service level had a negative effect, the value is -0.037 and the high service level had a positive one, $+0.037$ on consumer utility. Different from the results for all of the respondents, the average importance of Delivery Time was the second smallest in all factors that is, 12.612%. Regarding the receiving method's effect on consumer utility, low service level had a negative effect; the value was -0.071 and high service level had a positive; $+0.071$. However, this attribute was the smallest in the average importance on consumer utility, the importance rate was 12.388%.

In terms of the Business Hours attribute's effect on consumer utility, both the middle level and the high level had a positive effect and these values are $+0.016$ (middle) and $+0.085$ (high), respectively.

On the other hand, low service level had a negative impact, -0.081 . This attribute is the second highest of importance, the average importance of the factor is 21.723%.

In terms of the effect of Free Shipping Options on consumer utility, this attribute had the highest impact among all of the attributes. High level of service (¥315 and free over ¥1,000) had a high positive effect on consumer utility, $+0.763$. Middle-level shipping options (¥315 and over ¥5,000) and Low level shipping options have a negative value, -0.025 and -0.737 . Since the average importance of this factor was 53.277%, this attribute has the greatest degree of importance.

These results are similar to the results from all respondents. These two analyses indicate that the importance of the shipping fee attribute is higher than that of the convenience attribute. However, the order of consumer preference differs, as the attribute having the lowest priority is the receiving method, with delivery time having the second-lowest priority. This resulted in the difference in the preference order of all of the respondents and implies that Hypothesis 6 is supported.

As the empirical results demonstrate, in the survey on online supermarket services, Japanese respondents placed much more importance on delivery charges (i.e., cost attributes) rather than convenience attributes (i.e., lead time and receiving method), regardless if they were an experienced online consumer or not. This finding is consistent with previous anecdotal evidence in the literature (Gotou, 2010; Liu et al.). Gotou (2010) showed that consumers' sensitivity to shipping charges is the main obstacle to the popularity of online Japanese supermarkets. She indicated that this is a distinctive feature of Japanese consumers compared to British consumers. This feature is supported by the fact that the home delivery service provided by co-ops had a market share of 40%. With the service of the co-op, the lead time from ordering (ordering by phone or online) to delivery took a week or more, but the shipping fee for the co-op was set to half or a quarter or less than a general online supermarket. It also came with a free shipping option depending on the purchase amount. The service level was certainly not as good as that of online supermarkets, but sales continued to grow (Teikoku Databank, 2011).

In the context of the Consumer Logistics Model (Granzin, et al., 1989), as Ingene (1984) and Kotzab and Grant (2012) have pointed out, the extent to which consumers have to share distribution functions with retailers affects consumer satisfaction. However, our results show the customer's low willingness to pay for distribution functions fulfilled by consumers themselves in physical stores. For SME retailers, these conditions are at a competitive disadvantage. These local online groceries might need to specialize their business model to specific segments, such as those that place more emphasis on convenience, with the spread of outsourcing to gig workers in several sectors, including the delivery business in Japan. Thus, it might be necessary to make an effort to reduce shipping charges by outsourcing it. Already, some small and medium-sized online grocery stores have begun outsourcing delivery services to gig economy companies. The delivery service "Skima-bin" using gig workers provided by 207.inc has been in service since May 2020 and about half of the users are online groceries and restaurants and retail stores (Diamond Signal, 2020).

To respond to Japanese consumers' preference for low shipping costs, a store-type delivery model for picking and delivering items based on actual stores is costly. It is necessary to fundamentally improve the efficiency of order-picking in terms of cost by using the specialized warehouse shipping model (or, the distribution center model). However, the specialized warehouse shipping model requires a considerable up-front investment, which may further increase the concentration degree of this retail sector.

The results also show that respondents do not place a high valuation on the delivery box. The delivery box has been regarded as a beneficial way for online grocery customers to pick up their orders at any time. Additionally, click-and-collect, that is, the method by which a consumer receives an online order

at the pickup point (e.g., delivery box, drive-through, etc.), has been regarded as a method that helps retailers reduce distribution costs. For many years, the Japanese government has been promoting the spread of click-and-collect due to a shortage of logistics workers and increasing oil prices (Nikkei, 2017). However, this method is not sufficiently popular in Japan. The empirical results indicate that distribution costs might not have been successfully reduced by this method. Many online grocery customers purchase fresh foods and are therefore anxious to maintain their order's freshness, which is questionable when being stored in a click-and-collect box. This might have resulted in a lower consumer valuation for such delivery boxes.

Table 4. Empirical results

Attribute	All Respondents			Online Grocery Users	
	Level	Utility (SD)	Importance (%)	Utility (SD)	Importance (%)
Delivery time	4 h	−0.032 (0.039)	10.630	−0.037 (0.037)	12.612
	2 h	0.032 (0.039)		0.037 (0.037)	
Receiving method	By hand	−0.099 (0.039)	13.564	−0.071 (0.037)	12.388
	By hand or delivered box	0.099 (0.039)		0.071 (0.037)	
Business hours for shipping	14:00–20:00	−0.080 (0.052)	18.558	−0.081 (0.049)	21.723
	11:00–21:00	0.036 (0.052)		0.016 (0.049)	
	08:00–24:00	0.044 (0.052)		0.085 (0.049)	
Shipping charges per shipping	¥315 (no free option)	−0.671 (0.052)	57.248	−0.737(0.049)	53.277
	¥315 (free over 5,000 yen)	−0.233(0.052)		−0.025(0.049)	
	¥315 (free over 1,000 yen)	0.904(0.052)		0.763(0.049)	
Constants		3.031 (0.041)		3.343(0.039)	
Pearson's R	0.997***			0.997***	
Kendall's tau	0.944***			0.944***	

Notes: ***Significant at the 1% level.

FUTURE RESEARCH DIRECTIONS

The strategy of online grocery retailers has shifted from simply providing additional services by retail stores to acquiring economies of scale by establishing specialized distribution centers in the direction of lowering shipping costs. The empirical results of this study confirm that such strategic changes are aligned with customer needs, i.e., prioritizing lower shipping charges over convenience. However, with the development of information technology and mobile technology, new delivery specialists such as Uber that offer a high level of convenience have been created. The delivery services of these specialists are kept at a low cost and some Japanese retailers have already started outsourcing their delivery to them. It is necessary to consider how the emergence of this new delivery specialist will affect the market structure in the future.

CONCLUSION

With the expansion of the online grocery market in many countries, attention is being given to its technological innovation. The online grocery sector's distribution system has been examined by researchers, businessmen, and policymakers alike. In recent years, mega retailers have been constructing warehouse-based distribution systems and the 2020 pandemic further facilitated this trend. Changes in the online grocery distribution system can significantly change the competitive environment and market structure of retailers.

In previous research on online groceries, discussions have focused on technical aspects such as ordering, picking, and delivery systems. On the other hand, there is still much room for discussing the kinds of distribution systems that should be chosen or developed according to consumer needs. In the chapter, by applying conjoint analysis to consumer surveys, the authors discovered the priority of customers in choosing online grocery services and the service attributes that are most attractive in this retail service. As a result, although some different priorities exist between consumers who have already used online grocery services and those who have not, the attributes related to costs (such as the availability of a free shipping option) are evaluated and superior to attributes related to convenience. This finding supports the results of previous comparative international studies that demonstrate that Japanese consumers are highly sensitive to spending on additional services because similar trends could be seen in this study's results.

This result suggests that the competitive advantage of the online grocery warehouse model in Japan is consistent with the fact that large retailers are promoting their business model. In Japan's online grocery business, reducing the costs paid by consumers is important and therefore it is indispensable to acquire a large upfront investment and a large number of customers. This is likely to change the Japanese retail market, which has been regarded as a competitive market composed of a large number of SME retailers. It is arguable how such changes in the business model will affect society as a whole, from producers to consumers, and what policies will be required to promote the highest benefit to society as a whole.

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REFERENCES

- Adegbola, Y. P., Ahoyo Adjovi, N. R., Adekambi, S. A., Zossou, R., Sonehekpon, E. S., Assogba Komlan, F., & Djossa, E. (2019). Consumer Preferences for Fresh Tomatoes in Benin using a Conjoint Analysis. *Journal of International Food & Agribusiness Marketing*, 31(1), 1–21. doi:10.1080/08974438.2018.1469448
- Ankar, B., Walden, P., & Jelassi, T. (2002). Creating customer value in online grocery shopping. *International Journal of Retail & Distribution Management*, 30(4), 211–220. doi:10.1108/09590550210423681

- Becerril-Arreola, R., Leng, M., & Parlar, M. (2013). 'Online retailers' promotional pricing, free-shipping threshold, and inventory decisions: A simulation-based analysis'. *European Journal of Operational Research*, 230(2), 272–283. doi:10.1016/j.ejor.2013.04.006
- Diamond Signal. (2020). *A startup that realizes a world without "redelivery" with an app and reforms the last mile of logistics*. Retrieved from <https://signal.diamond.jp/articles/-/240>
- Freeman, M. (2009). Experiences of users from online grocery stores. In D. Oliver, C. Romm Livermore, & F. Sudweeks (Eds.), *Self Service in the Internet Age: Expectations and Experiences* (pp. 139–160). Springer-Verlag. doi:10.1007/978-1-84800-207-4_7
- Gotou, A. (2010). Online supermarket: its trends and future [Sannnyuuga fueru nettosu-pa-no doukouto konngonokanouseini kannsuru kenntou]. *The Journal of Marketing and Distribution (Ryuutsuujouhou)*, 485, 14–21.
- Granzin, K. L., & Bahn, K. D. (1989). Consumer logistics: Conceptualization, pertinent issues and a proposed program for research. *Journal of the Academy of Marketing Science*, 17(1), 91–101. doi:10.1007/BF02726358
- Green, P. E., & Krieger, A. M. (1991). Segmenting markets with conjoint analysis. *Journal of Marketing*, 55(4), 20–31. doi:10.1177/002224299105500402
- Gümüş, M., Li, S., Oh, W., & Ray, S. (2013). Shipping fees or shipping free? A tale of two price partitioning strategies in online retailing. *Production and Operations Management*, 22(4), 758–776. doi:10.1111/j.1937-5956.2012.01391.x
- Güsken, S. R., Janssen, D., & Hees, F. (2019). Online Grocery Platforms–Understanding Consumer Acceptance. In *ISPIM Conference Proceedings* (pp. 1–17). The International Society for Professional Innovation Management (ISPIM).
- Hasan, H., & Ditsa, G. (1999). The impact of culture on the adoption of IT: An interpretive study. *Journal of Global Information Management*, 7(1), 5–15. doi:10.4018/jgim.1999010101
- Hirogaki, M. (2015). Key factors in successful online grocery retailing: Empirical evidence from Tokyo, Japan. *International Journal of Entrepreneurship and Small Business*, 26(2), 139–153. doi:10.1504/IJESB.2015.071821
- Hirogaki, M. (2016) *Marketing Innovations in a Mature Society*. Chikura Publishing.
- Hirogaki, M. (2020). CSV Activities in the Japanese Retail Sector. In *Handbook of Research on Contemporary Consumerism* (pp. 39–56). IGI Global. doi:10.4018/978-1-5225-8270-0.ch003
- Hong, G.H. (2013). Support people with limited access to shopping facilities in area [Chiikiniokeru kaimonopakusha shiennsa-bisu no tennkainitsuite]. *RKU Logistics Review (Butsuryuu monndai kenkyuu)*, 59, 60–71.
- IGD. (2018). *Leading global online grocery markets to create a \$227bn growth opportunity by 2023*. Retrieved from <https://www.igd.com/articles/article-viewer/t/leading-global-online-grocery-markets-to-create-a-227bn-growth-opportunity-by-2023/i/20396>

Online Consumer Behaviors Trigger Drastic Distribution Changes

Incept. (2020). *e-words "Net Super"*. Retrieved from <http://e-words.jp/>

Ingene, C. A. (1984). Productivity and functional shifting in spatial retailing-private and social perspectives. *Journal of Retailing*, 60(1), 15–36.

Japan Delivery System. (2020). *What is delivery box?* <https://www.j-d-sys.com/aboutbox/>

Jiang, Y., Shang, J., & Liu, Y. (2013). Optimizing shipping-fee schedules to maximize e-tailer profits. *International Journal of Production Economics*, 146(2), 634–645. doi:10.1016/j.ijpe.2013.08.012

Kawabe, N. (2011). The historical development of internet supermarkets in Japan: Integration of virtual and real businesses [nettosupanoseiseitohatten-bacharu bijinesutoriaru ijinesunotogo]. *The Waseda Commercial Review*, 429, 23–78.

Liu, K., Shiu, J., & Sun, C. (2013). How different are consumers in internet auction markets? Evidence from Japan and Taiwan. *Japan and the World Economy*, 28, 1–12. doi:10.1016/j.japwor.2013.06.001

LOGI-BIZ. (2001). The failures of online grocery [nettosupano zasetsu]. *LOGI-BIZ*, (August), 12–13.

Marimon, F., Vidgen, R., Barnes, S., & Cristobal, E. (2010). Purchasing behaviour in an online supermarket. *International Journal of Market Research*, 52(1), 111–129. doi:10.2501/S1470785310201089

Ministry of Economy, Trade and Industry (METI). (2010). *Way of distribution to support the community life infrastructure* [chiikishakaitotomoniikiruryutsu]. Retrieved from <https://www.meti.go.jp/report/downloadfiles/g100514a03j.pdf>

Ministry of Health, Labour, and Welfare. (2020). *Cnsumer's Co-op* [shohiseikatsukyodokumiai]. Retrieved from https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/seikatsuhogo/seikyou/index.html

Morganosky, M., & Cude, B. (2000). Consumer response to online grocery shopping. *International Journal of Retail & Distribution Management*, 28(1), 17–26. doi:10.1108/09590550010306737

MyVoice. (2013). *The Research on Online Super Market: 4th survey* [nettosu-pa-ni kannsuru chousa dai 4 kai]. MyVoice.co.jp.

Nicholls, E., Romaniuk, J., & Sharp, B. (2003). The effect of advertised messages on light and heavy users' brand perceptions. In *Doctoral dissertations 2003: Proceedings of Australia and NZ Marketing Academy Conference*. University of South Australia.

Nikkei, M.J. (2009). Summit storeless type, net supermarket CEO Tajiri saying: Profitable with 400 orders per day [samittomutempogatanettosupa tajirishacho chumonichinichiyonhyakukendesaisan]. *Nikkei MJ*, (3).

Nikkei. (2017). *The government's subsidy to popularize delivery boxes: Reducing redelivery and improving the efficiency of distribution cost* [takuhaibokkusufukyuhehojokin:saihaitatsuherashikoritsuka]. Retrieved from https://www.nikkei.com/article/DGXLASFS16H4F_W7A110C1MM8000/

NikkeiXtech. (2017). *Sales of online supermarkets and catalog mail orders have been expanding*. Retrieved from <https://xtech.nikkei.com/it/pc/article/trend/20130108/1075709/>

- Ogawara, S., Chen, J., & Zhang, Q. (2003). Internet grocery business in Japan: Current business models and future trends. *Industrial Management & Data Systems*, 103(9), 727–735. doi:10.1108/02635570310506142
- Parker, R., & Funkhouser, G. R. (1987). The consumer as a performer of marketing functions. *Research in Consumer Behavior*, 2, 161–191.
- Punakivi, M., & Saranen, J. (2001). Identifying the success factors in e-grocery home delivery. *International Journal of Retail & Distribution Management*, 29(4), 156–163. doi:10.1108/09590550110387953
- Ryutsuu.biz. (2019). *Co-op Sapporo / Over 1.8 million union members, about 60% of household covers in Hokkaido*. Retrieved from <https://www.ryutsuu.biz/strategy/m012144.html>
- Shimizu, N., & Sakata, T. (Eds.). (2012). *The 1st Step of Retail Management [Ichikarano rite-ru mane-jimennto]*. Chuoukeizasha Publishing.
- Sumitomo Mitsui Trust Bank. (2010). *Net supermarket seeking a business model -Comparison of the delivery methods*. Retrieved from https://dl.ndl.go.jp/view/download/digidepo_10363376_po_713_3.pdf?contentNo=1&alternativeNo=
- Teikoku Data Bank. (2011). *Investigation of the Food Home Delivery Company [Shokuzaitakuhaikigyō no keiei jittachōsa]*. Retrieved from <https://www.tdb.co.jp/report/watching/press/pdf/p110908.pdf>
- Teller, C., Kotzab, H., & Grant, D. B. (2012). The relevance of shopper logistics for consumers of store-based retail formats. *Journal of Retailing and Consumer Services*, 19(1), 59–66. doi:10.1016/j.jretconser.2011.09.001
- Thakahashi, I. (2016). Net Super as an Innovator - Characteristics and Challenges Seen from Analysis of Business Format Loyal Users [inobetatoshitenonettosupa-gyotairoiyaruyuzanobunsekikaramitatokuchotokadai] [maketeingujanaru]. *Marketing Journal*, 36(2), 5–20.
- Watanabe, T. (2014). Profitable Online grocery(Net Super): Comparing Center Shipment Model and Store Shipment Model in terms of advantages and disadvantages [riekinoderunettosupa—sentahaisototempohaisomerittotokosutowohikaku]. *Sales Innovation (Hanbai-Kakushin)*, 87-90.

KEY TERMS AND DEFINITIONS

Center-Based Delivery Model: A method of delivering directly to consumers from a specialized distribution center where orders are accepted and processed. The warehouse then serves as the delivery base and handles all operations, including order receiving, processing, picking, packing, and delivery.

Consumers' Co-Op (Consumers' Cooperative): A consumers' co-op (co-op) is a corporation established based on the Consumer Co-op Law (Law No. 200 of 1948). It is a non-profit organization organized by people who live in the same area (this is limited to the same prefectures) or the same businesses.

Delivery Box: The delivery box is a locker-type facility that receives parcels on behalf of a resident. It is also called a delivery locker. In Japan, most are equipped in condominiums and individual houses.

Online Consumer Behaviors Trigger Drastic Distribution Changes

Online Grocery (Net Super): A type of online shopping site that sells fresh foods, frozen/refrigerated foods, prepared foods, daily necessities, etc., just like in a real supermarket. “Net super” is frequently used in the Japanese language, it combines two words, “net (=internet)” and “super (=supermarket).”

Store-Based Delivery Model: A method of delivering products to consumers by using physical stores. In this delivery model, the entire process from order acceptance to delivery takes place at the retail store.

Compilation of References

Abdellatif, R. (2019). Lebanon's Banking Association Sets \$1,000 Weekly Withdrawal Limit. *Alarabiya*. <https://english.alarabiya.net/en/business/economy/2019/11/18/Lebanon-s-banking-association-sets-1-000-weekly-withdrawal-limit>

Abou-Shouk, M., & Khalifa, G. (2016). The influence of website quality dimensions on e-purchasing behaviour and e-loyalty: A comparative study of Egyptian travel agents and hotels. *Journal of Travel & Tourism Marketing*, 34(5), 608–623. doi:10.1080/10548408.2016.1209151

Abubakar, H. I., Hashim, N., & Hussain, A. (2015). Verification process of usability evaluation model for m-banking application. In *Proceedings of the 7th International Conference on Mathematical and Computational Method in Science and Engineering* (pp. 325–334). Academic Press.

Accenture. (2015). *2015 North America Consumer Digital Banking Survey: Banking shaped by the customer – intuitive, intelligent, individual*. Accenture. <https://www.accenture.com/us-en/~media/accenture/conversion-assets/microsites/documents17/accenture-2015-north-america-consumer-banking-survey.pdf>

Ackerman, L., & Chopik, W. (2020). Individual differences in personality predict the use and perceived effectiveness of essential oils. *PLoS One*, 15(3), e0229779. doi:10.1371/journal.pone.0229779 PMID:32163451

Adegbola, Y. P., Ahoyo Adjovi, N. R., Adekambi, S. A., Zossou, R., Sonehekpon, E. S., Assogba Komlan, F., & Djossa, E. (2019). Consumer Preferences for Fresh Tomatoes in Benin using a Conjoint Analysis. *Journal of International Food & Agribusiness Marketing*, 31(1), 1–21. doi:10.1080/08974438.2018.1469448

Adeola, O., & Evans, O. (2020). ICT, infrastructure, and tourism development in Africa. *Tourism Economics*, 26(1), 97–114. doi:10.1177/1354816619827712

Agarwal, S., & Chua, Y. H. (2020). FinTech and household finance: A review of the empirical literature. *China Finance Review International*, 10(4), 361–376. doi:10.1108/CFRI-03-2020-0024

Aghekyan-Simonian, M., Forsythe, S., Kwon, W. S., & Chattaraman, V. (2012). The role of product brand image and online store image on perceived risks and online purchase intentions for apparel. *Journal of Retailing and Consumer Services*, 19(3), 325–331. doi:10.1016/j.jretconser.2012.03.006

Agift, A., Rekha, V., & Nisha, C. (2014). Consumers attitude towards online shopping. *Research Journal of Family, Community and Consumer Sciences*, 2(3), 4–7.

Ahluwalia, S., Mahto, R. V., & Guerrero, M. (2020). Blockchain technology and startup financing: A transaction cost economics perspective. *Technological Forecasting and Social Change*, 151, 119854. doi:10.1016/j.techfore.2019.119854

Ahn, J. A., & Seo, S. (2018). Consumer responses to interactive restaurant self-service technology (IRSST): The role of gadget-loving propensity. *International Journal of Hospitality Management*, 74, 109–121. doi:10.1016/j.ijhm.2018.02.020

Compilation of References

- Ahn, T., Ryu, S., & Han, I. (2007). The impact of web quality and playfulness on user acceptance of online retailing. *Information & Management*, 44(3), 263–275. doi:10.1016/j.im.2006.12.008
- Aji, Z. M., Yusop, N. I., Ahmad, F., Azizi, A. A., & Jawad, Z. M. (2016). Conceptual model of technological change on telecentre effectiveness. *Computer and Information Science*, 9(2), 10–18. doi:10.5539/cis.v9n2p10
- 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
- Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology*, 32(4), 665–683. doi:10.1111/j.1559-1816.2002.tb00236.x
- Ajzen, I., & Fishbein, M. (1977). Attitude-behaviour relations: A theoretical analysis and review of empirical research. *Psychological Bulletin*, 84(5), 888–918. doi:10.1037/0033-2909.84.5.888
- Ajzen, I., & Fishbein, M. (2000). Attitudes and the attitude-behavior relation: Reasoned and automatic processes. *European Review of Social Psychology*, 11(1), 1–33. doi:10.1080/14792779943000116
- Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions, and perceived behavioral control. *Journal of Experimental Social Psychology*, 22(5), 453–474. doi:10.1016/0022-1031(86)90045-4
- Akhter, S. H. (2015). Impact of Internet usage comfort and internet technical comfort on online shopping and online banking. *Journal of International Consumer Marketing*, 27(3), 207–219. doi:10.1080/08961530.2014.994086
- Akingbola, K. (2013). A model of strategic nonprofit human resource management. *Voluntas*, 24(1), 214–240. doi:10.1007/11266-012-9286-9
- Akman, I., & Mishra, A. (2017). Factors Influencing Consumer Intention in Social Commerce Adoption. *Information Technology & People*, 30(2), 356–370. doi:10.1108/ITP-01-2016-0006
- Akram, U., Hui, P., Kaleem Khan, M., Tanveer, Y., Mehmood, K., & Ahmad, W. (2018). How website quality affects online impulse buying: Moderating effects of sales promotion and credit card use. *Asia Pacific Journal of Marketing and Logistics*, 30(1), 235–256. doi:10.1108/APJML-04-2017-0073
- Akram, W. (2018). A Study on Positive and Negative Effects of Social Media on Society. *International Journal on Computer Science and Engineering*, 5(10), 347–354.
- Akrout, H., & Nagy, G. (2018). Trust and commitment within a virtual brand community: The mediating role of brand relationship quality. *Information & Management*, 55(8), 939–955. Advance online publication. doi:10.1016/j.im.2018.04.009
- Alakali, T. T., Alu, F. A., Tarnong, M., & Ogbu, E. (2013). The Impact of Social Marketing Networks on the Promotion Of Nigerian Global Market: An analytical approach, Advertising/Marketing: A Study of Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. Kuhl & J. Beckmann (Eds.), *Action Control* (pp. 11–39). Springer.
- Alakali, T. T., Alu, F. A., Tarnong, M., & Ogbu, E. (2013). The Impact of Social Marketing Networks on the Promotion of Nigerian Global Market: An analytical Approach. *International Journal of Humanities and Social Science Invention*, 2(3), 1–8.
- Alalwan, A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*, 42, 65–77. doi:10.1016/j.ijinfomgt.2018.06.001
- Alalwan, A. A., Baabdullah, A. M., Rana, N. P., Tamilmani, K., & Dwivedi, Y. K. (2018). Examining adoption of mobile internet in Saudi Arabia: Extending TAM with perceived enjoyment, innovativeness and trust. *Technology in Society*, 55, 100–110. doi:10.1016/j.techsoc.2018.06.007

- Alalwan, A., Dwivedi, Y., & Rana, N. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. doi:10.1016/j.ijinfomgt.2017.01.002
- Alao, A., Lwaga, T. E., & Chigona, W. (2017). Telecentres use in rural communities and women empowerment: Case of Western Cape. *IFIP Advances in Information and Communication Technology*, 504, 119–134. doi:10.1007/978-3-319-59111-7_11
- Alavi, S., & Ahuja, V. (2016). An empirical segmentation of users of mobile banking apps. *Journal of Internet Commerce*, 15(4), 390–407. doi:10.1080/15332861.2016.1252653
- Alberghini, E., Cricelli, L., & Grimaldi, M. (2010). Implementing knowledge management through IT opportunities: definition of a theoretical model based on tools and processes classification. *The Proceedings of the 2nd European Conference on Intellectual Capital*, 22-33.
- Al-Deen, H. S. N., & Hendricks, J. A. (2011). *Social media: usage and impact*. Lexington Books.
- Alderson, W., & Martin, M. W. (1965). Toward a formal theory of transactions and transvections. *JMR, Journal of Marketing Research*, 2(2), 117–127. doi:10.1177/002224376500200201
- Alexander, R. M., & Gentry, J. K. (2014). Using social media to report financial results. *Business Horizons*, 57(2), 161–167. doi:10.1016/j.bushor.2013.10.009
- Alhabash, S., & McAlister, A. R. (2015). Redefining virality in less broad strokes: Predicting viral behavioral intentions from motivations and uses of Facebook and Twitter. *New Media & Society*, 17(8), 1317–1339. doi:10.1177/1461444814523726
- Alhabash, S., McAlister, A. R., Quilliam, E. T., Richards, J. I., & Lou, C. (2015). Alcohol's getting a bit more social: When alcohol marketing messages on Facebook increase young adults' intentions to imbibe. *Mass Communication & Society*, 18(3), 350–375. doi:10.1080/15205436.2014.945651
- Al-Hayale, T. (2010). Financial reporting on the internet in the Middle East: The case of Jordanian industrial companies. *International Journal of Accounting and Finance*, 2(2), 171–191. doi:10.1504/IJAF.2010.032087
- Ali, F. (2016). Hotel website quality, perceived flow, customer satisfaction and purchase intention. *Journal of Hospitality and Tourism Technology*, 7(2), 213–228. doi:10.1108/JHTT-02-2016-0010
- Aliyu, A. A., Rosmain, T., & Takala, J. (2014). Online banking and customer service delivery in Malaysia: Data screening and preliminary findings. *Procedia: Social and Behavioral Sciences*, 129, 562–570. doi:10.1016/j.sbspro.2014.03.714
- Al-Jahwari, N. S., Khan, F. R., Al Kalbani, G. K., & Al Khansouri, S. (2018). Factors influencing customer satisfaction of online shopping in Oman: Youth perspective. *Humanities and Social Science Reviews*, 6(2), 64–73. doi:10.18510/hssr.2018.628
- Allen, F., Carletti, E., & Xian, G. (2015). The roles of banks in financial systems. In A. N. Berger, P. Molyneux, & J. O. S. Wilson (Eds.), *The Oxford handbook of banking* (pp. 27–46). Oxford University Press., doi:10.1093/oxford-hb/9780199688500.013.0002
- Allen, F., Mcandrews, J., & Strahan, P. (2002). E-Finance: An introduction. *Journal of Financial Services Research*, 22(1/2), 5–27. doi:10.1023/A:1016007126394
- Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology*, 63(1), 1–18. doi:10.1111/j.2044-8325.1990.tb00506.x

Compilation of References

- Al-Msallam, S., & Alhaddad, A. (2016). Customer satisfaction and royalty in the hotel industry: The mediating role of relationship marketing (PLS Approach). *Journal of Research in Business and Management*, 4(5), 32–42.
- Al-Salamin, H., & Al-Hassan, E. (2016). The impact of pricing on consumer buying behaviour in Saudi Arabi: Al-Hassa case study. *European Journal of Business and Management*, 8(12), 62–73.
- Al-Sharqi, L., Hashim, K., & Kutbi, I. (2015). Perception of Social Media Impact on Students' Social Behaviour: A Comparison between Arts and Science Students. *International Journal of Education and Social Science*, 2(4), 122–131.
- Alsubagh, H. (2015). The impact of social networks on consumer behavior. *International Journal of Business and Social Science*, 6(1), 209–216.
- Al-Zyoud, M. F. (2018). Does social media marketing enhance impulse purchasing among female customers case study of Jordanian female shoppers. *The Journal of Business and Retail Management Research*, 13(2), 135–151. doi:10.24052/JBRMR/V13IS02/ART-13
- Amit, R., & Zott, C. (2012). Creating value through business model innovation. *MIT Sloan Management Review*, 53(3), 41–49.
- Amron, A. (2018). Effects of product quality, price, and brand image on the buying decision of city car product. *Archives of Business Research*, 6(4), 1–8. doi:10.14738/abr.64.4374
- Anand, T., Ramachandran, J., Sambasivan, M., & Batra, G. S. (2019). Impact of Hedonic Motivation on Consumer Satisfaction Towards Online Shopping: Evidence from Malaysia. *e-Service Journal*, 11(1), 56. doi:10.2979/eservicej.11.1.03
- Anckar, B., Walden, P., & Jelassi, T. (2002). Creating customer value in online grocery shopping. *International Journal of Retail & Distribution Management*, 30(4), 211–220. doi:10.1108/09590550210423681
- Anderson, C. (2012). The impact of social media on lodging performance. *Cornell Hospitality Report*, 12(15), 4–11.
- Anggita, R. & Ali, H. (2017). The influence of product quality, service quality and price to purchase decision of SGM Bunda Milk (Study on PT. Sarihusada Generasi Mahardika Region Jakarta, South Tangerang District). *A Multidisciplinary Journal*, 3(6), 261-272.
- Angur, Natarajan, & Jahera. (1999). Service Quality in The Banking Industry: An Assessment in A Developing Economy. *International Journal of Bank Marketing*, 17(3), 116–25.
- Appannie. (2020). *The State of Mobile in 2020: How to Win On Mobile*. Available from: <https://www.appannie.com/en/insights/market-data/state-of-mobile-2020/>
- Appiah, D., Ozuem, W., Howell, K., & Lancaster, G. (2019). Brand switching and consumer identification with brands in the smartphones industry. *Journal of Consumer Behaviour*, 18(6), 463–473. doi:10.1002/cb.1785
- Aqsa, M., & Kartini, D. (2015). Impact of online Advertising on consumer attitudes and interests buy online: Survey on students of internet users in Makassar. *International Journal of Scientific and Technology Research*, 4(4), 230–236.
- Aragoncillo, L., & Orus, C. (2018). Impulse buying behaviour: An online-offline comparative and the impact of social media. *Spanish Journal of Marketing*, 22(1), 42–62. doi:10.1108/SJME-03-2018-007
- Aramendia Muneta, M. E., & Ollo López, A. (2013). ICT Impact on tourism industry. *International Journal of Management Cases*, 15(2), 87–98.
- Araujo, T. (2018). Living up to the chatbot hype: The influence of anthropomorphic design cues and communicative agency framing on conversational agent and company perceptions. *Computers in Human Behavior*, 85, 183–189. doi:10.1016/j.chb.2018.03.051

- Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in Developing Human Resources*, 10(4), 541–554. doi:10.1177/1523422308319536
- Ardito, L., D'Adda, D., & Petruzzelli, A. M. (2018). Mapping innovation dynamics in the Internet of Things domain: Evidence from patent analysis. *Technological Forecasting and Social Change*, 136, 317–330. doi:10.1016/j.techfore.2017.04.022
- Arend, R. J., & Bromiley, P. (2009). *Assessing the dynamic capabilities view: spare change, everyone?* Sage Publications.
- Armstrong, C. E., & Shimizu, K. (2007). A review of approaches to empirical research on the resource-based view of the firm. *Journal of Management*, 33(6), 959–986. doi:10.1177/0149206307307645
- Arosa, B., Iturralde, T., & Maseda, A. (2013). The board structure and firm performance in SMEs: Evidence from Spain. *Investigaciones Europeas de Dirección y Economía de la Empresa*, 19(3), 127–135. doi:10.1016/j.iedee.2012.12.003
- Arslan, F. M., & Altuna, O. K. (2010). The effect of brand extensions on product brand image. *Journal of Product and Brand Management*, 19(3), 170–180. doi:10.1108/10610421011046157
- Arvidsson, N., Hedman, J., & Segendorf, B. (2017). Cashless society: When will merchants stop accepting cash in Sweden – A research model. In S. Feuerriegel & D. Neumann (Eds.), *Enterprise applications: Markets and services in the finance industry. Eighth international workshop, FinanceCom 2016, Frankfurt, Germany, 8 December 2016, revised papers* (pp. 105–113). Springer.
- Arvidsson, N. (2017). *Building a cashless society: The Swedish route to the future of cash payments*. Springer International Publishing.
- Ashman, R., Solomon, M. R., & Wolny, J. (2015). An old model for a new age: Consumer decision-making in participatory digital culture. *Journal of Customer Behaviour*, 14(2), 127–146. doi:10.1362/147539215X14373846805743
- Asian Institute of Finance. (2016). *Malaysia embraces a shift to digital banking* [Press release]. Available at: <https://www.aif.org.my/symposium2016>
- Aslam, W., Arif, I., Farhat, K., & Khursheed, M. (2018). The role of customer trust, service quality and value dimensions in determining satisfaction and loyalty: An empirical study of mobile telecommunication industry in Pakistan. *Global Business Review*, 30(2), 177–193.
- Aslam, W., & Frooghi, R. (2018). Switching behaviour of young adults in cellular service industry: An empirical study of Pakistan. *Global Business Review*, 19(3), 1–15. doi:10.1177/0972150917713886
- Aslam, W., Tariq, A., & Arif, I. (2019). The Effect of ATM Service Quality on Customer Satisfaction and Customer Loyalty: An Empirical Analysis. *Global Business Review*, 20(5), 1155–1178. doi:10.1177/0972150919846965
- Attreya, B. (2018). Consumer buying behaviour. *Journal of Advances and Scholarly Researches in Allied Education*, 15(9), 1–4. doi:10.29070/15/57885
- Au Yeung, T. & Law, R. (2004). Extending the modified heuristic usability evaluation technique to chain and independent hotel websites. *International Journal of Hospitality Management*, 23(3), 307–313.
- Auf, M., Meddour, H., Saoula, O., & Majid, A. (2018). Consumer buying behaviour: The roles of price, motivation, perceived culture importance, and religious orientation. *The Journal of Business and Retail Management Research*, 12(04). Advance online publication. doi:10.24052/JBRMR/V12IS04/ART-18
- Au, Y. A., & Kauffman, R. J. (2008). The economics of mobile payments: Understanding stakeholder issues for an emerging financial technology application. *Electronic Commerce Research and Applications*, 7(2), 141–164. doi:10.1016/j.elerap.2006.12.004

Compilation of References

- Ávalos, M. (2015). Baby, you can't drive my car. The case of Uber in Mexico. *Economy Informis*, (390), 104-112.
- Awdeh, A. (2012). *Remittances to Lebanon: Economic Impact and the Role of the Banks*. United Nations Social and Economic Commission for Western Asia.
- Ayuso, S., & Navarrete-Báez, F. E. (2018). How does entrepreneurial and international orientation influence SMEs' commitment to sustainable development? Empirical evidence from Spain and Mexico. *Corporate Social Responsibility and Environmental Management*, 25(1), 80–94. doi:10.1002/csr.1441
- Azhari, T. (2020). 'Not Legal' but Necessary. Lebanon's Banks Tighten Restrictions. *Aljazeera*. <https://www.aljazeera.com/ajimpact/legal-lebanon-banks-tighten-restrictions-200203163004785.html>
- Babin, B., & Zikmund, W. (2015). *Exploring Marketing Research* (11th ed.). South-Western College Pub.
- Baden-Fuller, C., & Haefliger, S. (2013). Business models and technological innovation. *Long Range Planning*, 46(6), 419–426. doi:10.1016/j.lrp.2013.08.023
- Bae, M. (2018). Understanding the effect of the discrepancy between sought and obtained gratification on social networking site users' satisfaction and continuance intention. *Computers in Human Behavior*, 79, 137–153. doi:10.1016/j.chb.2017.10.026
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. doi:10.1007/BF02723327
- Bagram, M. M. M., & Khan, S. (2012). Attaining customer loyalty! The role of consumer attitude and consumer behavior. *International Review of Management and Business Research*, 1(1), 1–8.
- Bahari, M.F. (2014). *Kepuasan pelajar terhadap kualiti perkhidmatan perbankan Islam di Malaysia* (Master Dissertation). Universiti Malaya.
- Balaji, M. S., & Roy, S. K. (2017). Value co-creation with Internet of things technology in the retail industry. *Journal of Marketing Management*, 33(1–2), 7–31. doi:10.1080/0267257X.2016.1217914
- Ballantyne, D., Frow, P., Varey, R. J., & Payne, A. (2011). Value propositions as communication practice: Taking a wider view. *Industrial Marketing Management*, 40(2), 202–210. doi:10.1016/j.indmarman.2010.06.032
- Baller, S., Dutta, S., & Lanvin, B. (2016). *The global information technology report 2016*. Geneva, Switzerland: World Economic Forum.
- Ball, H. L. (2019). Conducting online surveys. *Journal of Human Lactation*, 35(3), 413–417. doi:10.1177/0890334419848734 PMID:31084575
- Bank Negara Malaysia. (2019). *Exposure draft on licensing framework for digital banks*. https://www.bnm.gov.my/index.php?ch=en_press&pg=en_press&ac=4970
- Bank Negara Malaysia. (2020). *Internet banking and mobile banking subscribers*. <https://www.bnm.gov.my/index.php?ch=34&pg=163&ac=4&bb=file>
- Banque Du Liban. (2019). *Geographical Distribution of ATMs*. <https://www.bdl.gov.lb/statistics/search.php>
- Banque Du Liban. (n.d.). *Quick Numbers*. <https://www.bdl.gov.lb>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. doi:10.1177/014920639101700108
- Barquin, S., & Vinayak, H.K. (2015). Digital banking in Asia: What do consumers really want? *Asia Banking Practice*, 1-12.

- Barranco, M. C., & González, M. G. (2016). Intra condominium transportation in the daily mobility of periurbanization: the community link of the Guadalajara Metropolitan Area. *Transport and Territory Magazine*, (14), 167-188. Retrieved from <http://revistascientificas.filo.uba.ar/index.php/rtt/article/view/2434/2092>
- Barreda, A. A., Bilgihan, A., Nusair, K., & Okumus, F. (2015). Generating brand awareness in online social networks. *Computers in Human Behavior*, 50(September), 600–609. doi:10.1016/j.chb.2015.03.023
- Barrick, M. R., Bradley, B. H., Kristof-Brown, A. L., & Colbert, A. E. (2007). The moderating role of top management team interdependence: Implications for real teams and working groups. *Academy of Management Journal*, 50(3), 544–557. doi:10.5465/amj.2007.25525781
- Barua, A., Pinnell, J., Shutter, J., & Whinston, A. B. (1999). *Measuring Internet economy: An exploratory paper*. University of Texas.
- Bátiz-Lazo, B., Haigh, T., & Stearns, D. L. (2014). How the future shaped the past: The case of the cashless society. *Enterprise and Society*, 15(1), 103–131. doi:10.1093/es/kht024
- Baumöl, U., Hollebeek, L., & Jung, R. (2016). Dynamics of customer interaction on social media platforms. *Electronic Markets*, 26(3), 199–202. doi:10.1007/12525-016-0227-0
- Bazini, E., & Elmazi, L. (2009). ICT influences on marketing mix and building a Tourism Information System. *China-USA Business Review*, 8(2), 36–45.
- Becerril-Arreola, R., Leng, M., & Parlar, M. (2013). ‘Online retailers’ promotional pricing, free-shipping threshold, and inventory decisions: A simulation-based analysis’. *European Journal of Operational Research*, 230(2), 272–283. doi:10.1016/j.ejor.2013.04.006
- Beckinsale, M., & Ram, M. (2006). Delivering ICT to ethnic minority businesses: An action-research approach. *Environment and Planning. C, Government & Policy*, 24(6), 847–867. doi:10.1068/c0559
- Beck, R., Müller-Bloch, C., & King, J. L. (2018). Governance in the blockchain economy: A framework and research agenda. *Journal of the Association for Information Systems*, 19, 1020–1034. doi:10.17705/1jais.00518
- Beerli, A., Martín, J., & Quintana, A. (2004). A Model of Customer Loyalty in The Retail Banking Market. *European Journal of Marketing*, 38(1/2), 253–275. doi:10.1108/03090560410511221
- Belanche, D., Casaló, L. V., & Flavián, C. (2019). Artificial Intelligence in FinTech: Understanding robo-advisors adoption among customers. *Industrial Management & Data Systems*, 119(7), 1411–1430. doi:10.1108/IMDS-08-2018-0368
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600. doi:10.1016/j.jbusres.2013.10.001
- Benbasat, I., & Wang, W. (2005). Trust in and adoption of online recommendation agents. *Journal of the Association for Information Systems*, 6(3), 72–121. doi:10.17705/1jais.00065
- Benlian, A., Titah, R., & Hess, T. (2012). Differential effects of provider recommendations and consumer reviews in e-commerce transactions: An experimental study. *Journal of Management Information Systems*, 29(1), 237–272. doi:10.2753/MIS0742-1222290107
- Benthaus, J., Risius, M., & Beck, R. (2016). Social media management strategies for organizational impression management and their effect on public perception. *The Journal of Strategic Information Systems*, 25(2), 127–139. doi:10.1016/j.jsis.2015.12.001

Compilation of References

- Berglund, H., & Sandström, C. (2013). Business model innovation from an open systems perspective: Structural challenges and managerial solutions. *International Journal of Product Development*, 8(3/4), 274–285. doi:10.1504/IJPD.2013.055011
- Berndt, A., Herbst, F., & Roux, L. (2005). Implementing a customer relationship management programme in an emerging market. *Journal of Global Business and Technology*, 1(2), 81–89.
- Bhaskaran, S., & And, N. (2007). National Culture, Business Culture and Management Practices: Consequential Relationships? *Cross Cultural Management*, 14(1), 54–67. doi:10.1108/13527600710718831
- Bhatia, A., Chandani, A., & Chhateja, J. (2020). Robo advisory and its potential in addressing the behavioral biases of investors: A qualitative study in Indian context. *Journal of Behavioral and Experimental Finance*, 20, 1–9. doi:10.1016/j.jbef.2020.100281
- Bhatnagar, S., & Kumra, R. (2020). Understanding consumer motivation to share IoT products data. *Journal of Indian Business Research*, 12(1), 5–22. doi:10.1108/JIBR-09-2019-0268
- Bilan, Y., Mishchuk, H., Samoliuk, N., & Grishnova, O. (2019). ICT and Economic Growth: Links and Possibilities of Engaging. *Intellectual Economics*, 13(1), 93–104.
- Bilgihan, A. (2016). Gen Y customer loyalty in online shopping: An integrated model of trust, user experience and branding. *Computers in Human Behavior*, 61, 103–113. doi:10.1016/j.chb.2016.03.014
- Bilgihan, A., Kandampully, J., & Zhang, T. C. (2016). Towards a unified customer experience in online shopping environments. *International Journal of Quality and Service Sciences*, 8(1), 102–119. doi:10.1108/IJQSS-07-2015-0054
- Bilgihan, A., Nusair, K., Okumus, F., & Cobanoglu, C. (2015). Applying flow theory to booking experiences: An integrated model in an online service context. *Information & Management*, 52(6), 668–678. doi:10.1016/j.im.2015.05.005
- Bilgin, Y. (2018). The effect of social media marketing activities on brand awareness, brand image and brand loyalty. *Business & Management Studies: An International Journal*, 6(1), 128–148. doi:10.15295/bmij.v6i1.229
- Billington, M. G., & Billington, P. J. (2012). Social Media Tools for Leaders and Managers. *Journal of Leadership, Accountability and Ethics*, 9(6), 11–19.
- Bitner, M., Zeithaml, V., & Gremler, D. (2010). Technology's Impact on the Gaps Model of Service Quality. In *Handbook of Service Science*. Springer. doi:10.1007/978-1-4419-1628-0_10
- Bjerregaard, T. (2009). Universities-industry collaboration strategies: A micro-level perspective. *European Journal of Innovation Management*, 12(2), 161–176. doi:10.1108/14601060910953951
- Blankespoor, E., Miller, G. S., & White, H. D. (2013). The role of dissemination in market liquidity: Evidence from firms' use of Twitter™. *The Accounting Review*, 89(1), 79–112. doi:10.2308/accr-50576
- BLOMINVEST Bank. (2019a). *Brite indicators and trends. Outstanding Payment Cards*. Author.
- BLOMINVEST Bank. (2019b). *Brite indicators and trends. Number of ATMs*. Author.
- Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115–143. doi:10.1016/S0304-4076(98)00009-8
- Blundell, R., Bond, S., & Windmeijer, F. (2001). *Estimation in dynamic panel data models: improving on the performance of the standard GMM estimator*. Emerald Group Publishing Limited.
- Boateng, S. L. (2019). Online Relationship Marketing and Customer Loyalty: A Signaling Theory Perspective. *International Journal of Bank Marketing*, 37(1), 226–240. doi:10.1108/IJBM-01-2018-0009

- Bohannon, J. (2016). Survey fraud test sparks battle. *Science*, 351(6277), 1014. doi:10.1126/science.351.6277.1014 PMID:26941296
- Böhme, R., Christin, N., Edelman, B., & Moore, T. (2015). Bitcoin: Economics, technology, and governance. *The Journal of Economic Perspectives*, 29(2), 213–238. doi:10.1257/jep.29.2.213
- Bonsón Ponte, E., Carvajal-Trujillo, E., & Escobar-Rodríguez, T. (2015). Influence of trust and perceived value on the intention to purchase travel online: Integrating the effects of assurance on trust antecedents. *Tourism Management*, 47, 286–302. Advance online publication. doi:10.1016/j.tourman.2014.10.009
- Borghini, S., Carù, A., & Cova, B. (2010). Representing B to B reality in case study research – challenges and new opportunities. *Industrial Marketing Management*, 39(1), 16–24. doi:10.1016/j.indmarman.2008.05.006
- Boschma, R. A., & Ter Wal, A. L. (2007). Knowledge networks and innovative performance in an industrial district: The case of a footwear district in the South of Italy. *Industry and Innovation*, 14(2), 177–199. doi:10.1080/13662710701253441
- Bougrain, F., & Haudeville, B. (2002). Innovation, collaboration and SMEs internal research capacities. *Research Policy*, 31(5), 735–747. doi:10.1016/S0048-7333(01)00144-5
- Bowie, D., & Buttle, F. (2004). *Hospitality marketing*. Elsevier Butterworth-Heinemann.
- Bramwell, B., & Lane, B. (2011). Critical research on the governance of tourism and sustainability. *Journal of Sustainable Tourism*, 19(4-5), 411–421. doi:10.1080/09669582.2011.580586
- Brandl, B., & Hornuf, L. (2017). Where did FinTechs come from, and where do they go? The transformation of the financial industry in Germany after digitalization. *Frontiers in Artificial Intelligence*, 3(8), 1–12. doi:10.3389/frai.2020.00008
- Bravo, M. (2015). *Expensive and bad, public transportation in Mexico*. Retrieved from <https://meganoticias.mx/tu-ciudad/guadalajara/especiales-meganoticias/item/85874-caro-ymalo-el-transport-publico-en-mexico.html>
- Bravo, R., Martínez, E., & Pina, J. M. (2019). Effects of customer perceptions in multichannel retail banking. *International Journal of Bank Marketing*, 37(5), 1253–1274. doi:10.1108/IJBM-07-2018-0170
- Brenner, L., & Meyll, T. (2020). Robo-advisors: A substitute for human financial advice? *Journal of Behavioral and Experimental Finance*, 25, 1–8. doi:10.1016/j.jbef.2020.100275
- Brey, P. (2009). Philosophy of Technology Meets Social Constructivism: A Shopper's Guide. In D. M. Kaplan (Ed.), *Readings in the Philosophy of Technology* (2nd ed., pp. 268–324). Rowman & Littlefield Publishers.
- Breytenbach, J., De Villiers, C., & Jordaan, M. (2012). Communities in control of their own integrated technology development processes. *Information Technology for Development*, 19(2), 1–18.
- Brida, J. G., & Risso, W. A. (2010). Tourism as a determinant of long-run economic growth. *Journal of Policy Research in Tourism, Leisure & Events*, 2(1), 14–28. doi:10.1080/19407960903542276
- Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of Service Research*, 14(3), 252–271. doi:10.1177/1094670511411703
- Brodie, R. J., Ilic, A., Juric, B., & Hollebeek, L. (2013). Consumer engagement in a virtual brand community: An exploratory analysis. *Journal of Business Research*, 66(1), 105–114. doi:10.1016/j.jbusres.2011.07.029
- Brown, G., & Maxwell, G. (2002). Customer Service in UK call centres: Organisational perspectives and employee perceptions. *Journal of Retailing and Consumer Services*, 9(6), 309–316. doi:10.1016/S0969-6989(01)00040-6

Compilation of References

- Bruderl, J., & Schussler, R. (1990). Organizational mortality: The liabilities of newness and adolescence. *Administrative Science Quarterly*, 35(3), 530–547. doi:10.2307/2393316
- Bruneel, J., d’Este, P., & Salter, A. (2010). Investigating the factors that diminish the barriers to university–industry collaboration. *Research Policy*, 39(7), 858–868. doi:10.1016/j.respol.2010.03.006
- Bruneel, J., & De Cock, R. (2016). Entry mode research and SMEs: A review and future research agenda. *Journal of Small Business Management*, 54, 135–167. doi:10.1111/jsbm.12291
- Brynjolfsson, E., & Saunders, A. (2009). *Wired for innovation: How information technology is reshaping the economy*. MIT Press. doi:10.7551/mitpress/8484.001.0001
- Buchak, G., Matvos, G., Piskorski, T., & Seru, A. (2018). Fintech, regulatory arbitrage, and the rise of shadow banks. *Journal of Financial Economics*, 130(3), 453–483. doi:10.1016/j.jfineco.2018.03.011
- Bughin, J., Chui, M., Manyika, J. (2013, May). Ten IT-enabled business trends for the decade ahead. *McKinsy Quarterly*.
- Bughin, J., Byers, A. H., & Chui, M. (2011). *How business uses social technologies*. McKinsey Quarterly.
- Bughin, J., Chui, M., & Manyika, J. (2013). Ten IT-enabled business trends for the decade ahead. *The McKinsey Quarterly*, 13(May).
- Buhalis, D., & Law, R. (2008). Progress in information technology and tourism management: 20 years on and 10 years after the Internet—The state of eTourism research. *Tourism Management*, 29(4), 609–623. doi:10.1016/j.tourman.2008.01.005
- Buhalis, D., & O’Connor, P. (2005). Information communication technology revolutionizing tourism. *Tourism Recreation Research*, 30(3), 7–16. doi:10.1080/02508281.2005.11081482
- Buhalis, D., & Yen, E. C. S. (2020). Exploring the use of chatbots in hotels: technology providers’ perspective. In *Information and Communication Technologies in Tourism 2020* (pp. 231–242). Springer. doi:10.1007/978-3-030-36737-4_19
- Bulger, M., Bright, J., & Cobo, C. (2015). The real component of virtual learning: Motivations for face-to-face MOOC meetings in developing and industrialised countries. *Information Communication and Society*, 18(10), 1200–1216. doi:10.1080/1369118X.2015.1061571
- Bulut, Z. A., & Karabulut, A. N. (2018). Examining the role of two aspects of eWOM in online repurchase intention: An integrated trust–loyalty perspective. *Journal of Consumer Behaviour*, 17(4), 407–417. doi:10.1002/cb.1721
- Burton, R. M. (2015). Extraordinary Survival from Ordinary Resources—How So? *Management and Organization Review*, 11(3), 413–417. doi:10.1017/mor.2015.38
- Burton, R. M., Obel, B., & Håkonsson, D. D. (2020). *Organizational design*. Cambridge University Press. doi:10.1017/9781108681162
- Bustamante, C., & Vargas-Hernández & J. G. (2018). Uber’s competitive advantages over its direct competition in the private transportation business in Guadalajara, Jal. *Economic Sciences, Faculty of Economic Sciences UNL*, 15(2), 107–116.
- Byblos Banks Economic Research & Analysis Department. (2019). Lebanon. *ThisWeek (Lagos, Nigeria)*, (599), 9–14.
- Cabiddu, F., De Carlo, M., & Piccoli, G. (2014). Social media affordances: Enabling customer engagement. *Annals of Tourism Research*, 48, 175–192. doi:10.1016/j.annals.2014.06.003
- Cabrera, A. F., Crissman, J. L., Bernal, E. M., Nora, A., Terenzini, P. T., & Pascarella, E. T. (2002). Collaborative learning: Its impact on college students’ development and diversity. *Journal of College Student Development*, 43(1), 20–34.

- Calder, B. J., Isaac, M. S., & Malthouse, E. C. (2016). How to Capture Consumer Experiences: A Context-Specific Approach to Measuring Engagement Predicting Consumer Behavior across Qualitatively Different Experiences. *Journal of Advertising Research*, 56(1), 39–52. doi:10.2501/JAR-2015-028
- Calisir, F., & Gumussoy, C. A. (2008). Internet banking versus other banking channels: Young consumers' view. *International Journal of Information Management*, 28(3), 215–221. doi:10.1016/j.ijinfomgt.2008.02.009
- Cantù, C., Corsaro, D., Tunisini, A., de Zubieli, G. C., Jones, J., Seet, P. S., & Lindsay, N. (2015). Knowledge transfer between actors in the innovation system: A study of higher education institutions (HEIS) and SMEs. *Journal of Business and Industrial Marketing*, 30(3/4), 436–458. doi:10.1108/JBIM-07-2013-0152
- Cao, G., & Tian, N. (2020). Enhancing customer-linking marketing capabilities using marketing analytics. *Journal of Business and Industrial Marketing*, 35(7), 1289–1299. Advance online publication. doi:10.1108/JBIM-09-2019-0407
- Cao, Y., Ajjan, H., & Hong, P. (2018). Post-purchase shipping and customer service experiences in online shopping and their impact on customer satisfaction: An empirical study with comparison. *Asia Pacific Journal of Marketing and Logistics*, 30(2), 400–416. doi:10.1108/APJML-04-2017-0071
- Carlson, J., Rahman, M., Voola, R., & De Vries, N. (2018). Customer engagement behaviours in social media: Capturing innovation opportunities. *Journal of Services Marketing*, 32(1), 83–94. doi:10.1108/JSM-02-2017-0059
- Carson, D., & Gilmore, A. (2000). Marketing at the interface: Not 'what' but 'how'. *Journal of Marketing Theory and Practice*, 8(2), 1–7. doi:10.1080/10696679.2000.11501863
- Caruana, A. (2002). Service Loyalty: The Effects of Service Quality and The Mediating Role of Customer Satisfaction. *European Journal of Marketing*, 36(7/8), 811–828. doi:10.1108/03090560210430818
- Casadesus-Masanell, R., & Llanes, G. (2011). Mixed source. *Management Science*, 57(7), 1212–1230. doi:10.1287/mnsc.1110.1353
- Casciaro, T., & Piskorski, M. J. (2005). Power imbalance, mutual dependence, and constraint absorption: A closer look at resource dependence theory. *Administrative Science Quarterly*, 50(2), 167–199. doi:10.2189/asqu.2005.50.2.167
- Cegarra-Navarro, J., Jiménez-Jiménez, D., García-Pérez, A., & Giudice, M. D. (2018). Building affective commitment in a financial institution through an ambidexterity context. *European Business Review*, 30(1), 2–25. doi:10.1108/EBR-07-2016-0093
- Cengiz, E. (2010). 'Measuring customer satisfaction: Must or not?' *Journal of Naval Science and Engineering*, 6(2), 76–88.
- Central Administration of Statistics. (2019-2020). *Consumer Price Index*. CPI 2007-2020.
- Chaker, J. (2008). The Lebanese Economic Crisis 101 (Part 1). *Jadaliyya*. <https://www.jadaliyya.com/Details/40855>
- Chander, S., & Raza, M. (2015). Consumer buying behaviour: A comparative study of male and female users of electronics. *Abasyn Journal of Social Sciences*, 8(1), 47–61.
- Chang, H. H., & Chen, S. W. (2008). The impact of online store environment cues on purchase intention: Trust and perceived risk as a mediator. *Online Information Review*, 32(6), 818–841. doi:10.1108/14684520810923953
- Chang, S. E., Chen, Y. C., & Lu, M. F. (2019). Supply chain re-engineering using blockchain technology: A case of smart contract based tracking process. *Technological Forecasting and Social Change*, 144, 1–11. doi:10.1016/j.techfore.2019.03.015
- Chang, V. (2016). Review and discussion: E-learning for academia and industry. *International Journal of Information Management*, 36(3), 476–485. doi:10.1016/j.ijinfomgt.2015.12.007

Compilation of References

- Chan, N. L., & Guillet, B. D. (2011). Investigation of social media marketing: How does the hotel industry in Hong Kong perform in marketing on social media websites? *Journal of Travel & Tourism Marketing*, 28(4), 345–368. doi:10.1080/10548408.2011.571571
- Chaouali, W., & Souiden, N. (2019). The role of cognitive age in explaining mobile banking resistance among elderly people. *Journal of Retailing and Consumer Services*, 50, 342–350. doi:10.1016/j.jretconser.2018.07.009
- Charoensukmongkol, P., & Sasatanun, P. (2017). Social media use for CRM and business performance satisfaction: The moderating roles of social skills and social media sales intensity. *Asia Pacific Management Review*, 22(1), 25–34. doi:10.1016/j.apmr.2016.10.005
- Chaturvedi, S., & Gupta, S. (2014). Social media – A new tool in modern era marketing. *International Journal of Engineering Sciences and Management Research*, 1(2).
- Chen, G. M. (2011). Tweet this: A uses and gratifications perspective on how active Twitter use gratifies a need to connect with others. *Computers in Human Behavior*, 27(2), 755–762. doi:10.1016/j.chb.2010.10.023
- Chen, M. A., Wu, Q., & Yang, B. (2019). How valuable is fintech innovation? *Review of Financial Studies*, 32(5), 2062–2106. doi:10.1093/rfs/hhy130
- Chen, X., Yu, H., Gentry, J. W., & Yu, F. (2016). Complaint or recommendation? The impact of customers' state and trait goal orientations on customer engagement behaviours. *Journal of Consumer Behaviour*.
- Chen, Y. S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307–319. doi:10.1007/10551-009-0223-9
- Chesbrough, H. W. (2007). Why companies should have open business models. *MIT Sloan Management Review*, 48(2), 22.
- Chew, H. E., Ilavarasan, P. V., & Levy, M. R. (2010). The economic impact of information and communication technologies (ICTs) on microenterprises in the context of development. *The Electronic Journal on Information Systems in Developing Countries*, 44(1), 1–19. doi:10.1002/j.1681-4835.2010.tb00316.x
- Chikandiwa, S. T., Contogiannis, E., & Jembere, E. (2013). The Adoption of Social Media Marketing in South African Banks. *European Business Review*, 25(4), 365–381. doi:10.1108/EBR-02-2013-0013
- Child, J. (1972). Organizational structure, environment and performance: The role of strategic choice. *Sociology*, 6(1), 1–22.
- Chittoor, R., Sarkar, M. B., Ray, S., & Aulakh, P. S. (2009). Third-world copycats to emerging multinationals: Institutional changes and organizational transformation in the Indian pharmaceutical industry. *Organization Science*, 20(1), 187–205. doi:10.1287/orsc.1080.0377
- Cho, J. (2004). Likelihood to abort an online transaction: Influences from cognitive evaluations, attitudes, and behavioral variables. *Information & Management*, 41(7), 827–838. doi:10.1016/j.im.2003.08.013
- Cho, M., Bonn, M., & Li, J. (2019). Differences in perceptions about food delivery apps between single-person and multi-person households. *International Journal of Hospitality Management*, 77, 108–116. doi:10.1016/j.ijhm.2018.06.019
- Chong, A. Y. L., Lim, E. T., Hua, X., Zheng, S., & Tan, C. W. (2019). Business on chain: A comparative case study of five blockchain-inspired business models. *Journal of the Association for Information Systems*, 20(9), 1310–1339. doi:10.17705/1jais.00568
- Chong, H. L., Islam, M. A., Manaf, A. H. A., & Mustafa, W. M. W. (2015). User's satisfaction towards online banking in Malaysia. *International Business Management*, 9(1), 15–27.

- Chou, S., & Chen, C. (2018). The influences of relational benefits on repurchase intention in service contexts: The roles of gratitude, trust and commitment. *Journal of Business and Industrial Marketing*, 33(5), 680–692. doi:10.1108/JBIM-08-2017-0187
- Chovanová, H., Korshunov, A., & Babčanová, D. (2015). Impact of brand on consumer behaviour. *Procedia Economics and Finance*, 34, 615–620. doi:10.1016/S2212-5671(15)01676-7
- Chuck, M. (2019). *Social Media Marketing Converts Up to 3-Fold Because Millennials Are Paying For It*. Business to Community. Available at: <https://www.business2community.com/social-media/social-media-marketing-converts-up-to-3-fold-because-millennials-are-paying-for-it-02214169>
- Chung, M., Ko, E., Joung, H., & Kim, S. J. (2018, September). Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*, 117, 587–595. doi:10.1016/j.jbusres.2018.10.004
- Chung, N., & Koo, C. (2015). The use of social media in travel information search. *Telematics and Informatics*, 32(2), 215–229. doi:10.1016/j.tele.2014.08.005
- Clark, T. (2003, January). Disadvantages of collaborative online discussion and the advantages of sociability, fun and cliques for online learning. *Proceedings of the 3.1 and 3.3 working groups conference on International federation for information processing: ICT and the teacher of the future*, 23, 23–25.
- Clementson, C. J. (2018). A mixed methods investigation of flow experience in the middle school instrumental music classroom. *Research Studies in Music Education*. Advance online publication. doi:10.1177/1321103X18773093
- Clow, E. K., & Baack, D. (2016). *Integrated Advertising, Promotion, and Marketing Communications* (7th ed.). Pearson Education.
- Cochrane, J. (2010). The sphere of tourism resilience. *Tourism Recreation Research*, 35(2), 173–186. doi:10.1080/02508281.2010.11081632
- Cohen, J. (2013). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Taylor and Francis. doi:10.4324/9780203771587
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, S95–S120. doi:10.1086/228943
- Collins, J. A., & Fauser, B. C. (2005, March-April). Balancing the strengths of systematic and narrative reviews. *Human Reproduction Update*, 11(2), 103–104. doi:10.1093/humupd/dmh058 PMID:15618290
- Collins, S. E., & Carey, K. B. (2007). The theory of planned behavior as a model of heavy episodic drinking among college students. *Psychology of Addictive Behaviors*, 21(4), 498–507. doi:10.1037/0893-164X.21.4.498 PMID:18072832
- Connor, T. (2002). The resource-based view of strategy and its value to practising managers. *Strategic Change*, 11(6), 307–316. doi:10.1002/jsc.593
- Conway, T., & Swift, J. S. (2000). International relationship marketing: The importance of psychic distance. *European Journal of Marketing*, 34(11/12), 1391–1414. doi:10.1108/03090560010348641
- Cooper, D., & Schindler, P. (2013). *Business Research Methods* (12th ed.). McGraw-Hill Higher Education.
- Cooper, D., Schindler, P., & Blumberg, B. (2014). *Business research methods*. McGraw-Hill Education.
- Corm, G. (1995). Reconstruction and Development Issues in Lebanon. In Economic Research Forum and World Bank workshop on strategic visions for the Middle East and North Africa, Tunis, Tunisia.

Compilation of References

- Correa, T., Hinsley, A. W., & De Zúñiga, H. G. (2010). Who interacts on the Web? The intersection of users' personality and social media use. *Computers in Human Behavior*, 26(2), 247–253. doi:10.1016/j.chb.2009.09.003
- Corsaro, D. (2014). The emergent role of value representation in managing business relationships. *Industrial Marketing Management*, 43(6), 985–995. doi:10.1016/j.indmarman.2014.05.011
- Coskun, V., Ozdenizci, B., & Ok, K. (2013). A survey on near field communication (NFC) technology. *Wireless Personal Communications*, 71(3), 2259–2294. doi:10.1007/11277-012-0935-5
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). SAGE Publications.
- Cronin, J. J. Jr, & Taylor, S. A. (1992). Measuring Service Quality: A Reexamination and Extension. *Journal of Marketing*, 56(3), 55–68. doi:10.1177/002224299205600304
- Cronin, J. Jr, Brady, M., & Hult, T. (2000). Assessing the Effects of Quality, Value, and Customer Satisfaction on Consumer Behavioral Intentions in Service Environments. *Journal of Retailing*, 76(2), 193–218. doi:10.1016/S0022-4359(00)00028-2
- Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship quality in services selling: An interpersonal influence perspective. *Journal of Marketing*, 54(3), 68–82. doi:10.1177/002224299005400306
- Crotti, R., & Misrahi, T. (2015). *The travel & tourism competitiveness index 2015: T&T as a resilient contribution to national development*. The Travel & Tourism Competitiveness Report, 13.
- Crotti, R., & Misrahi, T. (2017). *The travel & tourism competitiveness report 2017. Paving the way for a more sustainable and inclusive future*. World Economic Forum.
- Csikszentmihalyi, M. (1975). *Beyond Boredom and Anxiety*. Jossey-Bass.
- Csikszentmihalyi, M., & Csikszentmihalyi, I. S. (1988). *Optimal Experience: Psychological Studies of Flow in Consciousness*. Cambridge University Press. doi:10.1017/CBO9780511621956
- Cui, A. S., & Wu, F. (2016). Utilizing customer knowledge in innovation: Antecedents and impact of customer involvement on new product performance. *Journal of the Academy of Marketing Science*, 44(4), 516–538. doi:10.1007/11747-015-0433-x
- Cunningham, P. (2018). Drivers of Performance of Privately Owned, Rapid-Growth Firms: A Reconceptualization of the Trust? Commitment Model of Relationship Marketing. *Innovation and Strategy*, 15, 10–283. doi:10.1108/S1548-643520180000015013
- D'Acunto, F., Prabhala, N., & Rossi, A. G. (2019). The promises and pitfalls of robo-advising. *Review of Financial Studies*, 32(5), 1983–2020. doi:10.1093/rfs/hhz014
- Dagger, T. S., & O'Brien, T. K. (2010). Does experience matter? Differences in relationship benefits, satisfaction, trust, commitment and loyalty for novice and experienced service users. *European Journal of Marketing*, 44(9/10), 1528–1552. doi:10.1108/03090561011062952
- Dahlander, L., & Magnusson, M. G. (2005). Relationships between open source software companies and communities: Observations from Nordic firms. *Research Policy*, 34(4), 481–493. doi:10.1016/j.respol.2005.02.003
- Dai, J., & Vasarhelyi, M. A. (2017). Toward blockchain-based accounting and assurance. *Journal of Information Systems*, 31(3), 5–21. doi:10.2308/isis-51804
- Daj, A. (2013). Economic and legal aspects of introducing novel TCT instruments: Integrating sound into social media marketing- from audio branding to soundscaping. *Economic Sciences*, 6(2), 15–24.

- Danish, M., Ali, S., Ahmad, M., & Zahid, H. (2019). The influencing factors on choice behaviour regarding green electronic products: Based on the green perceived value model. *Economies*, 7(4), 99. doi:10.3390/economies7040099
- David, S., Czellar, S., & Spangenberg, E. (2009). The Importance of a General Measure of Brand Engagement on Market Behavior: Development and Validation of a Scale. *Journal of Marketing*, 46(1), 92–104. doi:10.1509/jmkr.46.1.92
- Davidsson, P., & Findahl, O. (2016). *Svenskarna och internet 2016: Undersökning om svenskarnas internetvanor* [Swedes and the internet 2016: Survey on Swedes' Internet habits]. Internetstiftelsen i Sverige. https://www.iis.se/docs/Svenskarna_och_internet_2016.pdf
- Davis, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *Management Information Systems Quarterly*, 13(3), 319–339. doi:10.2307/249008
- Davis, F., Bagozzi, R., & Warshaw, P. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982–1003. doi:10.1287/mnsc.35.8.982
- Davis, F., Bagozzi, R., & Warshaw, P. (1992). Extrinsic and Intrinsic Motivation to Use Computers in the Workplace. *Journal of Applied Social Psychology*, 22(14), 1111–1132. doi:10.1111/j.1559-1816.1992.tb00945.x
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52. doi:10.1177/002224299405800404
- De Kerviler, G., Demoulin, N. T. M., & Zidda, P. (2016). Adoption of in-store mobile payment: Are perceived risk and convenience the only drivers? *Journal of Retailing and Consumer Services*, 31, 334–344. doi:10.1016/j.jretconser.2016.04.011
- de Mendonça, C. M. C., & de Andrade, A. M. V. (2018). Dynamic capabilities and their relations with elements of digital transformation in Portugal. *Journal of Information Systems Engineering & Management*, 3(3), 23–31.
- De Vries, N. J., & Carlson, J. (2014). Examining the drivers and brand performance implications of customer engagement with brands in the social media environment. *Journal of Brand Management*, 21(6), 495–515. doi:10.1057/bm.2014.18
- Dehghanpouri, H., Soltani, Z., & Rostamzadeh, R. (2020). The impact of trust, privacy and quality of service on the success of E-CRM: The mediating role of customer satisfaction. *Journal of Business and Industrial Marketing*, 35(11), 1831–1847. Advance online publication. doi:10.1108/JBIM-07-2019-0325
- Delke, V. F. (2015). *The Resource Dependence Theory: Assessment and evaluation as a contributing theory for supply management*. Academic Press.
- Demil, B., & Lecocq, X. (2010). Business model evolution: In search of dynamic consistency. *Long Range Planning*, 43(2-3), 227–246. doi:10.1016/j.lrp.2010.02.004
- Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). The Global Findex Database 2017: Measuring financial inclusion and the fintech revolution. The World Bank.
- Department of Statistics Malaysia. (2019). *Department of Statistics Malaysia Official Portal*. Available at: https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=448&bul_id=VmZsbTU4NDIFcFZRdVF6ZDF3OW4zZz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09
- Derksen, M., Vikkelsø, S., & Beaulieu, A. (2012). Social technologies: Cross-disciplinary reflections on technologies in and from the social sciences. *Theory & Psychology*, 22(2), 139–147. doi:10.1177/0959354311427593
- Derouin, R. E., Fritzsche, B. A., & Salas, E. (2005). E-learning in organizations. *Journal of Management*, 31(6), 920–940. doi:10.1177/0149206305279815

Compilation of References

- Deshpande, A., & Saxena, T. (2017). Effects of consumer buying behaviour durable sellers. *International Journal of Management Sciences*, 8(1), 32–44.
- Dessart, L., Veloutsou, C., & Morgan-Thomas, A. (2015). Consumer engagement in online brand communities: A social media perspective. *Journal of Product and Brand Management*, 24(1), 28–42. doi:10.1108/JPBM-06-2014-0635
- Dewnarain, S., Ramkissoon, H., & Mavondo, F. (2019). Social customer relationship management: An integrated conceptual framework. *Journal of Hospitality Marketing & Management*, 28(2), 172–188. doi:10.1080/19368623.2018.1516588
- Dhore, A., & Godbole, S. (2018). A descriptive study of the effectiveness of internet advertising on consumer buying behavior in Nagpur City. *International Journal of Latest Engineering and Management Research*, 3(5), 1–12.
- Di Gangi, P. M., & Wasko, M. M. (2016). Social Media Engagement Theory: Exploring the Influence of User Engagement on Social Media Usage. *Journal of Organizational and End User Computing*, 28(2), 53–73. doi:10.4018/JOEUC.2016040104
- Diamond Signal. (2020). *A startup that realizes a world without “redelivery” with an app and reforms the last mile of logistics*. Retrieved from <https://signal.diamond.jp/articles/-/240>
- Dictionary, C. (2020). *Retail investment*. Cambridge University Press. <https://dictionary.cambridge.org/dictionary/english/retail-investment>
- Dimitrova, I., Öhman, P., & Yazdanfar, D. (2019). Challenges in the limited choice of payment methods in terms of cashless society: Bank customers' perspective. In *ICEEG 2019: Proceedings of the 2019 3rd international conference on e-commerce, e-business and e-government* (pp. 45–48). Association for Computing Machinery. 10.1145/3340017.3340034
- Dimiyati, M., & Subagio, N. A. (2018). Customer trust as mediator in the creation of customer relationship intention. *Management & Marketing. Challenges for the Knowledge Society*, 13(1), 710–729. doi:10.2478/mmcks-2018-0001
- Ding, C., Cheng, H. K., Duan, Y., & Jin, Y. (2017). The power of the “like” button: The impact of social media on box office. *Decision Support Systems*, 94, 77–84. doi:10.1016/j.dss.2016.11.002
- Dirsehan, T., & Kurtuluş, S. (2018). Measuring brand image using a cognitive approach: Representing brands as a network in the Turkish airline industry. *Journal of Air Transport Management*, 67(March), 85–93. doi:10.1016/j.jairtra-man.2017.11.010
- Dochy, F. (2006). A guide for writing scholarly articles or reviews for the Educational Research Review. *Educational Research Review*, 4(1-2), 1–21. doi:10.1016/j.edurev.2006.02.001
- Domat, C. (2020). Lebanon's New Deal. *Global Finance Magazine*. <https://www.gfmag.com/magazine/april-2020/lebanons-new-deal?fbclid=IwAR1gnR3CS977v8-EexVtclzZK14uKPTOU62Xw470L6cjbyMKVNGXIFcY-4Q>
- Dominici, G., & Palumbo, F. (2013). 'How to build an e-learning product: Factors for student/customer satisfaction'. *Business Horizons*, 56(1), 87–96. doi:10.1016/j.bushor.2012.09.011
- Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer–seller relationships. *Journal of Marketing*, 61(2), 35–51.
- Donner, J. (2004). Microentrepreneurs and mobiles: An exploration of the uses of mobile phones by small business owners in Rwanda. *Information Technologies and International Development*, 2(1), 1–21. doi:10.1162/1544752043971198
- Donner, J. (2007). Customer acquisition among small and informal businesses in urban India: Comparing face-to-face and mediated channels. *The Electronic Journal on Information Systems in Developing Countries*, 1(3), 1–16. doi:10.1002/j.1681-4835.2007.tb00222.x

- Doody, O., & Doody, C. M. (2015). Conducting a pilot study: Case study of a novice researcher. *British Journal of Nursing (Mark Allen Publishing)*, 24(21), 1074–1078. doi:10.12968/bjon.2015.24.21.1074 PMID:26618678
- Dos Santos, B. L., Peffers, K., & Mauer, D. C. (1993). The impact of information technology investment announcements on the market value of the firm. *Information Systems Research*, 4(1), 1–23. doi:10.1287/isre.4.1.1
- Dowell, D., Morrison, M., & Heffernan, T. (2015). The changing importance of affective trust and cognitive trust across the relationship lifecycle: A study of business-to-business relationships. *Industrial Marketing Management*, 44, 119–130. doi:10.1016/j.indmarman.2014.10.016
- Drazin, R., & Van de Ven, A. H. (1985). Alternative forms of fit in contingency theory. *Administrative Science Quarterly*, 30(4), 514–539. doi:10.2307/2392695
- Eastlick, M. A., Lotz, S. L., & Warrington, P. (2006). Understanding online B-to-C relationships: An integrated model of privacy concerns, trust, and commitment. *Journal of Business Research*, 59(8), 877–886. doi:10.1016/j.jbusres.2006.02.006
- Eaton, G. (2018). The rise of the cashless economy: How Swedes abandoned notes and coins. *New Statesman (London, England)*, 147(5411), 19.
- Ebner, W., Leimeister, J. M., & Krcmar, H. (2009). Community engineering for innovations: The ideas competition as a method to nurture a virtual community for innovations. *R & D Management*, 39(4), 342–356. doi:10.1111/j.1467-9310.2009.00564.x
- Eginli, A. T., & Tas, N. O. (2018). Interpersonal communication in social networking sites: An investigation in the framework of uses and gratification theory. *Online Journal of Communication and Media Technologies*, 8(2), 81–104.
- Eid, M. I., & Al-Jabri, I. M. (2016). Social networking, knowledge sharing, and student learning: The case of university students. *Computers & Education*, 99, 14–27. doi:10.1016/j.compedu.2016.04.007
- Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32. doi:10.5465/amj.2007.24160888
- Elbeltagi, I., & Agag, G. (2016). E-retailing ethics and its impact on customer satisfaction and repurchase intention: A cultural and commitment-trust theory perspective. *Internet Research*, 26(1), 288–310. doi:10.1108/IntR-10-2014-0244
- Elia, J. Y. (2020). *Lebanese banks: a factor of the current Lebanese financial crisis (2019–2020)*. Academic Press.
- Elifneh, Y. W., Brahma, D., Jagadish, G., & Girma, Y. (2020). Customers' Satisfaction in ATM Service-Empirical Evidence from The Leading Bank in Ethiopia. *International Journal of Engineering and Management Research*, 10.
- Elsayed, A. M. (2016). The use of academic social networks among Arab researchers: A survey. *Social Science Computer Review*, 34(3), 378–391. doi:10.1177/0894439315589146
- Engel & Blackwell. (1982). *Consumer Behavior* (4th ed.). Chicago: Dryden.
- Erat, P., Desouza, K. C., Schäfer-Jugel, A., & Kurzawa, M. (2006). Business customer communities and knowledge sharing: Exploratory study of critical issues. *European Journal of Information Systems*, 15(5), 511–524. doi:10.1057/palgrave.ejis.3000643
- Erdal, A., & Burcu, S. (2014). The Relationship between Globalization and E-commerce: Turkish Case. *Procedia: Social and Behavioral Sciences*, 150, 1267–1276. doi:10.1016/j.sbspro.2014.09.143
- Erdil, T. S. (2015). Effects of customer brand perceptions on store image and purchase intention: An application in apparel clothing. *Procedia: Social and Behavioral Sciences*, 207, 196–205. doi:10.1016/j.sbspro.2015.10.088

Compilation of References

- Eriksson, M., & Schuster, C. (2009). Customer loyalty in internet banking. *International Business and Economic Program*. Available at: <https://pdfs.semanticscholar.org/b80e/c00595e88cef0a1ea78fd6336e93789602ad.pdf>
- Escobar-Rodríguez, T., & Carvajal-Trujillo, E. (2014). Online purchasing tickets for low cost carriers: An application of the unified theory of acceptance and use of technology (UTAUT) model. *Tourism Management*, 43, 70–88. doi:10.1016/j.tourman.2014.01.017
- Ettis, S. A. (2017). Examining the relationships between online store atmospheric color, flow experience and consumer behavior. *Journal of Retailing and Consumer Services*, 37, 43–55. doi:10.1016/j.jretconser.2017.03.007
- Europäische, K., & Equal Opportunities Unit, E. (2005). *The new SME definition: User guide and model declaration*. Office for Official Publications of the European Communities.
- European Banking Federation. (2020). *Building financial resilience in turbulent times: Financial literacy in the 2020s*. <https://www.ebf.eu/events/financialliteracy2020seminar/>
- European Commission. (2018). *Distribution systems of retail investment products across the European Union*. https://ec.europa.eu/info/sites/info/files/180425-retail-investment-products-distribution-systems_en.pdf
- Evans, J. D. (1996). *Straightforward statistics for the behavioral sciences*. Brooks/Cole Publishing.
- Fabris, N. (2019). Cashless society: The future of money or a utopia? *Journal of Central Banking Theory and Practice*, 8(1), 53–66. doi:10.2478/jcbtp-2019-0003
- Faisal-E-Alam, M. (2020). The influence of quality on consumers' purchase intention between local and multinational cosmetic firm. *Journal of International Business and Management*, 3(1), 1–11. doi:10.37227/jibm-2020-63
- Faith, D. O., & Edwin, A. M. (2018). A Review of the effect of pricing strategies on the purchase of consumer goods. *International Journal of Research in Management. Science and Technology*, 2(2), 88–102.
- Fakhoury, R., & Aubert, B. (2015). Citizenship, Trust, and Behavioral Intentions to Use Public E-Services: The Case of Lebanon. *International Journal of Information Management*, 35(3), 346–351. doi:10.1016/j.ijinfomgt.2015.02.002
- Farell, R. (2015). *An analysis of the cryptocurrency industry*. Academic Press.
- Fecht, F., Hackethal, A., & Karabulut, Y. (2018). Is proprietary trading detrimental to retail investors? *The Journal of Finance*, 73(3), 1323–1361. doi:10.1111/jofi.12609
- Fedewa, C. S. (1996). *Business Models for Internetpreneurs*. Internet Entrepreneurs Support Service.
- Fellows, R., & Liu, A. (2015). *Research Methods for Construction* (4th ed.). Wiley Blackwell.
- Feng, X., Fu, S., & Qin, J. (2016). Determinants of consumers' attitudes toward mobile advertising: The mediating roles of intrinsic and extrinsic motivations. *Computers in Human Behavior*, 63, 334–341. doi:10.1016/j.chb.2016.05.024
- Fenn, J., Raskino, M., & Burton, B. (2013). *Understanding Gartner's Hype Cycles*. Gartner.
- Ferrer, A. (2016). *Taxi drivers against Uber: the fight for passengers in Mexico City*. Obtained from http://www.milenio.com/df/conflict_uber_taxis_df-fight_uber_taxis_ciudad_mexico-apps_debate_taxis_df_0_647335583.html
- Ferro, C., Padin, C., Svensson, G., & Payan, J. (2016). Trust and commitment as mediators between economic and non-economic satisfaction in manufacturer-supplier relationships. *Journal of Business and Industrial Marketing*, 31(1), 13–23. doi:10.1108/JBIM-07-2013-0154
- Fielding, K. S., McDonald, R., & Louis, W. R. (2008). Theory of planned behaviour, identity and intentions to engage in environmental activism. *Journal of Environmental Psychology*, 28(4), 318–326. doi:10.1016/j.jenvp.2008.03.003

- Findahl, O. (2019). *Svenskarna och internet 2019* [Swedes and the internet 2019]. Internetstiftelsen i Sverige. <https://svenskarnaochinternet.se/app/uploads/2019/10/svenskarna-och-internet-2019-a4.pdf>
- Fiol, C. M. (2001). Revisiting an identity-based view of sustainable competitive advantage. *Journal of Management*, 27(6), 691–699. doi:10.1177/014920630102700606
- Fiore, A. M., Jin, H., & Kim, J. (2005). For fun and profit: Hedonic value from image interactivity and responses toward an online store. *Psychology and Marketing*, 22(8), 669–694. doi:10.1002/mar.20079
- Flavián, C., Guinalíu, M., & Torres, E. (2006). How bricks-and-mortar attributes affect online banking adoption. *International Journal of Bank Marketing*, 24(6), 406–423. doi:10.1108/02652320610701735
- Floh, A., & Madlberger, M. (2013). The role of atmospheric cues in online impulse-buying behaviour. *Electronic Commerce Research and Applications*, 12(6), 425–439. doi:10.1016/j.elerap.2013.06.001
- Florendo, J., & Estelami, H. (2019). The role of cognitive style, gullibility, and demographics on the use of social media for financial decision making. *Journal of Financial Services Marketing*, 24(1/2), 1–10. doi:10.105741264-019-00064-7
- Følstad, A., Nordheim, C. B., & Bjørkli, C. A. (2018). What makes users trust a chatbot for customer service? An exploratory interview study. In *International Conference on Internet Science*, (pp. 194–208). Springer. 10.1007/978-3-030-01437-7_16
- Fong, K., Krug, J. D., Leung, H., & Westerholm, J. P. (2019). Determinants of household broker choices and their impacts on performance. *Journal of Banking & Finance*, 112, 1–14. doi:10.1016/j.jbankfin.2019.06.005
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *JMR, Journal of Marketing Research*, 18(1), 39–50. doi:10.1177/002224378101800104
- Foscht, T., Schloffer, J., Maloles, C. III, & Chia, S. L. (2009). Assessing the outcomes of generation-Y customers' loyalty. *International Journal of Bank Marketing*, 27(3), 218–241. doi:10.1108/02652320910950204
- Foss, N. J., & Saebi, T. (2016). Fifteen years of research on business model innovation. *Journal of Management*, 43(1), 200–227. doi:10.1177/0149206316675927
- Foster, B. (2016). Impact of brand image on purchasing decision on mineral water product “Amidis” (Case Study on Bintang Trading Company). *American Research Journal of Humanities and Social Sciences*, 2(1), 1–11.
- Fox, S., & Rainie, L. (2014). *The web at 25 in the U. S. Pew Research Center Internet and America Life Project*. Academic Press.
- Frederick, A. (2002). *The Lebanese Banking System*. New York Press House.
- Freeman, M. (2009). Experiences of users from online grocery stores. In D. Oliver, C. Romm Livermore, & F. Sudweeks (Eds.), *Self Service in the Internet Age: Expectations and Experiences* (pp. 139–160). Springer-Verlag. doi:10.1007/978-1-84800-207-4_7
- Fryer, L. K., Nakao, K., & Thompson, A. (2019). Chatbot learning partners: Connecting learning experiences, interest and competence. *Computers in Human Behavior*, 93, 279–289. doi:10.1016/j.chb.2018.12.023
- Fu, H., Manogaran, G., Wu, K., Cao, M., Jiang, S., & Yang, A. (2020). Intelligent decision-making of online shopping behavior based on internet of things. *International Journal of Information Management*, 50, 515–525. doi:10.1016/j.ijinfomgt.2019.03.010
- Fulk, M., Grable, J. E., Watkins, K., & Kruger, M. (2018). Who uses robo-advisory services, and who does not? *Financial Services Review*, 27, 173–188.

Compilation of References

- Furrer, O., Liu, B. S. C., & Sudharshan, D. (2000). The Relationships Between Culture and Service Quality Perceptions: Basis for Cross-Cultural Market Segmentation and Resource Allocation. *Journal of Service Research*, 2(4), 355–371. doi:10.1177/109467050024004
- Gaitan, J., Peral, B., & Jeronimo, M. (2015). Elderly and internet banking: An application of UTAUT2. *Journal of Internet Banking and Commerce*, 20(1).
- Galunic, D. C., & Eisenhardt, K. M. (1994). Renewing the strategy-structure-performance paradigm. *Research in Organizational Behavior*, 16, 215–215.
- Gan, C., & Li, H. (2018). Understanding the effects of gratifications on the continuance intention to use WeChat in China: A perspective on uses and gratifications. *Computers in Human Behavior*, 78, 306–315. doi:10.1016/j.chb.2017.10.003
- Gandhi, S., Thota, B., Kuchembuck, R., & Swartz, J. (2018). Demystifying data monetization. *MIT Sloan Management Review*, 1–9.
- Ganesh, R. S., & Vakayil, S. (2018). Consumer buying behaviour of virgin edible oils: A literature survey and conceptual framework. *International Journal of Management*, 10(4), 141–151.
- Ganiyu, R. A., Uche, I. I., & Adeoti, O. E. (2012). Is customer satisfaction an indicator of customer loyalty? *Australian Journal of Business and Management Research*, 2(7), 14–20.
- Ganju, K. K., Pavlou, P. A., & Banker, R. D. (2016). Does information and communication technology lead to the well-being of nations? A country-level empirical investigation. *Management Information Systems Quarterly*, 40(2), 417–430. doi:10.25300/MISQ/2016/40.2.07
- Gao, L., & Bai, X. (2014). A unified perspective on the factors influencing consumer acceptance of internet of things technology. *Asia Pacific Journal of Marketing and Logistics*, 26(2), 211–231. doi:10.1108/APJML-06-2013-0061
- Gao, L., & Bai, X. (2014). An empirical study on continuance intention of mobile social networking services: Integrating the IS success model, network externalities and flow theory. *Asia Pacific Journal of Marketing and Logistics*, 26(2), 168–189. doi:10.1108/APJML-07-2013-0086
- García Sánchez, M. (2018). *The case of UBER from a public view of Law. Final Master's Project in the practice of law*. International University of La Rioja.
- Garrido, M., Sey, A., Hart, T., & Santana, L. (2012b). *Exploratory study on explanations and theories of how telecentres and other community-based eInclusion actors operate and have an impact on digital and social inclusion policy goals*. JRC Working Papers. Seville, Spain: European Union.
- Garrido, M., Sey, A., Hart, T., & Santana, L. (2012a). *Literature review of how telecentres operate and have an impact on eInclusion*. JRC Scientific and Technical Reports. European Union.
- Gattringer, R., & Wiener, M. (2020). Key factors in the start-up phase of collaborative foresight. *Technological Forecasting and Social Change*, 153, 119931. doi:10.1016/j.techfore.2020.119931
- Gaur, N. (2020). Blockchain – A platform for disintermediation. *Infocast*. Available at: <https://infocastinc.com/market-insights/technology/blockchain-a-platform-for-disintermediation/>
- Geissinger, A., & Laurell, C. (2016). User engagement in social media: An explorative study of Swedish fashion brands. *Journal of Fashion Marketing and Management*, 20(2), 177–190. doi:10.1108/JFMM-02-2015-0010
- Generale, S. (2020). Lebanon: Presentation. *Societe Generale*. <https://import-export.societegenerale.fr/en/country/lebanon/presentation-trade>

- Gentina, E. G., Shrum, L. J., Lowrey, T. M., Vitell, S. J., & Rose, G. M. (2016). An integrative model of the influence of parental and peer support on consumer ethical beliefs: The mediating role of self-esteem, power, and materialism. *Journal of Business Ethics*, 150(4), 1173–1186. doi:10.1007/10551-016-3137-3
- George, D., & Mallery, P. (2003). *SPSS for Windows step by step*. Allyn and Bacon.
- Gerlitz, C., & Helmond, A. (2013). The like economy: Social buttons and the data-intensive web. *New Media & Society*, 15(8), 1348–1365. doi:10.1177/1461444812472322
- Gharaibeh, M., Arshad, M., & Gharaibeh, N. (2018). Using the UTAUT2 Model to Determine Factors Affecting Adoption of Mobile Banking Services: A Qualitative Approach. *International Journal of Interactive Mobile Technologies*, 12(4), 123. doi:10.3991/ijim.v12i4.8525
- Ginsberg, A., & Venkatraman, N. (1985). Contingency perspectives of organizational strategy: A critical review of the empirical research. *Academy of Management Review*, 10(3), 421–434. doi:10.5465/amr.1985.4278950
- Giordani, G., Floros, C., & Judge, G. (2014). Econometric investigation of Internet banking adoption in Greece. *Journal of Economic Studies (Glasgow, Scotland)*, 41(4), 586–600. doi:10.1108/JES-04-2011-0042
- Gitomer, J. (1998). *Customer Satisfaction Is Worthless, Customer Loyalty Is Priceless: How to Make Customers Love You, Keep Them Coming Back, And Tell Everyone They Know*. Bard Press.
- Glanz, K., Rimer, B. K., & Viswanath, K. (2008). *Health behavior and health education: theory, research, and practice*. John Wiley & Sons.
- Globerman, S., Roehl, T. W., & Standifird, S. (2001). Globalization and Electronic Commerce: Inferences from Retail Brokering. *Journal of International Business Studies*, 32(4), 749–768. doi:10.1057/palgrave.jibs.8490993
- Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humaneness perceptions. *Computers in Human Behavior*, 97, 304–316. doi:10.1016/j.chb.2019.01.020
- Goertzel, B., Goertzel, T., & Goertzel, Z. (2017). The global brain and the emerging economy of abundance: Mutualism, open collaboration, exchange networks and the automated commons. *Technological Forecasting and Social Change*, 114, 65–73. doi:10.1016/j.techfore.2016.03.022
- Goldstein, I., Jiang, W., & Karolyi, G. A. (2019). To FinTech and beyond. *Review of Financial Studies*, 32(5), 1647–1661. doi:10.1093/rfs/hhz025
- Golshan, B. (2018). *Digital Capability and Business Model Reconfiguration: a co-evolutionary perspective* (Doctoral dissertation). Linnaeus University Press.
- Gomber, P., Kauffman, R. J., Parker, C., & Weber, B. W. (2018). On the fintech revolution: Interpreting the forces of innovation, disruption, and transformation in financial services. *Journal of Management Information Systems*, 35(1), 220–265. doi:10.1080/07421222.2018.1440766
- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and fintech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537–580. doi:10.1007/11573-017-0852-x
- Gomez, R. (2014). When you do not have a computer: Public-access computing in developing countries. *Information Technology for Development*, 20(3), 274–291. doi:10.1080/02681102.2012.751573
- González Pérez, M. A. (2018). Uberification and urban mobility in the Metropolitan Area of Guadalajara: entropy in the new access configurations to motorized transport. *Science ergo-sum*, 25(2), 25-34. Available at <https://cienciaergosum.uaemex.mx/article/view/9500>

Compilation of References

- González Pérez, M. G. (2017a). Uber and urban mobility in the Guadalajara metropolitan geography: Rise and decline. *Geograficando*, 13(1), e020. doi:10.24215/2346898Xe020
- González Pérez, M. G. (2017b). Motorized mobility and transport infrastructures in Culiacán: an entropic situation. In *Power, Culture and Development* (pp. 60–77). University of Guanajuato.
- Gonzalez, C. (2010). *Social Media Best Practices for Communication Professionals through the Lens of the Fashion Industry* (MA thesis). The University of Southern California.
- Gonzalez, F. (2020). *Uber says goodbye to its Monterrey and Guadalajara offices: What will happen to employees?* Merca2.0. <https://www.merca20.com/uber-dice-adio-a-sus-oficinas-de-monterrey-y-guadalajara-que-pasara-con-los-empleados/>
- González, J. (2017). *In three years, how has Uber moved to Guadalajara?* Okupo +. <http://okupo.mx/tres-anos-ha-movido-uber-guadalajara>
- Gooroochurn, N., & Sugiyarto, G. (2005). Competitiveness indicators in the travel and tourism industry. *Tourism Economics*, 11(1), 25–43. doi:10.5367/0000000053297130
- Gotou, A. (2010). Online supermarket: its trends and future [Sannnyuga fueru nettosu-pa-no doukouto konngonokan-ouseini kannsuru kenntou]. *The Journal of Marketing and Distribution (Ryuutsuujuhou)*, 485, 14–21.
- Gould, J. M. (2009). Understanding organizations as learning systems. *Strategic Learning in a Knowledge Economy*, 19(6), 56–59.
- Gounaris, S., Stathakopoulos, V., & Athanassopoulos, A. (2003). Antecedents to Perceived Service Quality: An Exploratory Study in The Banking Industry. *International Journal of Bank Marketing*, 21(4), 168–190. doi:10.1108/02652320310479178
- Government Offices in Sweden. (2020). <https://www.government.se/articles/2020/09/the-budget-for-2021-in-five-minutes/>
- Govt. France. (2018). CEDRE (Conférence économique pour le développement, par les réformes et avec les entreprises) Joint Statement. *Relief Web*. <https://reliefweb.int/report/lebanon/cedre-conf-rence-conomique-pour-le-d-veloppement-par-les-r-formes-et-avec-les>
- Gracia, A., & de Magistris, T. (2013). Organic food product purchase behaviour: A pilot study for urban consumers in the south of Italy. *Spanish Journal of Agricultural Research*, 5(4), 439–451. doi:10.5424/jar/2007054-5356
- Granzin, K. L., & Bahn, K. D. (1989). Consumer logistics: Conceptualization, pertinent issues and a proposed program for research. *Journal of the Academy of Marketing Science*, 17(1), 91–101. doi:10.1007/BF02726358
- Green, P. E., & Krieger, A. M. (1991). Segmenting markets with conjoint analysis. *Journal of Marketing*, 55(4), 20–31. doi:10.1177/002224299105500402
- Grewal, R., & Dharwadkar, R. (2002). The role of the institutional environment in marketing channels. *Journal of Marketing*, 66(3), 82–97. doi:10.1509/jmkg.66.3.82.18504
- Groß, J., Herz, B., & Schiller, J. (2019). *Libra-Concept and Policy Implications (No. 02-19)*. Wirtschaftswissenschaftliche Diskussionspapiere.
- Grothoff, C., & Pentland, A. (2019). *Digital cash and privacy: What are the alternatives to Libra?* Academic Press.
- Gruber, D. A., Smerek, R. E., Thomas-Hunt, M. C., & James, E. H. (2015). The real-time power of Twitter: Crisis management and leadership in an age of social media. *Business Horizons*, 58(2), 163–172. doi:10.1016/j.bushor.2014.10.006

- Gruescu, R., Nanu, R., & Pirvu, G. (2009). Destination competitiveness: A framework for future research. *Entelequia. Revista Interdisciplinar*, 9, 197–209.
- Grunert, K. G., & Achmann, K. (2016). Consumer reactions to the use of EU quality labels on food products: A review of the literature. *Food Control*, 59, 178–187. doi:10.1016/j.foodcont.2015.05.021
- GSMA. (2016). *The mobile economy 2016*. Adweek. GSMA.
- Guba, E. G., & Lincoln, Y. S. (1989). Fourth generation evaluation. *Sage (Atlanta, Ga.)*.
- Gubbi, J., Buyya, R., Marusic, S., & Palaniswami, M. (2013). Internet of Things (IoT): A vision, architectural elements, and future directions. *Future Generation Computer Systems*, 29(7), 1645–1660. doi:10.1016/j.future.2013.01.010
- Guercini, S., & Tunisini, A. (2017). Formalizing in business networks as a tool for industrial policy. *IMP Journal*, 11(1), 91–108. doi:10.1108/IMP-07-2015-0040
- Guillén Navarro, N. (2018). Vehicle leasing with driver (VTC) and its legal framework: The advance of Uber, Cabify and the collaborative economy. *Journal of Local and Autonomous Administration Studies*, (9), 128–147. doi:10.24965/reala.v0i9.10470
- Guimarães Pereira, Â., & O'Connor, M. (1999). Information and communication technology and the popular appropriation of sustainability problems. *International Journal of Sustainable Development*, 2(3), 411–424. doi:10.1504/IJSD.1999.004331
- Gümüş, M., Li, S., Oh, W., & Ray, S. (2013). Shipping fees or shipping free? A tale of two price partitioning strategies in online retailing. *Production and Operations Management*, 22(4), 758–776. doi:10.1111/j.1937-5956.2012.01391.x
- Gunter, B., & Furnham, A. (1998). *Children as Consumers: A Psychological Analysis of Young People's Market* (1st ed.). Routledge. doi:10.4324/9780203272947
- Güsken, S. R., Janssen, D., & Hees, F. (2019). Online Grocery Platforms—Understanding Consumer Acceptance. In *ISPIM Conference Proceedings* (pp. 1-17). The International Society for Professional Innovation Management (ISPIM).
- Hacklin, F., Björkdahl, J., & Wallin, M. W. (2018). Strategies for business model innovation: How firms reel in migrating value. *Long Range Planning*, 51(1), 82–110. doi:10.1016/j.lrp.2017.06.009
- Hack-Polay, D. (2020). Are graduates as good as they think? A discussion of overconfidence among graduates and its impact on employability. *Education + Training*. Advance online publication. doi:10.1108/ET-10-2018-0213
- Hague, P., & Hague, N. (2016). *Customer Satisfaction Survey: The customer experience through the customer's eyes*. Cogent Publication.
- Ha, H. (2012). The effects of online shopping attributes on satisfaction–purchase intention link: A longitudinal study. *International Journal of Consumer Studies*, 36(3), 327–334. doi:10.1111/j.1470-6431.2011.01035.x
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. R. (2014). *Multivariate Data Analysis* (7th ed.). Prentice Hall.
- Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2013). *A Primer on Partial Least Squares Structural Equation Modelling (PLS-SEM)*. Sage Publications.
- Hair, J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis* (7th ed.). Pearson Education Limited.
- Hajli, M. N. (2014). The role of social support on relationship quality and social commerce. *Technological Forecasting and Social Change*, 87, 17–27. doi:10.1016/j.techfore.2014.05.012

Compilation of References

- Håkansson, H., Havila, V., & Pedersen, A. C. (1999). Learning in networks. *Industrial Marketing Management*, 28(5), 443–452. doi:10.1016/S0019-8501(99)00080-2
- Håkansson, H., & Waluszewski, A. (Eds.). (2007). *Knowledge and innovation in business and industry: The importance of using others*. Routledge. doi:10.4324/9780203947029
- Halinen, A., & Törnroos, J. Å. (2005). Using case methods in the study of contemporary business networks. *Journal of Business Research*, 58(9), 1285–1297. doi:10.1016/j.jbusres.2004.02.001
- Hall, A., Towers, N., & Shaw, D. R. (2017). Understanding how Millennial shoppers decide what to buy: Digitally connected unseen journeys. *International Journal of Retail & Distribution Management*, 45(5), 498–517. doi:10.1108/IJRDM-11-2016-0206
- Hamadi, G. (2019). Unemployment: The paralysis of Lebanese Youth. *Annahar*. <https://en.annahar.com/article/1004952-unemployment-the-paralysis-of-lebanese-youth>
- Hambrick, D. C. (2007). *Upper echelons theory: An update*. Academy of Management Briarcliff Manor.
- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193–206. doi:10.5465/amr.1984.4277628
- Hamid, F. S. (2011). Measuring service quality in the takaful industry. *SEGi Review*, 4(1), 118–124.
- Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The Impact Of E-Banking Service Quality on Customer Satisfaction: Evidence from The Lebanese Banking Sector. *SAGE Open*, 8(3), 2158244018790633. doi:10.1177/2158244018790633
- Hampton-Sosa, W., & Koufaris, M. (2005). The Effect of Web Site Perceptions on Initial Trust in the Owner Company. *International Journal of Electronic Commerce*, 10(1), 55–81. doi:10.1080/10864415.2005.11043965
- Hanaysha, J. (2016). The importance of social media advertisements in enhancing brand equity: A study on fast food restaurant industry in Malaysia. *International Journal of Innovation, Management and Technology*, 7(2), 46–51. doi:10.18178/ijimt.2016.7.2.643
- Hanaysha, J. (2018). An examination of the factors affecting consumer's purchase decision in the Malaysian retail market. *PSU Research Review*, 2(1), 7–23. doi:10.1108/PRR-08-2017-0034
- Han, H., Hsu, L.-T. J., & Sheu, C. (2010). Application of the theory of planned behavior to green hotel choice: Testing the effect of environmental friendly activities. *Tourism Management*, 31(3), 325–334. doi:10.1016/j.tourman.2009.03.013
- Han, H., Hwang, J., & Woods, D. P. (2014). Choosing virtual–rather than real–leisure activities: An examination of the decision–making process in screen-golf participants. *Asia Pacific Journal of Tourism Research*, 19(4), 428–450. doi:10.1080/10941665.2013.764333
- Han, H., & Hyun, S. S. (2015). Customer retention in the medical tourism industry: Impact of quality, satisfaction, trust and price reasonableness. *Tourism Management*, 46, 20–29. doi:10.1016/j.tourman.2014.06.003
- Hanif, M., Hafeez, S., & Riaz, A. (2010). Factors affecting customer satisfaction. *International Research Journal of Finance and Economics*, 60(1), 44–52.
- Hao, J. X., Yu, Y., Law, R., & Fong, D. K. C. (2015). A genetic algorithm-based learning approach to understand customer satisfaction with OTA websites. *Tourism Management*, 48, 231–241. doi:10.1016/j.tourman.2014.11.009
- Harmeling, C. M., Moffett, J. W., Arnold, M. J., & Carlson, B. D. (2017). Toward a theory of customer engagement marketing. *Journal of the Academy of Marketing Science*, 45(3), 312–335. doi:10.1007/11747-016-0509-2

- Harreveld, F. V., Schneider, I. K., Nohlen, H., & Plight, J. V. D. (2012). The dynamics of ambivalence: Evaluative conflict in attitudes and decision making. *Cognitive consistency: A fundamental principle in social cognition*, 267-284.
- Harrison-Walker, J. (2001). The Measurement of Word-Of-Mouth Communication and An Investigation of Service Quality and Customer Commitment as Potential Antecedents. *Journal of Service Research*, 4(1), 60-75. doi:10.1177/109467050141006
- Hartman, J. B., Gehrt, K. C., & Watchravesringkan, K. (2004). Re-examination of the concept of innovativeness in the context of the adolescent segment: Development of a measurement scale. *Journal of Targeting, Measurement & Analysis for Marketing*, 12(4), 353-365. doi:10.1057/palgrave.jt.5740122
- Harvey, C. R., Moorman, C., & Toledo, M. (2018). *How blockchain will change marketing as we know it*. Working Paper. Available at SSRN 3257511.
- Harvey, C. G., Stewart, D. B., & Ewing, M. T. (2011). Forward or delete: What drives peer-to-peer message propagation across social networks? *Journal of Consumer Behaviour*, 10(6), 365-372. doi:10.1002/cb.383
- Harvey, D. (2010). *Social justice and the city* (Vol. 1). University of Georgia Press.
- Harvie, C., & Saleh, A. S. (2008). Lebanon's economic reconstruction after the war: A bridge too far? *Journal of Policy Modeling*, 30(5), 857-872. doi:10.1016/j.jpolmod.2007.04.004
- Hasan, A., Arif, M. I., & Khan, N. (2013). ATM Service Quality and Its Effect on Customer Retention: A Case from Pakistani Banks. *Information Management and Business Review*, 5(6), 300-305. doi:10.22610/imbr.v5i6.1055
- Hasan, B. (2016). Perceived irritation in online shopping: The impact of website design characteristics. *Computers in Human Behavior*, 54, 224-230. doi:10.1016/j.chb.2015.07.056
- Hasan, H., & Ditsa, G. (1999). The impact of culture on the adoption of IT: An interpretive study. *Journal of Global Information Management*, 7(1), 5-15. doi:10.4018/jgim.1999010101
- Hasan, S. A., & Khan, M. Z. (2010). The impact of packaging characteristics on consumer brand preference. *South Asian Journal of Management Sciences*, 3(1), 1-10.
- Hashim, Y. (2010). Determining Sufficiency of Sample Size in Management Survey Research Activities. *International Journal of Organisational Management & Entrepreneurship Development*, 6(1), 119-130.
- Haslem, A. J. (2003). A Statistical Analysis of Member Bank Profitability Differences. *Banking Journal*.
- Hassan, S. H., Mohamed-Haniba, N. M., & Ahmad, N. H. (2019). Social customer relationship management (s-CRM) among small- and medium-sized enterprises (SMEs) in Malaysia. *International Journal of Ethics and Systems*, 35(2), 284-302. doi:10.1108/IJOES-11-2017-0192
- Hauff, J. C. (2014). Trust and risk-taking in a pension investment setting. *International Journal of Bank Marketing*, 32(5), 408-428. doi:10.1108/IJBM-11-2013-0138
- Haven, B. (2007). *Marketing's new key metric: Engagement*. Forrester Research.
- Hawlitsek, F., Notheisen, B., & Teubner, T. (2018). The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy. *Electronic Commerce Research and Applications*, 29, 50-63. doi:10.1016/j.elerap.2018.03.005
- Hawlitsek, F., Notheisen, B., & Teubner, T. (2020). A 2020 perspective on "The limits of trust-free systems: A literature review on blockchain technology and trust in the sharing economy. *Electronic Commerce Research and Applications*, 40, 100935. doi:10.1016/j.elerap.2020.100935

Compilation of References

- Heeks, R. (2008). ICT4D 2.0: The next phase of applying ICT for international development. *Computer*, 41(6), 26–31. doi:10.1109/MC.2008.192
- Hee, O. C., & Yen, W. S. (2018). The influence of advertising media towards consumer purchasing behavior in the food and beverage Industry in Malaysia. *International Journal of Human Resource Studies*, 8(2), 148–163. doi:10.5296/ijhrs.v8i2.12877
- Heizer, J., & Render, B. (2011). *Principles of Operations Management*. 8. Prentice Hall.
- Hennig-Thurau, T., Gwinner, K. P., & Gremler, D. D. (2002). Understanding relationship marketing outcomes an integration of relational benefits and relationship quality. *Journal of Service Research*, 4(3), 230–247. doi:10.1177/1094670502004003006
- Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms: What motivates consumers to articulate themselves on the internet? *Journal of Interactive Marketing*, 18(1), 38–52. doi:10.1002/dir.10073
- Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The impact of new media on customer relationships. *Journal of Service Research*, 13(3), 311–330. doi:10.1177/1094670510375460
- Hernández Romero, Y., & Galindo Sosa, R. V. (2016). UBER transport service management model. Who loses and who wins? *Public Spaces*, 19(47), 157–175.
- Hernandez, B., Jimenez, J., & Martin, M. J. (2009). Key website factors in e-business strategy. *International Journal of Information Management*, 29(5), 362–371. doi:10.1016/j.ijinfomgt.2008.12.006
- Hernández, Y., Galindo, S., & Vicente, R. (2015). Conflict for the operation of public passenger transport (taxi mode) in urban areas of Tecámac, State of Mexico. *Public Spaces Magazine, UAEM*, 18(42), 135–156.
- Herrando, C., Jimenez-Martinez, J., & Martin de Hoyos, M. J. (2018). Surfing or flowing? How to retain e-customers on the internet. *Spanish Journal of Marketing - ESIC*, 22(1), 2–21. doi:10.1108/SJME-03-2018-006
- Hew, J., Lee, V., Ooi, K., & Wei, J. (2015). What catalyses mobile apps usage intention: An empirical analysis. *Industrial Management & Data Systems*, 115(7), 1269–1291. doi:10.1108/IMDS-01-2015-0028
- Hidayat, A., Adanti, A., Darmawan, A. & Setyaning, A. (2019). Factors influencing Indonesian customer satisfaction and customer loyalty in local fast-food restaurant. *International Journal of Marketing Studies*, 11(3), 131-139.
- Hilal, M. (2015). Technological transition of banks for development: New information and communication technology and its impact on the banking sector in Lebanon. *International Journal of Economics and Finance*, 7(5), 186–200. doi:10.5539/ijef.v7n5p186
- Hill, J., Ford, W. R., & Farreras, I. G. (2015). Real conversations with artificial intelligence: A comparison between human–human online conversations and human–chatbot conversations. *Computers in Human Behavior*, 49, 245–250. doi:10.1016/j.chb.2015.02.026
- Hirogaki, M. (2015). Key factors in successful online grocery retailing: Empirical evidence from Tokyo, Japan. *International Journal of Entrepreneurship and Small Business*, 26(2), 139–153. doi:10.1504/IJESB.2015.071821
- Hirogaki, M. (2016) *Marketing Innovations in a Mature Society*. Chikura Publishing.
- Hirogaki, M. (2020). CSV Activities in the Japanese Retail Sector. In *Handbook of Research on Contemporary Consumerism* (pp. 39–56). IGI Global. doi:10.4018/978-1-5225-8270-0.ch003
- Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: Emerging concepts, methods and propositions. *Journal of Marketing*, 46(3), 92–101. doi:10.1177/002224298204600314

- Ho, R. C., & Amin, M. (2019). What Drives the Adoption of Smart Travel Planning Apps? The Relationship between Experiential Consumption and Mobile App Acceptance. *KnE Social Sciences*, 22–41.
- Ho, R. C., & Teo, T. C. (2020). Consumer Socialization Process for the Highly Connected Customers: The Use of Instagram to Gain Product Knowledge. In *Strategies and Tools for Managing Connected Consumers* (pp. 1–19). doi:10.4018/978-1-5225-9697-4.ch001
- Hobbs, L. R. (2020). Facebook's Libra: The Social Media Giant's Pursuit of Global Financial Inclusion. *North Carolina Banking Institute*, 24(1), 331.
- Hofer, C. W. (1990). Toward a contingency theory of business strategy. In *Strategische Unternehmensplanung/Strategische Unternehmensführung* (pp. 151–175). Springer. doi:10.1007/978-3-662-41484-2_7
- Hofmann, S., Beverungen, D., Räckers, M., & Becker, J. (2013). What makes local governments' online communications successful? Insights from a multi-method analysis of Facebook. *Government Information Quarterly*, 30(4), 387–396. doi:10.1016/j.giq.2013.05.013
- Hollebeek, L. D. (2011). Demystifying customer brand engagement: Exploring the loyalty nexus. *Journal of Marketing Management*, 27(7–8), 785–807. doi:10.1080/0267257X.2010.500132
- Hollebeek, L. D., Glynn, M. S., & Brodie, R. J. (2014). Consumer brand engagement in social media: Conceptualization, scale development and validation. *Journal of Interactive Marketing*, 28(2), 149–165. doi:10.1016/j.intmar.2013.12.002
- Hollender, L., Zapkau, F. B., & Schwens, C. (2017). SME foreign market entry mode choice and foreign venture performance: The moderating effect of international experience and product adaptation. *International Business Review*, 26(2), 250–263. doi:10.1016/j.ibusrev.2016.07.003
- Hong, G.H. (2013). Support people with limited access to shopping facilities in area [Chiikiniokeru kaimonojakusha shiennsa-bisu no tennkainitsuite]. *RKU Logistics Review (Butsuryuu monndai kennkyuu)*, 59, 60–71.
- Hoopes, D. G., Madsen, T. L., & Walker, G. (2003). Guest editors' introduction to the special issue: Why is there a resource-based view? Toward a theory of competitive heterogeneity. *Strategic Management Journal*, 24(10), 889–902. doi:10.1002/mj.356
- Hoq, K. M. G. (2015). Rural library and information services, their success, failure and sustainability: A literature review. *Information Development*, 31(3), 294–310. doi:10.1177/0266666913515693
- Ho, R. C. (2019). The Outcome Expectations of Promocode in Mobile Shopping Apps: An Integrative Behavioral and Social Cognitive Perspective. *Proceedings of the 2019 3rd International Conference on E-Commerce, E-Business and E-Government*, 74–79. 10.1145/3340017.3340028
- Ho, R. C. (2020). *Strategies and Tools for Managing Connected Consumers*. IGI Global. doi:10.4018/978-1-5225-9697-4
- Ho, R. C., & Cheng, R. (2020). The impact of relationship quality and social support on social media users' selling intention. *International Journal of Internet Marketing and Advertising*, 14(4), 433–453. doi:10.1504/IJIMA.2020.111051
- Ho, R. C., & Rajadurai, K. G. (2020). Live streaming meets online shopping in the connected world: interactive social video in online marketplace. In *Strategies and tools for managing connected consumers* (pp. 130–142). IGI Global. doi:10.4018/978-1-5225-9697-4.ch008
- Ho, R. C., & Rajandram, K. V. (2016). The Influence of Social Media Data on Online Purchase: A Study on Relative Advantage of Social Commerce. In *Encyclopedia of E-Commerce Development* (pp. 2039–2050). Implementation, and Management. doi:10.4018/978-1-4666-9787-4.ch145

Compilation of References

- Ho, R. C., & Rezaei, S. (2018). Social Media Communication and Consumers Decisions: Analysis of the Antecedents for Intended Apps Purchase. *Journal of Relationship Marketing*, 17(3), 204–228. doi:10.1080/15332667.2018.1492322
- Ho, R. C., & Vogel, D. (2014). The impact of social networking functionalities on online shopping: An examination of the web's relative advantage. *International Journal of Business Information Systems*, 16(1), 25–41. doi:10.1504/IJBIS.2014.060834
- Ho, R. C., Withanage, M. S., & Khong, K. W. (2020). Sentiment drivers of hotel customers: A hybrid approach using unstructured data from online reviews. *Asia-Pacific Journal of Business Administration*, 12(3/4), 237–250. doi:10.1108/APJBA-09-2019-0192
- Horscroft, V. (2010). *An Eye on East Asia and Pacific – The Role of Information and Communications Technology in Mitigating the Challenges on Economic Geography in the Pacific Islands*. World Bank. http://www.siteresources.worldbank.org/INTEASTASIA/PACIFIC/Resources/226262-1291126731435/EOEA_Virginia_Horscroft_Nov2010.pdf
- Hossain, M. S., Zhou, X., & Rahman, M. F. (2018). Examining the impact of QR codes on purchase intention and customer satisfaction on the basis of perceived flow. *International Journal of Engineering Business Management*, 10, 1–11. doi:10.1177/1847979018812323
- Hossain, M. S., Zhou, X., & Rahman, M. F. (2019). Customer satisfaction under heterogeneous services of different self-service technologies. *Management & Marketing. Challenges for the Knowledge Society*, 14(1), 90–107. doi:10.2478/mmcks-2019-0007
- Hossain, M., Kim, M., & Jahan, N. (2019). Can “Liking” Behavior Lead to Usage Intention on Facebook? Uses and Gratification Theory Perspective. *Sustainability*, 11(4), 1166. doi:10.3390/u11041166
- Hosseini, Z., Gharghani, Z. G., Mansoori, A., Aghamolaei, T., & Nasrabadi, M. M. (2015). Application of the theory of reasoned action to promoting breakfast consumption. *Medical Journal of the Islamic Republic of Iran*, 29, 289. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4764274/> PMID:26913252
- Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve? *International Journal of Human-Computer Interaction*, 32(1), 51–62. doi:10.1080/010447318.2015.1087664
- Howard, P. N., & Hussain, M. M. (2011). The upheavals in Egypt and Tunisia: The role of digital media. *Journal of Democracy*, 22(3), 35–48. doi:10.1353/jod.2011.0041
- Hsieh, Y. C., Roan, J., Pant, A., Hsieh, J. K., Chen, W. Y., Lee, M., & Chiu, H. C. (2012). All for one but does one strategy work for all? Building consumer loyalty in multi-channel distribution. *Managing Service Quality*, 22(3), 310–335. doi:10.1108/09604521211231003
- Hsu, C. L., Chang, K. C., & Chen, M. C. (2012). The impact of website quality on customer satisfaction and purchase intention: Perceived playfulness and perceived flow as mediators. *Information Systems and e-Business Management*, 10(4), 549–570. doi:10.1007/10257-011-0181-5
- Huang, C., & Kao, Y. (2015). UTAUT2 Based Predictions of Factors Influencing the Technology Acceptance of Phablets by DNP. *Mathematical Problems in Engineering*, 2015, 1–23. doi:10.1155/2015/571594
- Huang, H. C., Huang, L. S., Chou, Y. J., & Teng, C. I. (2017). Influence of temperament and character on online gamer loyalty: Perspectives from personality and flow theories. *Computers in Human Behavior*, 70, 398–406. doi:10.1016/j.chb.2017.01.009

- Huang, J., Baptista, J., & Galliers, R. D. (2013). Reconceptualizing rhetorical practices in organizations: The impact of social media on internal communications. *Information & Management*, 50(2), 112–124. doi:10.1016/j.im.2012.11.003
- Huang, J., Zhou, J., Liao, G., Mo, F., & Wang, H. (2017). Investigation of Chinese students' O2O shopping through multiple devices. *Computers in Human Behavior*, 75, 58–69. doi:10.1016/j.chb.2017.04.050
- Huang, Y., Huo, S., Yao, Y. C., Hanif, N., Wang, Y., Grygiel, J., & Sawyer, S. (2016). Municipal police departments on Facebook: What are they posting and are people engaging? *Proceedings of the 17th Annual International Conference on Digital Government Research*. 10.1145/2912160.2912189
- Huaroto, C. (2012). Use of the Internet and productivity of microbusinesses: Evidence from the Peruvian case (2007–2010). *Information Technologies and International Development*, 8(4), 113–128.
- Huber, G. P., & Power, D. J. (1985). Retrospective reports of strategic-level managers: Guidelines for increasing their accuracy. *Strategic Management Journal*, 6(2), 171–180. doi:10.1002/mj.4250060206
- Hudock, S. L. (2015). Can research “send me high?” Addressing flow theory. *RSR. Reference Services Review*, 43(4), 689–705. doi:10.1108/RSR-04-2015-0025
- Huggins, R., Johnston, A., & Thompson, P. (2012). Network capital, social capital and knowledge flow: How the nature of inter-organizational networks impacts on innovation. *Industry and Innovation*, 19(3), 203–232. doi:10.1080/13662716.2012.669615
- Hummel, E., Slowinski, G., Matthews, S., & Gilmont, E. (2010). Business models for collaborative research. *Research Technology Management*, 53(6), 51–54.
- Hur, K., Kim, T. T., Karatepe, O. M., & Lee, G. (2017). An exploration of the factors influencing social media continuance usage and information sharing intentions among Korean travellers. *Tourism Management*, 63, 170–178. doi:10.1016/j.tourman.2017.06.013
- Hwang, Y., Gretzel, U., Xiang, Z., & Fesenmaier, D. R. (2006). Information search for travel decisions. *Destination Recommendation Systems: Behavioral Foundations and Applications*, 42(4), 357–371.
- Hwang, G., Lee, J., Park, J., & Chang, T.-W. (2017). Developing performance measurement system for Internet of Things and smart factory environment. *International Journal of Production Research*, 55(9), 2590–2602. doi:10.1080/00207543.2016.1245883
- Hwang, S., Kim, B., & Lee, K. (2019). A data-driven design framework for customer service chatbot. *International Conference on Human-Computer Interaction*, 222–236. 10.1007/978-3-030-23570-3_17
- Hysenlika, V. (2012). *Communicating During an Organizational Crisis: Using Facebook as a Relationship Management Tool*. South Florida.
- IGD. (2018). *Leading global online grocery markets to create a \$227bn growth opportunity by 2023*. Retrieved from <https://www.igd.com/articles/article-viewer/t/leading-global-online-grocery-markets-to-create-a-227bn-growth-opportunity-by-2023/i/20396>
- Ilgen, D. R., Hollenbeck, J. R., Johnson, M., & Jundt, D. (2005). Teams in organizations: From input-process-output models to IMOI models. *Annual Review of Psychology*, 56(1), 517–543. doi:10.1146/annurev.psych.56.091103.070250 PMID:15709945
- İncekara, A., & Eğri, C. Ö. (2018). Lebanon. In *Handbook of Research on Sociopolitical Factors Impacting Economic Growth in Islamic Nations* (pp. 161–181). IGI Global.

Compilation of References

Incept. (2020). *e-words "Net Super"*. Retrieved from <http://e-words.jp/>

Ingene, C. A. (1984). Productivity and functional shifting in spatial retailing-private and social perspectives. *Journal of Retailing*, 60(1), 15–36.

Intelligence, I. (2017). *Sverige Betalar 2017* [Sweden pays 2017]. Insight Intelligence AB. <https://internetstiftelsen.se/docs/sverige-betalar-2017.pdf>

International Monetary Fund (IMF). (2019). *Lebanon. 2019 Article Iv Consultation—Press Release; Staff Report; Informational Annex; And Statement by The Executive Director For Lebanon*. IMF.

Investment Development Authority of Lebanon (IDAL). (2019). *Tourism Sector in Lebanon 2019 Factbook*. IDAL.

Ion, P., & Andreea, Z. (2008). Use of ICT in SMEs management within the sector of services. *Annals of the University of Oradea. Economic Science Series*, 17(4), 481–487.

Irish, J., & Pennetier, M. (2018). Lebanon Wins Pledges Exceeding \$11 Billion in Paris. *Reuters*. <https://www.reuters.com/article/us-lebanon-economy-france/lebanon-wins-pledges-exceeding-11-billion-in-paris-idUSKCN1HD0UU>

Irvine, W., & Anderson, A. R. (2008). ICT (information communication technology), peripherality and smaller hospitality businesses in Scotland. *International Journal of Entrepreneurial Behaviour & Research*, 14(4), 200–218. doi:10.1108/13552550810887381

Itzhakov, G., & Latham, G. (2018). The Moderating Effect of Performance Feedback and the Mediating Effect of Self-Set Goals on the Primed Goal-Performance Relationship. *Applied Psychology*.

Ivanov, S. H., & Webster, C. (2013). Globalisation as a driver of destination competitiveness. *Annals of Tourism Research*, 43, 628–633. doi:10.1016/j.annals.2013.07.010

Ivanov, S., & Webster, C. (2007). Measuring the impact of tourism on economic growth. *Tourism Economics*, 13(3), 379–388. doi:10.5367/000000007781497773

Izogo, E. E., & Ogba, I.-E. (2015). Service quality, customer satisfaction and loyalty in automobile repair services sector. *International Journal of Quality & Reliability Management*, 32(3), 250–269. doi:10.1108/IJQRM-05-2013-0075

Jaiyeoba, H. B., Abdullah, M. A., & Ibrahim, K. (2019). Institutional investors vs retail investors: Are psychological biases equally applicable to investor divides in Malaysia? *International Journal of Bank Marketing*, 38(3), 671–691. doi:10.1108/IJBM-07-2019-0242

Jamal, A., & Anastasiadou, K. (2009). Investigating the Effects of Service Quality Dimensions and Expertise on Loyalty. *European Journal of Marketing*, 43(3/4), 398–420. doi:10.1108/03090560910935497

Jani, D., & Han, H. (2013). Personality, social comparison, consumption emotions, satisfaction, and behavioral intentions: How do these and other factors relate in a hotel setting? *International Journal of Contemporary Hospitality Management*, 25(7), 970–993. doi:10.1108/IJCHM-10-2012-0183

Jan, M., Haque, A., Abdullah, K., Anis, Z., & Faisal-E-Alam, F.-E.-A. (2019). Elements of advertisement and their impact on buying behaviour: A study of skincare products in Malaysia. *Management Science Letters*, 9(10), 1519–1528. doi:10.5267/j.msl.2019.5.033

Jansen, B. J., Zhang, M., Sobel, K., & Chowdury, A. (2009). Twitter power: Tweets as electronic word of mouth. *Journal of the American Society for Information Science and Technology*, 60(11), 2169–2188. doi:10.1002/asi.21149

Japan Delivery System. (2020). *What is delivery box?* <https://www.j-d-sys.com/aboutbox/>

- Jeong, M., & Oh, H. (2017). Business-to-business social exchange relationship beyond trust and commitment. *International Journal of Hospitality Management*, 65, 115–124. doi:10.1016/j.ijhm.2017.06.004
- Jeon, M. M., & Jeong, M. (2017). Customers' perceived website service quality and its effects on e-loyalty. *International Journal of Contemporary Hospitality Management*, 29(1), 438–457. doi:10.1108/IJCHM-02-2015-0054
- Jha, R., Shah, D. K., Basnet, S., Paudel, K.R., Sah, P., Sah, A., & Adhikari, K. (2016). *Facebook use and its effect on the life of health science students in a private medical of Nepal*. Academic Press.
- Jiang, G., Ma, F., Shang, J., & Chau, P. Y. (2014). Evolution of knowledge sharing behavior in social commerce: An agent-based computational approach. *Information Sciences*, 278, 250–266. doi:10.1016/j.ins.2014.03.051
- Jiang, H., Luo, Y., & Kulemeka, O. (2016). Social media engagement as an evaluation barometer: Insights from communication executives. *Public Relations Review*, 42(4), 679–691. doi:10.1016/j.pubrev.2015.12.004
- Jiang, X. D. (2015). What is the most helpful product review? The effect of online reviews' quantitative and textual features on its helpfulness. *Foreign Economics and Management*, 37(4), 41–55.
- Jiang, Y., Liu, Y., Wang, H., Shang, J., & Ding, S. (2018). Online pricing with bundling and coupon discounts. *International Journal of Production Research*, 56(5), 1773–1788. doi:10.1080/00207543.2015.1112443
- Jiang, Y., Shang, J., & Liu, Y. (2013). Optimizing shipping-fee schedules to maximize e-tailer profits. *International Journal of Production Economics*, 146(2), 634–645. doi:10.1016/j.ijpe.2013.08.012
- Jie, Y. U., Subramanian, N., Ning, K., & Edwards, D. (2015). Product delivery service provider selection and customer satisfaction in the era of internet of things: A Chinese e-retailers' perspective. *International Journal of Production Economics*, 159, 104–116. doi:10.1016/j.ijpe.2014.09.031
- Jiménez, J. R. Z., & Díaz, I. A. (2019). Educational level and Internet banking. *Journal of Behavioral and Experimental Finance*, 22, 31–40. doi:10.1016/j.jbef.2019.01.004
- Jiménez-Parra, B., Rubio, S., & Vicente-Molina, M. A. (2014). Key drivers in the behaviour of potential consumers of remanufactured products: A study on laptops in Spain. *Journal of Cleaner Production*, 85, 488–496. doi:10.1016/j.jclepro.2014.05.047
- Johar, S. (2015). To Study The Consumer decision making behavior to purchase of durable goods. *International Journal of Applied and Pure Science and Agriculture*, 1(12), 85–92.
- Johnson, D., & Grayson, K. (2005). Cognitive and affective trust in service relationships. *Journal of Business Research*, 58(4), 500–507. doi:10.1016/S0148-2963(03)00140-1
- Johnson, V. L., Kiser, A., Washington, R., & Torres, R. (2018). Limitations to the rapid adoption of M-payment services: Understanding the impact of privacy risk on M-Payment services. *Computers in Human Behavior*, 79, 111–122. doi:10.1016/j.chb.2017.10.035
- Joseph, M., & Stone, G. (2003). An Empirical Evaluation of US Bank Customer Perceptions of The Impact of Technology on Service Delivery in The Banking Sector. *International Journal of Retail & Distribution Management*, 31(4), 190–202. doi:10.1108/09590550310469185
- Jovevski, D., Tijan, E., & Karanikić, P. (2010). Internet marketing strategies and ICT as a common ground for business development. In *The 33rd International Convention MIPRO* (pp. 1120–1125). IEEE.
- Jung, D., Dorner, V., Weinhardt, C., & Puzmaz, H. (2018). Designing a robo-advisor for risk-averse, low-budget consumers. *Electronic Markets*, 28(3), 367–380. doi:10.1007/12525-017-0279-9

Compilation of References

- Jung, D., Glaser, F., & Köpplin, W. (2019). Robo-advisory: Opportunities and risks for the future of financial advisory. In V. Nissen (Ed.), *Advances in consulting research* (pp. 405–427). Springer. doi:10.1007/978-3-319-95999-3_20
- Kadir, H. A., Rahmani, N., & Masinaei, R. (2011). Impacts of Service Quality on Customer Satisfaction: Study of Online Banking and ATM Services in Malaysia. *International Journal of Trade, Economics and Finance*, 2(1), 1.
- Kamble, S. S., Gunasekaran, A., Parekh, H., & Joshi, S. (2019). Modeling the internet of things adoption barriers in food retail supply chains. *Journal of Retailing and Consumer Services*, 48(May), 154–168. doi:10.1016/j.jretconser.2019.02.020
- Kamis, A., Stern, T., & Ladik, D. M. (2010). A flow-based model of web site intentions when users customize products in business-to-consumer electronic commerce. *Information Systems Frontiers*, 12(2), 157–168. doi:10.1007/10796-008-9135-y
- Kane, G. C., Alavi, M., Labianca, G., & Borgatti, S. P. (2014). What's different about social media networks? A framework and research agenda. *Management Information Systems Quarterly*, 38(1), 275–304. doi:10.25300/MISQ/2014/38.1.13
- Kanj, O., & El Khoury, R. (2013). Determinants of non-resident deposits in commercial banks: Empirical evidence from Lebanon. *International Journal of Economics and Finance*, 5(12), 135–150. doi:10.5539/ijef.v5n12p135
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons*, 53(1), 59–68. doi:10.1016/j.bushor.2009.09.003
- Kapoor, A., & Vij, M. (2018). Technology at the dinner table: Ordering food online through mobile apps. *Journal of Retailing and Consumer Services*, 43, 342–351. doi:10.1016/j.jretconser.2018.04.001
- Kapoor, K. K., Tamilmani, K., Rana, N. P., Dwivedi, Y. K., Nerur, S., & Patil, P. (2017). Advances in Social Media Research: Past, Present and Future. *Information Systems Frontiers*, 1–28.
- Karatepe, O. M., Yavas, U., & Babakus, E. (2005). Measuring Service Quality of Banks: Scale Development and Validation. *Journal of Retailing and Consumer Services*, 12(5), 373–383. doi:10.1016/j.jretconser.2005.01.001
- Kashef, M. A., Ginige, A., & Hol, A. (2018). Framework for enhancing online working-together relations. *Journal of Information, Communication and Ethics in Society*, 16(4), 357–380. doi:10.1108/JICES-04-2018-0043
- Kashif, M., Altaf, U., Ayub, H. M., Asif, U., & Walsh, J. C. (2014). Customer satisfaction at public hospitals in Pakistan: PAKSERV application. *Global Business Review*, 15(4), 677–693. doi:10.1177/0972150914543556
- Kasiri, L. A., Cheng, K. T. G., Sambasivan, M., & Sidin, S. M. (2017). Integration of standardization and customization: Impact on service quality, customer satisfaction, and loyalty. *Journal of Retailing and Consumer Services*, 35, 91–97. doi:10.1016/j.jretconser.2016.11.007
- Katz, E. (1974). Utilization of mass communication by the individual. *The Uses of Mass Communications: Current Perspectives on Gratifications Research*, 19–32.
- Katz, R. L. (2009). The economic and social impact of telecommunications output. *Inter Economics*, 44(1), 41–48. doi:10.1007/10272-009-0276-0
- Kaura, V., & Datta, S. K. (2012). Role of customers and employees in service delivery and customer satisfaction: Survey evidence from banks in Rajasthan. *IUP Journal of Bank Management*, 11(4), 121–126.
- Kaur, P. (2016). Underpinnings of User Participation in Service Provider–Hosted Online Communities. *Service Science*, 8(3), 249–262. doi:10.1287erv.2016.0136
- Kaur, P., Dhir, A., Chen, S., Malibari, A., & Almotairi, M. (2020). Why do people purchase virtual goods? A uses and gratification (U&G) theory perspective. *Telematics and Informatics*, 101376, 101376. Advance online publication. doi:10.1016/j.tele.2020.101376

- Kawabe, N. (2011). The historical development of internet supermarkets in Japan: Integration of virtual and real businesses [nettosupanoseiseitohatten-bacharu bijinesutoriaru ijinesunotogo]. *The Waseda Commercial Review*, 429, 23–78.
- Keith, T. Z. (2014). *Multiple regression and beyond: An introduction to multiple regression and structural equation modeling*. Routledge. doi:10.4324/9781315749099
- Kejriwal, S., & Mahajan, S. (2017). Blockchain in commercial real estate: The future is here! *Deloitte Center for Financial Services*. Available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-dcfs-blockchain-in-cre-the-future-is-here.pdf>
- Khalilzadeh, J., Ozturk, A., & Bilgihan, A. (2017). Security-related factors in extended UTAUT model for NFC based mobile payment in the restaurant industry. *Computers in Human Behavior*, 70, 460–474. doi:10.1016/j.chb.2017.01.001
- Khan, I. (2012). Impact of customer satisfaction and retention on customer loyalty. *International Journal of Scientific and Technology Research*, 1(2), 106–110.
- Khaniwale, M. (2015). Consumer buying behaviour. *International Journal of Innovation and Scientific Research*, 14(2), 278–286.
- Khattak, N. A. (2010). Customer satisfaction and awareness of Islamic banking system in Pakistan. *African Journal of Business Management*, 4(5), 662–671.
- Khraiche, D. (2020). Lebanon to Default on \$1.2 Billion Payment, Seek Restructuring. *Bloomberg*. <https://www.bloomberg.com/news/articles/2020-03-07/lebanon-won-t-repay-maturing-eurobonds-with-economy-in-turmoil>
- Khristianto, W., Kertahadi, I., & Suyadi, I. (2012). The influence of information, system and service on customer satisfaction and loyalty in online shopping. *International Journal of Academic Research*, 4(2), 28–32.
- Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social Media? Get Serious! Understanding the functional building blocks of social media. *Business Horizons*, 54(3), 241–251. doi:10.1016/j.bushor.2011.01.005
- Kilduff, M. (2007). *Editor's comments: The top ten reasons why your paper might not be sent out for review*. Academic Press.
- Kim, J. (2012). *Developing an Empirical Model of College Students' Online Shopping*. Academic Press.
- Kim, K., Oglesby-Neal, A., & Mohr, E. (2017). *2016 Law Enforcement Use of Social Media Survey*. Academic Press.
- Kim, C., Galliers, R. D., Shin, N., Ryoo, J.-H., & Kim, J. (2012). Factors influencing Internet shopping value and customer repurchase intention. *Electronic Commerce Research and Applications*, 11(4), 374–387. doi:10.1016/j.elerap.2012.04.002
- Kim, J., Suh, E., & Hwang, H. (2003). A model for evaluating the effectiveness of CRM using the balanced scorecard. *Journal of Interactive Marketing*, 17(2), 5–19. doi:10.1002/dir.10051
- Kim, M. J., & Hall, C. M. (2019). A hedonic motivation model in virtual reality tourism: Comparing visitors and non-visitors. *International Journal of Information Management*, 46, 236–249. doi:10.1016/j.ijinfomgt.2018.11.016
- Kim, N., & Kim, W. (2018). Do your social media lead you to make social deal purchases? Consumer-generated social referrals for sales via social commerce. *International Journal of Information Management*, 39, 38–48. doi:10.1016/j.ijinfomgt.2017.10.006
- Kim, S., Baek, T. H., & Yoon, S. (2020). The effect of 360-degree rotatable product images on purchase intention. *Journal of Retailing and Consumer Services*, 55, 102062. doi:10.1016/j.jretconser.2020.102062

Compilation of References

- Kim, S., Malhotra, N., & Narasimhan, S. (2005). Research Note—Two Competing Perspectives on Automatic Use: A Theoretical and Empirical Comparison. *Information Systems Research*, 16(4), 418–432. doi:10.1287/isre.1050.0070
- Kim, Y., & Peterson, R. A. (2017). A Meta-analysis of Online Trust Relationships in E-commerce. *Journal of Interactive Marketing*, 38, 44–54. doi:10.1016/j.intmar.2017.01.001
- King, D. L. (2015). Why use social media? *Library Technology Reports*, 51(1), 6–9.
- Kirakosyan, K. (2014). Social Media Usage in Banking Industry and its Managerial View: Case Study for Mexican Banking System. *Journal of Economic and Social Development*, 2(1), 34–43.
- Kiviat, T. I. (2015). Beyond Bitcoin: Issues in regulating blockchain transactions. *Duke Law Journal*, 65, 569–608.
- Kleine, D. (2015). ICT4D. In R. Mansell & P. Hwa Ang (Eds.), *The international encyclopedia of digital communication and society* (pp. 315–323). Wiley-Blackwell. doi:10.1002/9781118767771.wbiedcs161
- Klemp, T., & Nilssen, V. (2017). Positionings in an immature triad in teacher education. *European Journal of Teacher Education*, 40(2), 257–270. doi:10.1080/02619768.2017.1282456
- Knecht, E. (2019). As Lebanese Banks Tighten Control, Depositor Concern Grows. *Reuters*. <https://www.reuters.com/article/us-lebanon-protests-banks/as-lebanese-banks-tighten-controls-depositor-concern-grows-idUSKBN1Y027S>
- Kő, A., Vas, R., Kovács, T., & Szabó, I. (2019). Knowledge Creation from the Perspective of the Supply Chain. The Role of ICT. *Society and Economy*, 41(3), 311–329. doi:10.1556/204.2019.009
- Koen, P. A., Bertels, H. M., & Elsum, I. R. (2011). The three faces of business model innovation: Challenges for established firms. *Research Technology Management*, 54(3), 52–59. doi:10.5437/08953608X5403009
- Koestler, A. (1964). *The act of creation*. Academic Press.
- Koksal, M. H. (2016). The Intentions of Lebanese Consumers to Adopt Mobile Banking. *International Journal of Bank Marketing*, 34(3), 327–346. doi:10.1108/IJBM-03-2015-0025
- Koo, Ch., Wati, Y., & Jung, J. J. (2011). Examination of how social aspects moderate the relationship between task characteristics and usage of social communication technologies (SCTs) in organizations. *International Journal of Information Management*, 31(5), 445–459. doi:10.1016/j.ijinfomgt.2011.01.003
- Korsakienė, R., & Diskienė, D. (2015). *Personality traits of managers and success of firms: a case of Lithuanian SMEs*. Academic Press.
- Kotler, P., & Armstrong, G. (2005). *Principles of Marketing* (11th ed.). Prentice Hall.
- Kotler, P., & Armstrong, G. (2012). *Principle of Marketing* (14th ed.). Pearson Education Inc.
- Kraemer, K. L., Gibbs, J. L., & Dedrick, J. (2005). Impacts of Globalization on ECommerce Use and Firm Performance: A Cross-Country Investigation. *The Information Society*, 21(5), 323–340. doi:10.1080/01972240500253350
- Krakovsky, M. (2015). The middleman economy: How brokers, agents, dealers, and everyday matchmakers create value and profit. Palgrave MacMillan US. doi:10.1007/978-1-137-53020-2
- Kranias, A., & Bourlessa, M. (2013). Investigating the Relationship Between Service Quality and Loyalty in Greek Banking Sector. *Procedia Economics and Finance*, 5, 453–458. doi:10.1016/S2212-5671(13)00053-1
- Kshetri, N. (2018). Blockchain's role in meeting key supply chain management objectives. *International Journal of Information Management*, 39, 80–89. doi:10.1016/j.ijinfomgt.2017.12.005

- Ku-Mahamud, K. R., Omar, M., Bakar, N. A. A., & Muraina, I. D. (n.d.). *Awareness, Trust, and Adoption of Blockchain Technology and Cryptocurrency among Blockchain Communities in Malaysia*. Academic Press.
- Kumar, V., Kumar, U., & Persaud, A. (1999). Building Technological Capability through Importing Technology: The Case of Indonesian Manufacturing Industry. *Journal of Technology Transfer*, 24, 81-96.
- Kumar, N., & Kumar, R. R. (2020). Relationship between ICT and international tourism demand: A study of major tourist destinations. *Tourism Economics*, 26(6), 908–925. doi:10.1177/1354816619858004
- Kumar, N., Stern, L. W., & Anderson, J. C. (1993). Conducting interorganizational research using key informants. *Academy of Management Journal*, 36(6), 1633–1651.
- Kumar, R. R., Stauvermann, P. J., Patel, A., Kumar, N., & Prasad, S. (2016b). Exploring the nexus between tourism and output in Cook Islands: An ARDL bounds approach. *Social Indicators Research*, 128(3), 1085–1101. doi:10.1007/1205-015-1070-y
- Kumar, R. R., Stauvermann, P. J., & Samitas, A. (2016a). The effects of ICT on output per worker: A study of the Chinese economy. *Telecommunications Policy*, 40(2-3), 102–115. doi:10.1016/j.telpol.2015.06.004
- Kumar, V., & Mehrotra, S. (2018). Print vs. online advertising: Impact on buying behavior of youth. *Global Media Journal*, 16(31), 1–3.
- Kumar, V., & Taunk, A. (2018). Factors influencing buying behaviour of the consumers: A study of four wheeler passenger tourist cab state of Uttarakhand. *International Journal of Research in Humanities and Social Studies*, 5(4), 36–40.
- Kumbhar Vijay, M. (2011). Customer Satisfaction in ATM Service: An Empirical Evidences from Public and Private Sector Banks in India. *Management Research Practice*, 3(2), 24-35.
- Kunal Ahuja, S. (2020). *Essential Oils Market size to exceed \$15bn by 2026*. Global Market Insights, Inc. Retrieved 1 February 2020, from <https://www.gminsights.com/pressrelease/essential-oil-market>
- Kurila, J., Lazuras, L., & Ketikidis, P. H. (2016). Message framing and acceptance of branchless banking technology. *Electronic Commerce Research and Applications*, 17, 12–18. doi:10.1016/j.elerap.2016.02.001
- Ku, T. H., & Lin, T. L. (2018). Effects of luxury brand perceptions on brand attachment and purchase intention: A comparative analysis among consumers in China, Hong Kong and Taiwan. *South African Journal of Business Management*, 49(1), 1–9. doi:10.4102/ajbm.v49i1.6
- Kutner, M. H., Nachtsheim, C. J., & Neter, J. (2004). *Applied Linear Regression Models* (4th ed.). McGraw-Hill Irwin.
- Kwon, Y.-C. (2008). Antecedents and consequences of international joint venture partnerships: A social exchange perspective. *International Business Review*, 17(5), 559–573. doi:10.1016/j.ibusrev.2008.07.002
- Lakshmi, S. (2016). Consumer buying behaviour towards online shopping. *International Journal of Research – Granthaalayah, A Knowledge Repository*, 4(8), 60-65.
- Larivière, B., & Van den Poel, D. (2004). Investigating the role of product features in preventing customer churn, by using survival analysis and choice modeling: The case of financial services. *Expert Systems with Applications*, 27(2), 277–285. doi:10.1016/j.eswa.2004.02.002
- Larsson, S., Svensson, L., & Carlsson, H. (2016). Digital consumption and over-indebtedness among young adults in Sweden (LUii reports, Vol. 3). Lund University Internet Institute.

Compilation of References

- Larsson, A., & Viitaoja, Y. (2017). Building customer loyalty in digital banking: A study of bank staff's perspectives on the challenges of digital CRM and loyalty. *International Journal of Bank Marketing*, 35(6), 858–877. doi:10.1108/IJBM-08-2016-0112
- Laukkanen, T., & Cruz, P. (2012). Cultural, individual and device-specific antecedents on mobile banking adoption: A cross-national study. In *45th Hawaii international conference on system sciences* (pp. 3170–3179). IEEE. 10.1109/HICSS.2012.189
- Laukkanen, T. (2016). Consumer adoption versus rejection decisions in seemingly similar service innovations: The case of the Internet and mobile banking. *Journal of Business Research*, 69(7), 2432–2439. doi:10.1016/j.jbusres.2016.01.013
- Laukkanen, T., & And Kiviniemi, V. (2010). The Role of Information in Mobile Banking Resistance. *International Journal of Bank Marketing*, 28(5), 372–388. doi:10.1108/02652321011064890
- Laukkanen, T., & Pasanen, M. (2008). Mobile banking innovators and early adopters: How they differ from other online users. *Journal of Financial Services Marketing*, 13(2), 86–94. doi:10.1057/palgrave.fsm.4760077
- Laukkanen, T., Sinkkonen, S., Laukkanen, P., & Kivijarvi, M. (2008). Segmenting bank customers by resistance to mobile banking. *International Journal of Mobile Communications*, 6(3), 309–320. doi:10.1504/IJMC.2008.017513
- Law, R., & Cheung, C. (2006). A study of the perceived importance of the overall website quality of different classes of hotels. *International Journal of Hospitality Management*, 25(3), 525–553. doi:10.1016/j.ijhm.2005.03.001
- Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly*, 12(1), 1–47. doi:10.2307/2391211
- Lee, D., Oh, K.-J., & Choi, H.-J. (2017). The chatbot feels you-a counseling service using emotional response generation. *2017 IEEE International Conference on Big Data and Smart Computing (BigComp)*, 437–440.
- Lee, G., & Lin, H. (2005). Customer perceptions of e-service quality in online shopping. *International Journal of Retail & Distribution Management*, 33(2), 161–176. doi:10.1108/09590550510581485
- Lee, H. S. (2013). Major moderators influencing the relationships of service quality, customer satisfaction and customer loyalty. *Asian Social Science*, 9(2), 1–11. doi:10.5539/ass.v9n2p1
- Lee, I., & Shin, Y. J. (2018). Fintech: Ecosystem, business models, investment decisions, and challenges. *Business Horizons*, 61(1), 35–46. doi:10.1016/j.bushor.2017.09.003
- Lee, J. K., & Lee, W.-N. (2009). Country-of-origin effects on consumer product evaluation and purchase intention: The role of objective versus subjective knowledge. *Journal of International Consumer Marketing*, 21(2), 137–151. doi:10.1080/08961530802153722
- Lee, J., Agrawal, M., & Rao, H. R. (2015). Message diffusion through social network service: The case of rumor and non-rumor related tweets during Boston bombing 2013. *Information Systems Frontiers*, 17(5), 997–1005. doi:10.1007/10796-015-9568-z
- Lee, K. (2010). The green purchase behavior of Hong Kong young consumers: The role of peer influence, local environmental involvement, and concrete environmental knowledge. *Journal of International Consumer Marketing*, 23(1), 21–44. doi:10.1080/08961530.2011.524575
- Lee, M.-C. (2010). Explaining and predicting users' continuance intention toward e-learning: An extension of the expectation-confirmation model. *Computers & Education*, 54(2), 506–516. doi:10.1016/j.compedu.2009.09.002

- Lee, S.-Y., Hansen, S. S., & Lee, J. K. (2016). What makes us click “like” on Facebook? Examining psychological, technological, and motivational factors on virtual endorsement. *Computer Communications*, 73, 332–341. doi:10.1016/j.comcom.2015.08.002
- Leong, L., Ooi, K., Chong, A., & Lin, B. (2013). Modeling the stimulators of the behavioral intention to use mobile entertainment: Does gender really matter? *Computers in Human Behavior*, 29(5), 2109–2121. doi:10.1016/j.chb.2013.04.004
- Leon, S. (2018). Service mobile apps: A millennial generation perspective. *Industrial Management & Data Systems*, 118(9), 1837–1860. doi:10.1108/IMDS-10-2017-0479
- LePine, J. A., & King, A. W. (2010). Editors’ comments: Developing novel theoretical insight from reviews of existing theory and research. *Academy of Management Journal*.
- Letchumanan, G., & Sam, C. Y. (2016). A study on the influence of brand name on purchase of automobiles in Malaysia. *Global Business and Management Research*, 8(3), 15–29.
- Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2019). Social Media in Tourism and Hospitality: A Literature Review. *Journal of Travel & Tourism Marketing*, 30(1-2), 3–22. doi:10.1080/10548408.2013.750919
- Lev-On, A., & Steinfeld, N. (2015). Local engagement online: Municipal Facebook pages as hubs of interaction. *Government Information Quarterly*, 32(3), 299–307. doi:10.1016/j.giq.2015.05.007
- Lewicka, D., & Krot, K. (2015). The model of HRM-trust-commitment relationships. *Industrial Management & Data Systems*, 115(8), 1457–1480. doi:10.1108/IMDS-12-2014-0388
- Lewis, B., & Soureli, M. (2006). The Antecedents of Consumer Loyalty in Retail Banking. *Journal of Consumer Behaviour*, 5(1), 15–31. doi:10.1002/cb.46
- Lewis, P., Saunders, M., & Thornhill, A. (2016). *Research Method for Business Students* (7th ed.). Pearson Education Limited.
- Li, X. (2016). *Compositional advantage and strategy: understanding how resource-poor firms survive and thrive*. Academic Press.
- Liébana-Cabanillas, F., Alonso-Dos-Santos, M., Soto-Fuentes, Y., & Valderrama-Palma, V. A. (2017). Unobserved heterogeneity and the importance of customer loyalty in mobile banking. *Technology Analysis and Strategic Management*, 29(9), 1015–1032. doi:10.1080/09537325.2016.1262021
- Lien, C. H., & Cao, Y. (2014). Examining WeChat users’ motivations, trust, attitudes, and positive word-of-mouth: Evidence from China. *Computers in Human Behavior*, 41, 104–111. doi:10.1016/j.chb.2014.08.013
- Li, H., Liu, Y., Xu, X., Heikkilä, J., & Van Der Heijden, H. (2015). Modeling hedonic is continuance through the uses and gratifications theory: An empirical study in online games. *Computers in Human Behavior*, 48, 261–272. doi:10.1016/j.chb.2015.01.053
- Li, L., Peng, M., Jiang, N., & Law, R. (2017). An empirical study on the influence of economy hotel website quality on online booking intentions. *International Journal of Hospitality Management*, 63, 1–10. doi:10.1016/j.ijhm.2017.01.001
- Limayem, H., Hirt, & Cheung. (2007). How Habit Limits the Predictive Power of Intention: The Case of Information Systems Continuance. *Management Information Systems Quarterly*, 31(4), 705. doi:10.2307/25148817
- Lim, L. S. (2017). An empirical study on the impact of patient perceived value on patient satisfaction in private hospitals in Klang Valley, Malaysia. *South East Asia Journal of Contemporary Business. Economics and Law.*, 13(2), 71–77.

Compilation of References

- Lim, S. H., Kim, D. J., Hur, Y., & Park, K. (2019). An empirical study of the impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services. *International Journal of Human-Computer Interaction*, 35(10), 886–898. doi:10.1080/10447318.2018.1507132
- Lin, C. A., & Kim, T. (2016). Predicting user response to sponsored advertising on social media via the technology acceptance model. *Computers in Human Behavior*, 64, 710–718. doi:10.1016/j.chb.2016.07.027
- Lindsey, L. L. (2017). The influence of persuasive messages on healthy eating habits: A test of the Theory of Reasoned Action when attitudes and subjective norm are targeted for change. *Journal of Applied Biobehavioral Research*, 22(4), e12106. Advance online publication. doi:10.1111/jabr.12106
- Ling, K. C., Daud, D. B., Piew, T. H., Keoy, K. H., & Hassan, P. (2011). Perceived risk, perceived technology, online trust for the online purchase intention in Malaysia. *International Journal of Business and Management*, 6(6), 167–182.
- Lin, L., & Chen, C. (2006). The influence of the country-of-origin image, product knowledge and product involvement on consumer purchase decisions: An empirical study of insurance and catering services in Taiwan. *Journal of Consumer Marketing*, 23(5), 248–265. doi:10.1108/07363760610681655
- Linton, G. (2014). *Contingency theory in entrepreneurship research*. Academic Press.
- Liobikiene, G., Mandravickaite, J., & Bernatoniene, J. (2016). Theory of planned behavior approach to understand the green purchasing behavior in the EU: A cross-cultural study. *Ecol. Econ.*, 125, 38–46.
- Liu, I., Pan, H., & Zheng, S. (2019). Tourism Development, Environment and Policies: Differences between Domestic and International Tourists. Economics and Management School, 11.
- Liu, J., Cai, S., Chen, D., Wu, K., Liu, Y., Zhang, R., Chen, M., & Li, X. (2019). Behavioral and neural changes induced by a blended essential oil on human selective attention. *Behavioural Neurology*, 2019, 1–8. doi:10.1155/2019/5842132 PMID:31737125
- Liu, J., Li, X., & Wang, S. (2020). What have we learnt from 10 years of fintech research? A scientometric analysis. *Technological Forecasting and Social Change*, 155(March), 1–12. doi:10.1016/j.techfore.2020.120022
- Liu, K., Shiu, J., & Sun, C. (2013). How different are consumers in internet auction markets? Evidence from Japan and Taiwan. *Japan and the World Economy*, 28, 1–12. doi:10.1016/j.japwor.2013.06.001
- Liu, L., Cheung, C. M., & Lee, M. K. (2016). An empirical investigation of information sharing behavior on social commerce sites. *International Journal of Information Management*, 36(5), 686–699. doi:10.1016/j.ijinfomgt.2016.03.013
- Lockett, A., Thompson, S., & Morgenstern, U. (2009). The development of the resource-based view of the firm: A critical appraisal. *International Journal of Management Reviews*, 11(1), 9–28. doi:10.1111/j.1468-2370.2008.00252.x
- LOGI-BIZ. (2001). The failures of online grocery [nettosupano zasetu]. *LOGI-BIZ*, (August), 12–13.
- Loureiro, S. M. C., Almeida, M., & Rita, P. (2013). The effect of atmospheric cues and involvement on pleasure and relaxation: The spa hotel context. *International Journal of Hospitality Management*, 35, 35–43. doi:10.1016/j.ijhm.2013.04.011
- Lowisz, S. (2014). *The influence of Social Media on Today's Culture*. Stevelowisz.com/wp.../02/The-Influence-of-Social-media-in-Todays-Culture-wp.pdf
- Luarn, P., & Lin, H. (2003). A Customer Loyalty Model for E-Service Context. *Journal of Electronic Commerce Research*, 4(4), 156–167.

- Lu, C., Berchoux, C., Marek, M. W., & Chen, B. (2015). Service quality and customer satisfaction: Qualitative research implications for luxury hotels. *International Journal of Culture, Tourism and Hospitality Research*, 9(2), 168–182. doi:10.1108/IJCTHR-10-2014-0087
- Lu, J., Yang, J., & Yu, C. S. (2013). Is social capital effective for online learning? *Information & Management*, 50(7), 507–522. doi:10.1016/j.im.2013.07.009
- Lumpkin, G. T., & Dess, G. G. (2004). E-business strategies and internet business models: How the internet adds value. *Organizational Dynamics*, 33(2), 161–173. doi:10.1016/j.orgdyn.2004.01.004
- Lundberg, H. (2008). *Geographical proximity effects and regional strategic networks* (Doctoral dissertation). Uppsala University, Uppsala, Sweden.
- Lundberg, H., & Johanson, M. (2011). Network strategies for regional growth. In H. Lundberg & M. Johanson (Eds.), *Network strategies for regional growth* (pp. 1–21). Palgrave Macmillan.
- Lundberg, H., & Öberg, C. (2021). The matter of locality: Family firms in sparsely populated regions. *Entrepreneurship and Regional Development*.
- Lundberg, H., Öhman, P., & Sjödin, U. (2014). Transaction convenience in the payment stage: The retailers' perspective'. *Managing Service Quality*, 24(5), 434–454. doi:10.1108/MSQ-02-2014-0032
- Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science*, 38(6), 937–947. doi:10.1287/mksc.2019.1192
- Luo, Y., & Bu, J. (2018). Contextualizing international strategy by emerging market firms: A composition-based approach. *Journal of World Business*, 53(3), 337–355. doi:10.1016/j.jwb.2017.01.007
- Luo, Y., & Child, J. (2015). A composition-based view of firm growth. *Management and Organization Review*, 11(3), 379–411. doi:10.1017/mor.2015.29
- Macek, J. (2004). Koncept rané kyberkultury. In J. Volek & P. Binková (Eds.), *Média a realita* (pp. 35–65). FSS MU.
- Madhavan, M., & Chandrasekar, K. (2015). Consumer buying behavior- An overview of theory and models. *St. Theresa. Journal of the Humanities and Social Sciences*, 1(1), 74–112. <http://www.stic.ac.th/ojs/index.php/sjhs/article/view/6/50>
- Mahadevan, B. (2000). Business models for Internet-based e-commerce: An anatomy. *California Management Review*, 42(4), 55–69. doi:10.2307/41166053
- Mahmoud, A. B., Fuxman, L., Mohr, I., Reisel, W. D., & Grigoriou, N. (2020). “We aren’t your reincarnation!” workplace motivation across X, Y and Z generations. *International Journal of Manpower*. doi:10.1108/IJM-09-2019-0448
- Mahmoud, A. B., Grigoriou, N., Fuxman, L., Reisel, W. D., Hack-Polay, D., & Mohr, I. (2020). A generational study of employees’ customer orientation: A motivational viewpoint in pandemic time. *Journal of Strategic Marketing*, 1–18. Advance online publication. doi:10.1080/0965254X.2020.1844785
- Mahmoud, A. B., Reisel, W. D., Fuxman, L., & Mohr, I. (2020). A Motivational Standpoint of Job Insecurity Effects on Organisational Citizenship Behaviours: A Generational Study. *Scandinavian Journal of Psychology*, sjop.12689. Advance online publication. doi:10.1111/jop.12689 PMID:33156544
- Mahmoud, A. B., Reisel, W. D., Grigoriou, N., Fuxman, L., & Mohr, I. (2020). The reincarnation of work motivation: Millennials vs older generations. *International Sociology*, 35(4), 393–414. doi:10.1177/0268580920912970

Compilation of References

- Mahmoud, M. A., Hinson, R. E., & Adika, M. K. (2018, May 9). The Effect of Trust, Commitment, and Conflict Handling on Customer Retention: The Mediating Role of Customer Satisfaction. *Journal of Relationship Marketing*, 21(2), 1–20. doi:10.1080/15332667.2018.1440146
- Mainka, A., Hartmann, S., Stock, W. G., & Peters, I. (2015). Looking for friends and followers: A global investigation of governmental social media use. *Transforming Government: People, Process and Policy*, 9(2), 237–254.
- Ma, J. X., Buhalis, D., & Song, H. (2003). ICTs and Internet adoption in China's tourism industry. *International Journal of Information Management*, 23(6), 451–467. doi:10.1016/j.ijinfomgt.2003.09.002
- Malaysian Institute of Economic Research. (2020). *The economic impact of COVID-19*. <https://www.mier.org.my/the-economic-impacts-of-covid-19/>
- Mallapragada, G., Chandukala, S. R., & Liu, Q. (2016). Exploring the effects of “what” (product) and “where” (website) characteristics on online shopping behavior. *Journal of Marketing*, 80(2), 21–38. doi:10.1509/jm.15.0138
- Malthouse, E. C., Calder, J. C., Kim, S. J., & Vandenbosch, M. (2016). Evidence that user-generated content that produces engagement increases purchase behaviors. *Journal of Marketing Management*, 32(5–6), 427–444. doi:10.1080/0267257X.2016.1148066
- Manavalan, E., & Jayakrishna, K. (2019). A review of Internet of Things (IoT) embedded sustainable supply chain for industry 4.0 requirements. *Computers & Industrial Engineering*, 127, 925–953. doi:10.1016/j.cie.2018.11.030
- Mani, Z., & Chouk, I. (2018). Consumer resistance to innovation in services: Challenges and barriers in the Internet of things era. *Journal of Product Innovation Management*, 35(5), 780–807. doi:10.1111/jpim.12463
- Mann, C., Sue, L., Eckert, E., & Knight, S. C. (2000). *Global Electronic Commerce: A Policy Primer*. Institute for International Economics.
- Marakanon, L., & Panjakajornsak, V. (2017). Perceived quality, perceived risk and customer trust affecting customer loyalty of environmentally friendly electronics products. *Kasetsart Journal of Social Sciences*, 38(1), 24–30. doi:10.1016/j.kjss.2016.08.012
- Marbach, J., Lages, C. R., & Nunan, D. (2016). Who are you and what do you value? Investigating the role of personality traits and customer-perceived value in online customer engagement. *Journal of Marketing Management*, 32(5–6), 502–525. doi:10.1080/0267257X.2015.1128472
- Mariadoss, B. J., Milewicz, C., Lee, S., & Sahaym, A. (2014). Salesperson competitive intelligence and performance: The role of product knowledge and sales force automation usage. *Industrial Marketing Management*, 43(1), 136–145. doi:10.1016/j.indmarman.2013.08.005
- Marimon, F., Vidgen, R., Barnes, S., & Cristobal, E. (2010). Purchasing behaviour in an online supermarket. *International Journal of Market Research*, 52(1), 111–129. doi:10.2501/S1470785310201089
- Marinova, D., de Ruyter, K., Huang, M. H., Meuter, M. L., & Challagalla, G. (2017). Getting smart: Learning from technology-empowered frontline interactions. *Journal of Service Research*, 20(1), 29–42. doi:10.1177/1094670516679273
- MarketLine. (2015). *Retail savings & investments in Asia-Pacific*. <https://store.marketline.com/report/ohed3958--retail-savings-investments-in-asia-pacific/#product-26302>
- Marta, K. (2016). Influence of the Brand on Purchase Decision. *Academica Brancusi Publisher*, 6, 54–57.
- Martin, E. J. (2014). The state of social media. *EContent (Wilton, Conn.)*, 37(1), 21–21.

- Martínez, C. (2020). *Uber closes offices in Guadalajara, Monterrey and relocates employees*. The universal. <https://www.eluniversal.com.mx/cartera/uber-cierra-oficinas-de-guadalajara-monterrey-y-reubica-empleados>
- Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application. *International Journal of Information Management*, 34(1), 1–13. doi:10.1016/j.ijinfomgt.2013.06.002
- Martz, E. (2013). *No Matter How Strong*. Correlation Still Doesn't Equal Causation.
- Mashao, E. T., & Sukdeo, N. (2018). Factors that influence consumer behavior in the purchase of durable household products. *Proceedings of the International Conference on Industrial Engineering and Operations Management*.
- Matei, A. I., & Savulescu, C. (2012, September). Empirical analysis of ICT, economic growth and competitiveness in the EU. In *Proceedings of the International Conference on ICT Management (ICTM 2012)*. College of Management Edukacja.
- Matikitia, R., Krugerb, M., & Saaymanc, M. (2016). The usage of social media as a marketing tool in two Southern African countries. *Development Southern Africa*, 33(5), 740–755. doi:10.1080/0376835X.2016.1204228
- Mattila, M., Karjaluo, H., & Pento, T. (2003). Internet banking adoption among mature customers: Early majority or laggards? *Journal of Services Marketing*, 17(5), 514–528. doi:10.1108/08876040310486294
- Matzler, K., & Mueller, J. (2011). Antecedents of knowledge sharing—Examining the influence of learning and performance orientation. *Journal of Economic Psychology*, 32(3), 317–329. doi:10.1016/j.joep.2010.12.006
- Matzler, K., Strobl, A., Thurner, N., & Fuller, J. (2015). Switching experience, customer satisfaction, and switching costs in the ICT industry. *Journal of Service Management*, 26(1), 117–136. doi:10.1108/JOSM-04-2014-0101
- Mazlan, M., & Diah, N. M. (2019). Woman and essential oil usage: A literature review. *The Malaysian Journal of Soil Science*, 3(1), 27–36.
- Mazzola, F., Pizzuto, P., & Ruggieri, G. (2019). The role of tourism in island economic growth and resilience. *Journal of Economic Studies (Glasgow, Scotland)*, 46(7), 1418–1436. doi:10.1108/JES-04-2019-0172
- Mbama, C. I., Ezepue, P., Alboul, L., & Beer, M. (2018). Digital banking, customer experience and financial performance. *Journal of Research in Interactive Marketing*, 12(4), 432–451. doi:10.1108/JRIM-01-2018-0026
- Mbatha, B. (2016). Pushing the agenda of the information society: ICT diffusion in selected multipurpose community telecentres in South Africa. *Information Development*, 32(4), 937–952. doi:10.1177/0266666915575544
- McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of Management Journal*, 38(1), 24–59.
- McColl-Kennedy, J. R. (2015). Customer satisfaction, assessment, intentions and outcome behaviors of dyadic service encounters: A conceyful model. In *Proceedings of the 1998 Academy of Marketing Science (AMS) Annual Conference* (pp. 48-54). Springer International Publishing. 10.1007/978-3-319-13084-2_10
- McKinsey and Company. (2014). *Digital Banking in Asia*. Available at: <https://www.mckinsey.com/singapore/our-insights/digital-banking-in-asia-winning-approaches-in-a-new-generation-of-financial-services>
- McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. *Information Systems Research*, 13(3), 334–359. doi:10.1287/isre.13.3.334.81
- McLean, G., & Wilson, A. (2019). Shopping in the digital world: Examining customer engagement through augmented reality mobile applications. *Computers in Human Behavior*, 101, 210–224. doi:10.1016/j.chb.2019.07.002

Compilation of References

- Mekkamol, P., Piewdang, S., & Untachai, S. (2013). Modeling e-CRM for community tourism in upper northeastern Thailand. *Procedia: Social and Behavioral Sciences*, 88, 108–117. doi:10.1016/j.sbspro.2013.08.486
- Melissa, E., Hamidati, A., & Saraswati, M. S. (2015). The Internet and Indonesian women entrepreneurs: Examining the impact of social media on women empowerment. In A. Chib, J. May, & R. Barrantes (Eds.), *Impact of information society research in the Global South* (pp. 203–222). Springer. doi:10.1007/978-981-287-381-1_11
- Meltzer, J. P. (2016). *Maximizing the Opportunities of the Internet for International Trade*. ICTSD and World Economic Forum.
- Mention, A.-L. (2020). The age of FinTech: Implications for research, policy and practice. *The Journal of FinTech*, 1(1), 1–25. doi:10.1142/S2705109920500029
- Mesquita, L., & Lazzarini, S. (2008). Horizontal and Vertical Relationships in Developing Economies: Implications for the SMEs Access to Global Markets. *Academy of Management Journal*, 51(2), 359–380. doi:10.5465/amj.2008.31767280
- Meyer, C. (2001). A case in case study methodology. *Field Methods*, 13(4), 329–352. doi:10.1177/1525822X0101300402
- Michalska, K. K., Lilleker, D., & Michalski, T. (2016). Social Media Affordances, Election Campaigns and Follower Interactions. *Proceedings of the 112th Annual Meeting of the American Political Science Association*.
- Michelman, P. (2017). Seeing beyond the blockchain hype. *MIT Sloan Management Review*, 58(4), 17–19.
- Miettinen, A., & Møller, K. (1990). Interaction perspective into professional business services: A conceptual analysis. In R. Fiocca & I. Snehota (Eds.), *IMP conference: Research developments in international industrial marketing and purchasing* (6th ed., pp. 759–781). University of Bocconi, Italy.
- Migdadi, Y. K. A. A. (2011). The Impact of Adopting E-Banking on Branches Operations Strategy in Developing Economies: The Case of Jordan. *Information & Communication Systems*, 208.
- Migdadi, Y. K. A. A., & Omary, O. M. A. (2017). The Impact of Banks Adoption of Multi-Channels Mix on The Internet Banking Service Encounter Quality: The Case of Arab Middle East Region. *International Journal of Services and Standards*, 12(1), 47–63. doi:10.1504/IJSS.2017.088187
- Mihalic, T., & Buhalis, D. (2013). ICT as a new competitive advantage factor-Case of small transitional hotel sector. *Economic and Business Review for Central and South-Eastern Europe*, 15(1), 33–56.
- Milenkovski, B., Markovska, M., & Asani, A. (2019). Digital Economy – Present and Future Trends. *Knowledge International Journal*, 30(6), 1651–1653. doi:10.35120/kij30061651M
- Miles, J. A. (2012). *Management and organization theory: A Jossey-Bass reader* (Vol. 9). John Wiley & Sons.
- Miles, M. B., Huberman, A. M., Huberman, M. A., & Huberman, M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage (Atlanta, Ga.).
- Miller, D. (2003). An asymmetry-based view of advantage: Towards an attainable sustainability. *Strategic Management Journal*, 24(10), 961–976. doi:10.1002/mj.316
- Minghetti, V., & Buhalis, D. (2010). Digital divide in tourism. *Journal of Travel Research*, 49(3), 267–281. doi:10.1177/0047287509346843
- Ministry of Economy, Trade and Industry (METI). (2010). *Way of distribution to support the community life infrastructure* [chiikishakaitotomoniikiruryutsu]. Retrieved from <https://www.meti.go.jp/report/downloadfiles/g100514a03j.pdf>

- Ministry of Health, Labour, and Welfare. (2020). *Cnsumer's Co-op* [shohiseikatsukyodokumiai]. Retrieved from https://www.mhlw.go.jp/stf/seisakunitsuite/bunya/hukushi_kaigo/seikatsuhogo/seikyou/index.html
- Mishra, P. (2015). Motivator of Online Shopping: The Income Factor. *Asian Journal of Research in Marketing*, 4(6), 62–75.
- Mittal, B. (2015). Self-concept clarity: Exploring its role in consumer behaviour. *Journal of Economic Psychology*, 46, 98–110. doi:10.1016/j.joep.2014.11.003
- Mityko, D.S.V. (2012). Consumers' education level impact on the perception of the search experience credence products-empirical evidence. *Journal of Internet and e-Business Studies*, 1-8. doi:10.5171/2012.617588
- Mohammadi, H. (2015). A study of mobile banking usage in Iran. *International Journal of Bank Marketing*, 33(6), 733–759. doi:10.1108/IJBM-08-2014-0114
- Mohtasham, S. S., Sarollahi, S. K., & Hamirazavi, D. (2017). The effect of service quality and innovation on word of mouth marketing success. *Eurasian Business Review*, 7(2), 229–245. doi:10.1007/40821-017-0080-x
- Momtaz, H., Islam, M. A., Ariffin, K. H. K., & Karim, A. (2011). Customers Satisfaction on Online Shopping in Malaysia. *International Journal of Business and Management*, 6(10). Advance online publication. doi:10.5539/ijbm.v6n10p162
- Monash. (2020). Transactional functions. *Marketing Dictionary*. Available at: <https://www.monash.edu/business/marketing/marketing-dictionary/t/transactional-functions>
- Montano, D. E., & Kasprzyk, D. (2015). *Theory of Reasoned Action, Theory of Planned Behaviour, and The Integrated Behavioural Model. Health Behaviour: Theory, Research and Practice*. Jossey-Bass A Wiley Imprint.
- Montealegre Gallocod, A. C. (2017). *Importance of the big data solution in the mobility application Uber movement Monograph Diploma Big*. Free University Faculty of Engineering. Systems engineering program. Bogotá D.C.
- Montes, G. A., & Goertzel, B. (2019). Distributed, decentralized, and democratized artificial intelligence. *Technological Forecasting and Social Change*, 141, 354–358. doi:10.1016/j.techfore.2018.11.010
- Mooi, E., Sarstedt, M., & Mooi-Reci, I. (2018). *Principal Component and Factor Analysis in Market Research*. Springer.
- Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education*, 14(2), 129–135. doi:10.1016/j.iheduc.2010.10.001
- Morganosky, M., & Cude, B. (2000). Consumer response to online grocery shopping. *International Journal of Retail & Distribution Management*, 28(1), 17–26. doi:10.1108/09590550010306737
- Morgan, R. M., & Hunt, S. D. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, 58(3), 20–38. doi:10.1177/002224299405800302
- Morkunas, V. J., Paschen, J., & Boon, E. (2019). How blockchain technologies impact your business model. *Business Horizons*, 62(3), 295–306. doi:10.1016/j.bushor.2019.01.009
- Mothobi, O., Schoentgen, A., & Gillwald, A. (2017). *What is the state of microwork in Africa? A view from seven countries*. Research ICT Africa.
- Mou, Y., & Xu, K. (2017). The media inequality: Comparing the initial human-human and human-AI social interactions. *Computers in Human Behavior*, 72, 432–440. doi:10.1016/j.chb.2017.02.067
- MTJ. (2015). Study of supply and demand of taxi transport services and the new transport network companies UBER and City Drive in the Guadalajara Metropolitan Area. *The Informant*. Obtained from https://issuu.com/el_informador/docs/estudio_taxis_uber

Compilation of References

- Mukherjee, A., & Nath, P. (2007). Role of electronic trust in online retailing: A re-examination of the commitment-trust theory. *European Journal of Marketing*, 41(9/10), 1173–1202. Advance online publication. doi:10.1108/03090560710773390
- Müller, J. M., Buliga, O., & Voigt, K. I. (2018). Fortune favors the prepared: How SMEs approach business model innovations in Industry 4.0. *Technological Forecasting and Social Change*, 132, 2–17. doi:10.1016/j.techfore.2017.12.019
- Muniady, R., Al-Mamun, A., Yukthamarani, P. P., & Zainol, N. R. (2014). Factors Influencing Consumer Behavior: A Study among University Students in Malaysia. *Asian Social Science*, 10(9), 18–25. doi:10.5539/ass.v10n9p18
- Muñoz-Leiva, F., Climent-Climent, S., & Liébana-Cabanillas, F. (2017). Determinants of intention to use the mobile banking apps: An extension of the classic TAM model. *Spanish Journal of Marketing*, 21(1), 25–38. doi:10.1016/j.sjme.2016.12.001
- Munusamy, & Chelliah, & Mun. (2010). Service Quality Delivery and Its Impact on Customer Satisfaction in The Banking Sector in Malaysia. *International Journal of Innovation, Management and Technology*, 1(4), 398–404.
- Munusamy, J., Annamalah, S., & Chelliah, S. (2012). A study of users and non- users of internet banking in Malaysia. *International Journal of Innovation, Management and Technology*, 3(4), 452–458. doi:10.7763/IJIMT.2012.V3.274
- Munusamy, J., Chelliah, S., & Mun, H. W. (2010). Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia. *International Journal of Innovation, Management and Technology*, 1(4), 398–404.
- Murthy, D. N., & Kumar, B. V. (2015). Internet of things (IoT): Is IoT a disruptive technology or a disruptive business model? *Indian Journal of Marketing*, 45(8), 18–27. doi:10.17010/ijom/2015/v45/i8/79915
- MyVoice. (2013). *The Research on Online Super Market: 4th survey* [nettosu-pa-ni kannsuru chousa dai 4 kai]. MyVoice.co.jp.
- Nadler, D. A., & Tushman, M. L. (1980). A model for diagnosing organizational behavior. *Organizational Dynamics*, 9(2), 35–51. doi:10.1016/0090-2616(80)90039-X
- Nagar, K. (2015). Modeling the effects of Green advertising on brand image: Investigating the moderating effects of product involvement using structural equation. *Journal of Global Marketing*, 28(3–5), 152–171. doi:10.1080/08911762.2015.1114692
- Nahas, C. (2009, April). Financing and political economy of higher education in Lebanon. *In Economic. Research Forum*, 41(1), 69–95.
- Naik, C. K., Gantasala, S. B., & Prabhakar, G. V. (2010). Service quality (SERVQUAL) and its effect on customer satisfaction in retailing. *European Journal of Soil Science*, 16(2), 231–243.
- Naik, C. K., Gantasala, S. B., & Prabhakar, G. V. (2010). Service Quality (SERVQUAL) And Its Effect on Customer Satisfaction in Retailing. *European Journal of Soil Science*, 16(2), 231–243.
- Nakasone, E., & Torero, M. (2016). A text message away: ICTs as a tool to improve food security. *AGEC Agricultural Economics*, 47(S1), 49–59. doi:10.1111/agec.12314
- Namahoot, K. S., & Laohavichien, T. (2018). Assessing the intentions to use Internet banking. *International Journal of Bank Marketing*, 36(2), 256–276. doi:10.1108/IJBM-11-2016-0159
- Nasdaq. (2018). *Retail investors*. <https://www.nasdaq.com/glossary/r/retail-investors>
- Nash, J. (2019). Exploring how social media platforms influence fashion consumer decisions in the UK retail sector. *Journal of Fashion Marketing and Management*, 23(1), 82–103. doi:10.1108/JFMM-01-2018-0012

- Nathwani, D. (2017). Impact of sales promotion on consumer buying behaviour. *Journal for Contemporary Research in Management*, 4(1), 1–11.
- Navarro Pérez, K. L., & Ortiz Aristizábal, A. F. (2016). Evaluation of advantages and disadvantages of Uber compared to the taxi transport service between streets 53 to 45 and av. Caracas and Seventh. Degree work. Catholic University of Colombia. Faculty of Engineering. Civil Engineering Program. Bogota Colombia.
- Nawi, N. C., Al Mamun, A., Hamsani, N. H. B., & Muhayiddin, M. N. B. (2019). Effect of consumer demographics and risk factors on online purchase behaviour in Malaysia. *Societies (Basel, Switzerland)*, 9(1), 1–11. doi:10.3390/oc9010010
- Nayak, S. D. P., & Narayan, K. A. (2019). Strengths and weakness of online surveys. *Journal of the Humanities and Social Sciences*, 24(5), 31–38.
- Neupane, R. (2015). The effects of brand image on customer satisfaction and loyalty intention in retail super market chain UK. *International Journal of Social Sciences and Management*, 2(1), 9–26. doi:10.3126/ijssm.v2i1.11814
- Nicholls, E., Romaniuk, J., & Sharp, B. (2003). The effect of advertised messages on light and heavy users' brand perceptions. In *Doctoral dissertations 2003: Proceedings of Australia and NZ Marketing Academy Conference*. University of South Australia.
- Nicoletti, B. (2017). *The future of fintech*. Springer International Publishing. doi:10.1007/978-3-319-51415-4
- Nienhüser, W. (2008). Resource dependence theory-How well does it explain behavior of organizations? *Management Revue*, 9-32.
- Nikkei, M.J. (2009). Summit storeless type, net supermarket CEO Tajiri saying: Profitable with 400 orders per day [samittomutempogatanettosupa tajirishacho chumonichinichiyonhyakukendesaisan]. *Nikkei MJ*, (3).
- Nikkei. (2017). *The government's subsidy to popularize delivery boxes: Reducing redelivery and improving the efficiency of distribution cost* [takuhaibokkusufukyuhehojokin:saihaitatsuherashikoritsuka]. Retrieved from https://www.nikkei.com/article/DGXLASFS16H4F_W7A110C1MM8000/
- NikkeiXtech. (2017). *Sales of online supermarkets and catalog mail orders have been expanding*. Retrieved from <https://xtech.nikkei.com/it/pc/article/trend/20130108/1075709/>
- Nizameddin, T. (2006). The political economy of Lebanon under Rafiq Hariri: An interpretation. *The Middle East Journal*, 60(1), 95–114. doi:10.3751/60.1.15
- Noel, H. (2017). *Basics marketing 01: Consumer behaviour*. Bloomsbury Publishing.
- Nolcheska, V. (2017). The influence of social networks on consumer behaviour. *Balkan and Near Eastern Journal of Social Sciences*, 3(4), 75–87.
- Noreen, T., & Han, S. (2015). Exploratory Study of the Impact of Social Media Marketing on Consumer Purchase Intention. *AMJ*, 17(3), 53.
- Noueihed, L., & Khriache, D. (2019). Lebanon Leader Threatens to Abandon Ship During Largest Protests in Years. *Bloomberg*. <https://www.bloomberg.com/news/articles/2019-10-18/lebanon-s-hariri-gives-his-government-three-day-reform-ultimatum>
- Nourallah, (2020b). *Understanding Young Individuals' Initial Trust in Non-Sovereign Digital Currency*. The 2th Arab Graduate Student Conference 9-20 August (online), (Doha institute for graduate studies- Arab center for research & policy studies), Doha, Qatar.

Compilation of References

- Nourallah, M. (2020). *A mobile bank application loyalty model: The young bank customer perspective* [Unpublished licentiate thesis]. Mid Sweden University. doi:10.13140/RG.2.2.35638.86089
- Nourallah, M. (2020a). *A Mobile Bank Application Loyalty Model: The Young Bank Customer Perspective* [Unpublished licentiate thesis]. Mid Sweden University.
- Nourallah, M. W. (2015). Do the Arabian Customers Who Belong to Similar Markets Differ in The Evaluation of Banking Service Quality? *International Journal of Euro-Mediterranean Studies*, 8(1), 25–41.
- Nourallah, M., Strandberg, C., & Öhman, P. (2019). Understanding the Relationship between Trust and Satisfaction on Mobile Bank Application. In *Proceedings of the 2019 3rd International Conference on E-commerce, E-Business and E-Government* (pp. 58-61). 10.1145/3340017.3340033
- Nourallah, M., Strandberg, C., & Öhman, P. (in press). Mobile bank applications: Loyalty of young bank customers. *Financial Services Review*.
- Novak, T. P., Hoffman, D. L., & Duhachek, A. (2003). The influence of goal-directed and experiential activities in online flow experiences. *Journal of Consumer Psychology*, 13(1), 3–16. doi:10.1207/153276603768344744
- Nunkoo, R. (2015). Tourism development and trust in local government. *Tourism Management*, 46, 623–634. doi:10.1016/j.tourman.2014.08.016
- Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.
- Nuryakin & Farida, N. (2016). Effects of convenience online shopping and satisfaction on repeat purchase intention among students of higher institutions in Indonesia. *Journal of Internet Banking and Commerce*, 21(2), 1–19.
- O’Cass, A., & Carlson, J. (2010). Examining the effects of website-induced flow in professional sporting team websites. *Internet Research*, 20(2), 115–134. doi:10.1108/10662241011032209
- OCDE. (1993). *Les petites et moyennes Entreprises: Technologie et compétitivité*. OCDE.
- OECD. (2017). Enhancing the Contributions of SMEs in a Global and Digitalised Economy. *Proceedings of the Meeting of the OECD Council at Ministerial Level*.
- OECD. (2019). *OECD SME and Entrepreneurship Outlook 2019*. OECD Publishing., doi:10.1787/34907e9c-
- Oertzen, A. S., & Odekerken-Schröder, G. (2019). Achieving continued usage in online banking: A post-adoption study. *International Journal of Bank Marketing*, 37(6), 1394–1418. doi:10.1108/IJBM-09-2018-0239
- Ogawara, S., Chen, J., & Zhang, Q. (2003). Internet grocery business in Japan: Current business models and future trends. *Industrial Management & Data Systems*, 103(9), 727–735. doi:10.1108/02635570310506142
- Oke, A., Popoola, O., Kamolshotiros, P., Ajagbe, M., & Olujobi, O. (2016). Consumer behaviour towards decision making and loyalty to particular brands. *International Review of Management and Marketing*, 6(48), 43–52.
- Okumus, B., Ali, F., Bilgihan, A., & Ozturk, A. (2018). Psychological factors influencing customers’ acceptance of smartphone diet apps when ordering food at restaurants. *International Journal of Hospitality Management*, 72, 67–77. doi:10.1016/j.ijhm.2018.01.001
- Okumus, B., & Bilgihan, A. (2014). Proposing a model to test smartphone users’ intention to use smart applications when ordering food in restaurants. *Journal of Hospitality and Tourism Technology*, 5(1), 31–49. doi:10.1108/JHTT-01-2013-0003
- Oladele, P. O., Olowookere, B., Okolugbo, C. N., & Adegbola, E. A. (2015). Product packaging as a predictive factor of consumer patronage of toothpaste in Ado-Ekiti, Nigeria. *British Journal of Marketing Studies*, 3(3), 12–28.

- Olivares, E. M. (2014). *Economic systems and models of modern economy*. Autonomous University of Colombia.
- Oliver, R. L. (2014). *Satisfaction: A Behavioral Perspective on the Consumer*. Routledge. doi:10.4324/9781315700892
- Olorunniwo, F., Hsu, M. K., & Udo, G. J. (2006). Service quality, customer satisfaction, and behavioral intentions in the service factory. *Journal of Services Marketing*, 20(1), 59–72. doi:10.1108/08876040610646581
- Olotewo, J. (2016). Social Media Marketing in Emerging Markets. *International Journal of Online Marketing Research*, 2(2), 10. doi:10.5455/IJOMR.2016254411
- Ongsakul, V., Ali, F., Wu, C., Duan, Y., Cobanoglu, C., & Ryu, K. (2020). Hotel website quality, performance, telepresence and behavioral intentions. *Tourism Review*. doi:10.1108/TR-02-2019-0039
- Ong, T. S., Hong, Y. H., Teh, B. H., Soh, P. C. H., & Tan, C. P. (2014). Factors that affect the adoption of internet banking in Malaysia. *International Business Management*, 8(2), 55–63.
- Oppong, S. (2014). Upper echelons theory revisited: The need for a change from causal description to casual explanation. *Management*, 19(2), 169–183.
- Osman, Z., Mohamad, L., & Mohamad, R. K. (2015). An empirical study of direct relationship of service quality, customer satisfaction and bank image on customer loyalty in Malaysian Commercial Banking Industry. *American Journal of Economics*, 5(2), 168–176.
- Ostovare, M., & Shahraki, M. R. (2019). Evaluation of hotel websites using the multicriteria analysis of PROMETHEE and GAIA: Evidence from the five-star hotels of Mashhad. *Tourism Management Perspectives*, 30, 107–116. Advance online publication. doi:10.1016/j.tmp.2019.02.013
- Osuna, I., González, J., & Capizzani, M. (2015). Which Categories and Brands to Promote with Targeted Coupons to Reward and to Develop Customers in Supermarkets. *Journal of Retailing*, 92(2), 236–251. doi:10.1016/j.jretai.2015.12.002
- Otugo, N. E., Uzuegbunam, C. E., & Obikeze, C. O. (2015). Social Media Advertising/ Marketing: A Study of Awareness, Attitude and Responsiveness by Nigerian Youths. *International Conference on Communication, Media, Technology and Design*, Dubai, UAE.
- Ouazzani, K. (2019). CEDRE: One Year Later, where are We? *L'orient Le Jour*. <https://www.lorientlejour.com/article/1165541/cedre-one-year-later-where-are-we-.html>
- Ou, W. M., Shih, C. M., & Chen, C. Y. (2015). Effects of ethical sales behaviour on satisfaction, trust, commitment, retention and words-of-mouth. *International Journal of Commerce and Management*, 25(4), 673–686. doi:10.1108/IJCoMA-04-2013-0040
- Ou, W. M., Shih, C. M., Chen, C. Y., & Tseng, C. W. (2012). Effects of ethical sales behaviour, expertise, corporate reputation, and performance on relationship quality and loyalty. *Service Industries Journal*, 32(5), 773–787. doi:10.1080/02642069.2010.531268
- Paine, K. D. (2011). *Measure what matters: Online tools for understanding customers, social media, engagement, and key relationships*. Wiley.
- Pallares, M. A. (2016). Uber has 1.2 million users in Mexico. *The Universal newspaper*. Obtained from <https://www.eluniversal.com.mx/articulo/carera/negocios/2016/03/8/uber-suma-12-millones-de-usuarios-en-mexico>
- Parasuraman, Zeithaml, & Berry. (1988). SERVQUAL: A Multiple Item Scale for Measuring Customer Perceptions of Service Quality. *Journal of Retailing*, 64, 12–40.

Compilation of References

- Parasuraman, A. (2010). Service productivity, quality and innovation. *International Journal of Quality and Service Sciences*, 2(3), 277–286. doi:10.1108/17566691011090026
- Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing*, 64(1), 12–40.
- Parasuraman, A., Zeithaml, V. A., & Leonard, L. B. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*, 49(Fall), 41–50. doi:10.1177/002224298504900403
- Paridon, T. J., Carraher, S., & Carraher, S. C. (2006). The income effect in personal shopping value, consumer self-confidence, and information sharing (word of mouth communication) research. *Academy of Marketing Studies Journal*, 10(2), 107–124.
- Parker, R., & Funkhouser, G. R. (1987). The consumer as a performer of marketing functions. *Research in Consumer Behavior*, 2, 161–191.
- Parkinson, J. (1999). Retail models in the connected economy: Emerging business affinities. *Online document*. Retrieved from https://www.ey.com/global/gcr/nsf/us/insights_-_eBusiness_-_Ernst_&_Young_LLP
- Park, J., & Ha, S. (2016). Co-creation of service recovery: Utilitarian and hedonic value and post-recovery responses. *Journal of Retailing and Consumer Services*, 28, 310–316. doi:10.1016/j.jretconser.2015.01.003
- Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Journal of Educational Technology & Society*, 12(3), 150–162.
- Paskaleva, K. A., & Azorin, J. A. (2010). Developing integrated e-tourism services for cultural heritage destinations. *International Journal of Services Technology and Management*, 13(3–4), 247–262. doi:10.1504/IJSTM.2010.032081
- Patch, C. S., Tapsell, L. C., & Williams, P. G. (2005). Attitudes and intentions toward purchasing novel foods enriched with omega-3 fatty acids. *Journal of Nutrition Education and Behavior*, 37(5), 235–241. doi:10.1016/S1499-4046(06)60277-7 PMID:16053811
- Patel, P., & Pavitt, K. (1994). The continuing, widespread (and neglected) importance of improvements in mechanical technologies. *Research Policy*, 23(5), 533–545. doi:10.1016/0048-7333(94)01004-8
- Pavlou, P. A. (2002). Institution-based trust in interorganizational exchange relationships: The role of online B2B marketplaces on trust formation. *The Journal of Strategic Information Systems*, 11(3–4), 215–243. doi:10.1016/S0963-8687(02)00017-3
- Pavlou, P. A., Liang, H., & Xue, Y. (2007). Understanding and mitigate uncertainty in online exchange relationships: A principal agent perspective. *Management Information Systems Quarterly*, 31(1), 105–136. doi:10.2307/25148783
- Pease, W., & Rowe, M. (2005). An overview of information technology in the tourism industry. In *Conference Proceedings-ICT Networks-Building Blocks for Economic Development*. Communication Economics and Electronic Markets Research Centre.
- Pease, W., Rowe, M., & Cooper, M. (2005). The role of ICT in regional tourism providers. *The Asia Pacific Journal of Economics & Business*, 9(2), 50–62.
- Peevers, G., Douglas, G., & Jack, M. A. (2008). A usability comparison of three alternative message formats for an SMS banking service. *International Journal of Human-Computer Studies*, 66(2), 113–123. doi:10.1016/j.ijhcs.2007.09.005
- Penaflorida, R. (2020). *The Impact of Technology on the Customer Experience | Reviewtrackers*. Available at: <https://www.reviewtrackers.com/blog/technology-customer-experience/>

- Peng, M. W. (2012). *Global Strategy*. Thomson South-Western.
- Penrose, E., & Penrose, E. T. (2009). *The Theory of the Growth of the Firm*. Oxford university press.
- Penz, E., & Sinkovics, R. R. (2013). Triangulating consumers' perceptions of payment systems by using social representations theory: A multimethod approach. *Journal of Consumer Behaviour*, 12(4), 293–306. doi:10.1002/cb.1420
- Pérez, D. (2016). 7 Uber service points that will change with its regulation in Guadalajara. *Attraction 360*. <https://www.atraccion360.com/que-es-ley-uber-en-guadalajara>
- Perrow, C. (1979). *Organizational theory in a society of organizations*. Ecole Nationale d'Administration Publique.
- Peteraf, M. A., & Barney, J. B. (2003). Unraveling the resource-based tangle. *Managerial and Decision Economics*, 24(4), 309–323. doi:10.1002/mde.1126
- Petrovic, J., & Milićević, S. (2020). The ICT Impact on Inbound and Outbound Tourism Demand in the EU. *Management: Journal of Sustainable Business and Management Solutions in Emerging Economies*, 25(1), 47–55.
- Pew Research Center. (2018). *A majority of Facebook, Snapchat and Instagram users visit these platforms on a daily basis*. Author.
- Pfeffer, J., & Salancik, G. R. (1978). The external control of organisations. In *A Resource: Dependence Perspective*. New York: Harper & Row.
- Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*. Stanford University Press.
- Pfeffer, J., Zorbach, T., & Carley, K. M. (2014). Understanding online firestorms: Negative word-of-mouth dynamics in social media networks. *Journal of Marketing Communications*, 20(1–2), 117–128. doi:10.1080/13527266.2013.797778
- Pflaum, A. A., & Gölzer, P. (2018). The IoT and digital transformation: Toward the data-driven enterprise. *IEEE Pervasive Computing*, 17(1), 87–91. doi:10.1109/MPRV.2018.011591066
- Phang, I., Zaiton, O., & Cheuk, C. (2018). Young Adult Malaysian Consumers' Intention to Shop via Mobile Shopping Apps. *Asian Journal of Business Research*, 8(1). Advance online publication. doi:10.14707/ajbr.180041
- Phua, J., Jin, S. V., & Kim, J. J. (2017). Uses and gratifications of social networking sites for bridging and bonding social capital: A comparison of Facebook, Twitter, Instagram, and Snapchat. *Computers in Human Behavior*, 72, 115–122. doi:10.1016/j.chb.2017.02.041
- Pierdicca, R., Paolanti, M., & Frontoni, E. (2019). eTourism: ICT and its role for tourism management. *Journal of Hospitality and Tourism Technology*, 10(1), 90–106. doi:10.1108/JHTT-07-2017-0043
- Pivovarov, V. (2019). What happens when legal tech meets blockchain. *Forbes*. Available at <https://www.forbes.com/sites/valentinpivovarov/2019/01/24/legalnodes/#7fec0364d2c8>
- Poon, W. C. (2008). Users' adoption of e-banking services: The Malaysian perspective. *Journal of Business and Industrial Marketing*, 23(1), 59–69. doi:10.1108/08858620810841498
- Population Quick Info. (2020). *Population by states and age, Malaysia, 2019*. <http://pqj.stats.gov.my/result.php?token=ead145b6134eacd515fcbbb52b79fcd1>
- Porter, M. E. (2001). Strategy and the Internet. *Harvard Business Review*, 63–78. PMID:11246925
- Praničević, D. G. (2006). *Application of information and communication technologies (ICT) in tourism* [Paper presentation]. 3rd International Conference: An Enterprise Odyssey: Integration or Disintegration, Zagreb, Croatia.

Compilation of References

- Prentice, C., Wang, X., & Loureiro, S. M. C. (2019). The influence of brand experience and service quality on customer engagement. *Journal of Retailing and Consumer Services*, 50, 50–59. doi:10.1016/j.jretconser.2019.04.020
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based “view” a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22–40.
- Priem, R. L., Lyon, D. W., & Dess, G. G. (1999). Inherent limitations of demographic proxies in top management team heterogeneity research. *Journal of Management*, 25(6), 935–953. doi:10.1177/014920639902500607
- Priya, N. (2019). Studying the impact of internet advertising on consumer buying behavior. *International Journal of Management and Social Sciences*, 7(9), 44–52.
- Punakivi, M., & Saranen, J. (2001). Identifying the success factors in e-grocery home delivery. *International Journal of Retail & Distribution Management*, 29(4), 156–163. doi:10.1108/09590550110387953
- Purani, K., Kumar, D., & Sahadev, S. (2019). e-Loyalty among millennials: Personal characteristics and social influences. *Journal of Retailing and Consumer Services*, 48, 215–223. doi:10.1016/j.jretconser.2019.02.006
- Putri, K. D., & Balqiah, T. E. (2017). Do web atmospherics affect purchase intention? The role of color and product display. *Journal of Management and Marketing Review*, 2(2), 79–86.
- Qazzafi, S. (2019). Consumer buying decision process toward products. *International Journal of Scientific Research and Engineering Development*, 2(5), 30–133.
- Quan, T., Trinh, T., Ngo, D., Pham, H., Hoang, L., Hoang, H., . . . Mai, T. (2018). Lead engagement by automated real estate chatbot. In *2018 5th NAFOSTED Conference on Information and Computer Science (NICS)*, (pp. 357–359). IEEE.
- Queiroz, M., McGraw, J. L., & Coltman, T. (2019). Information Technology and The Renewal of Business Models. *Proceedings of the 27th European Conference on Information Systems (ECIS)*.
- Rahi, S., Ghani, M. & Ngah, A. (2018). A structural equation model for evaluating user’s intention to adopt internet banking and intention to recommend technology. *Accounting*, 139-152.
- Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics and Management Sciences*, 6(2), 1–5. doi:10.4172/2162-6359.1000403
- Rahman, K., & Noor, N. (2016). Evaluating gaps in consumer behaviour research on organic foods: A critical literature review under Bangladesh context. *Journal of Marketing and Consumer Behaviour in Emerging Markets*, 1(3), 42–49.
- Rahmi, D. Y., Rozalia, Y., Chan, D. N., Anira, Q., & Lita, R. P. (2017). Green brand image relation model, green awareness, green advertisement, and ecological knowledge as competitive advantage in improving green purchase intention and green purchase behavior on creative industry products, *Journal of Economics, Business, & Accountancy Ventura*, 20(2), 177–186. doi:10.14414/jebav.v20i2.1126
- Rahnama, H., & Rajabpour, S. (2016). Identifying effective factors on consumers’ choice behaviour toward green products: The case of Tehran, the capital of Iran. *Environmental Science and Pollution Research International*, 24(1), 911–925. doi:10.1007/11356-016-7791-x PMID:27761861
- Rai, A., & Tang, X. (2014). Information Technology-Enabled Business Models: A Conceptual Framework and a Coevolution Perspective for Future Research. *Information Systems Research*, 25(1), 1–14. doi:10.1287/isre.2013.0495
- Rakićević, Z., Omerbegović-Bijelović, J., & Lečić-Cvetković, D. (2016). A model for effective planning of SME support services. *Evaluation and Program Planning*, 54, 30–40. doi:10.1016/j.evalprogplan.2015.09.004 PMID:26479837
- Ramey, K. (2012). *Modern Technology Advantages and Disadvantages*. Academic Press.

- Ramos, C. M., & Rodrigues, P. M. (2013). The importance of ICT for tourism demand: A dynamic panel data analysis. In *Quantitative methods in tourism economics* (pp. 97-111). doi:10.1007/978-3-7908-2879-5_6
- Ramya, N., & Ali, S. (2016). Factors affecting consumer buying behaviour. *International Journal of Applied Research*, 2(10), 76-80.
- Rana, N., Dwivedi, Y., Williams, M., & Weerakkody, V. (2016). Adoption of online public grievance redressal system in India: Toward developing a unified view. *Computers in Human Behavior*, 59, 265-282. doi:10.1016/j.chb.2016.02.019
- Rao, P. S., Rajasekhar, D., & Ratnam, N. V. (2013). An Empirical Study of Customers' Satisfaction in ATM Services. *International Journal of Management Research and Business Strategy*, 2(4), 135-142.
- Rashideh, W. (2020). Blockchain technology framework: Current and future perspectives for the tourism industry. *Tourism Management*, 80.
- Ray, A., Dhir, A., Bala, P. K., & Kaur, P. (2019). Why do people use food delivery apps (FDA)? A uses and gratification theory perspective. *Journal of Retailing and Consumer Services*, 51, 221-230. doi:10.1016/j.jretconser.2019.05.025
- Razak, M. I. M., Idris, R., Yusof, M. M., Jaapar, W. E., & Ali, M. N. (2013). Acceptance determinants towards Takaful products in Malaysia. *International Journal of Humanities and Social Science*, 3(17), 243-252.
- Rehncrona, C. (2018). Young consumers' valuations of new payment services. *International Journal of Quality and Service Sciences*, 10(4), 384-399. doi:10.1108/IJQSS-11-2017-0111
- Reiter, L., McHaney, R., & Connell, K. Y. H. (2017). Social media influence on purchase intentions: Instrument validation. *International Journal of Web Based Communities*, 13(1), 54-72. doi:10.1504/IJWBC.2017.082719
- Resilience, T. H. (2011). *Sustaining MDG Progress in an Age of Economic Uncertainty*. United Nations Development Programme.
- Restauri, S. L., King, F. L., & Nelson, J. G. (2001). *Assessment of Students' Ratings for Two Methodologies of Teaching via Distance Learning: An Evaluative Approach Based on Accreditation*. ERIC Document Reproduction Service No. ED 460148, Reports-research (143).
- Riivari, J. (2005). Mobile banking: A powerful new marketing and CRM tool for financial services companies all over Europe. *Journal of Financial Services Marketing*, 10(1), 11-20. doi:10.1057/palgrave.fsm.4770170
- Ringim, K. J., & Reni, A. (2019). Mediating effect of social media on the consumer buying behaviour of cosmetic products. *Advances in Economics. Business and Management Research*, 92, 291-308.
- Risius, M., & Beck, R. (2015). Effectiveness of corporate social media activities in increasing relational outcomes. *Information & Management*, 52(7), 824-839. doi:10.1016/j.im.2015.06.004
- Risk, M. S. (2019). Government of Lebanon. *GEN*, 35, 40.
- Rissola, G., & Garrido, M. (2013). *Survey on eInclusion actors in the EU27*. European Commission.
- Roberts, D. L., Piller, F. T., & Lüttgens, D. (2016). Mapping the impact of social media for innovation: The role of social media in explaining innovation performance in the PDMA comparative performance assessment study. *Journal of Product Innovation Management*, 33, 117-135. doi:10.1111/jpim.12341
- Roberts-Lombard, M. (2009). Customer relationships in the retail travel trade-what is the opinion of management? *Journal of Contemporary Management*, 6(1), 409-429.

Compilation of References

- Roberts-Lombard, M. (2020). Antecedents and outcome of commitment in Islamic banking relationships – an emerging African market perspective. *Journal of Islamic Marketing*, 11(6), 1851–1871. Advance online publication. doi:10.1108/JIMA-09-2018-0164
- Roca, J. C., Chiu, C.-M., & Martinez, F. J. (2006). Understanding e-learning continuance intention: An extension of the Technology Acceptance Model. *International Journal of Human-Computer Studies*, 64(8), 683–696. doi:10.1016/j.ijhcs.2006.01.003
- Romano, F. (2001). *E-business. Paramus*. National Association for Printing Leadership, Pocket University Series.
- Rosenfall, T. (2012). *Open source vendors' business models*. Linköping University.
- Rose, S., Clark, M., Samouel, P., & Hair, N. (2012). Online Customer Experience in e-Retailing: An empirical model of Antecedents and Outcomes. *Journal of Retailing*, 88(2), 308–322. doi:10.1016/j.jretai.2012.03.001
- Rosman, R., & Stuhura, K. (2013). The Implications of Social Media on Customer Relationship Management and the Hospitality Industry. *Journal of Management Policy and Practice*, 14(3).
- Ross, J. W., Weill, P., & Robertson, D. (2006). *Enterprise architecture as strategy: Creating a foundation for business execution*. Harvard Business Press.
- Roy, S. K., Devlin, J. F., & Sekhon, H. (2015). The impact of fairness on trustworthiness and trust in banking. *Journal of Marketing Management*, 31(9–10), 996–1017. doi:10.1080/0267257X.2015.1036101
- Ruddell, R., & Jones, N. (2013). Social media and policing: Matching the message to the audience. *Safer Communities*, 12(2), 64–70. doi:10.1108/17578041311315030
- Ryan, A., Trumbull, G., & Tufano, P. (2011). A brief postwar history of US consumer finance. *Business History Review*, 85(3), 461–498. doi:10.1017/S0007680511000778
- Ryu, K., Lehto, X. Y., Gordon, S. E., & Fu, X. (2019). Effect of a brand story structure on narrative transportation and perceived brand image of luxury hotels. *Tourism Management*, 71(April), 348–363. doi:10.1016/j.tourman.2018.10.021
- Ryutsuu.biz. (2019). *Co-op Sapporo / Over 1.8 million union members, about 60% of household covers in Hokkaido*. Retrieved from <https://www.ryutsuu.biz/strategy/m012144.html>
- Sabri, E. (2019). Consumer's purchase intention towards luxury retailer's social media advertisements —A Case Study of a Shoe Retail—UAE-Dubai Mall. *Social Networking*, 8(1), 39–51. doi:10.4236n.2019.81003
- Sachdeva, I., & Goel, S. (2015). Retail store environment and customer experience: A paradigm. *Journal of Fashion Marketing and Management*, 19(3), 290–298. doi:10.1108/JFMM-03-2015-0021
- Saebi, T., Lien, L., & Foss, N. J. (2016). What drives business model adaptation? The impact of opportunities, threats and strategic orientation. *Long Range Planning*, 50(5), 567–581. doi:10.1016/j.lrp.2016.06.006
- Saidi, N. H. (1986). *Economic Consequences of the War in Lebanon*. Centre for Lebanese Studies.
- Sakhaei, S. F., Afshari, A. J., & Esmaili, E. (2014). The Impact of Service Quality on Customer Satisfaction in Internet Banking. *J Math Computer Sci*, 9(01), 33–40. doi:10.22436/jmcs.09.01.04
- Salih, D., & Ahmed, A. (2019). The impact of organizational values on employee performance, an empirical study on banking industry in Kurdistan Region. *Management Science Letters*, 1199–1206. doi:10.5267/j.msl.2019.4.021
- Sampaio, C. H., Ladeira, W. J., & Santini, F. D. O. (2017). Apps for mobile banking and customer satisfaction: A cross-cultural study. *International Journal of Bank Marketing*, 35(7), 1131–1151. doi:10.1108/IJBM-09-2015-0146

- Sanakulov, N., & Karjaluoto, H. (2015). Consumer adoption of mobile technologies: A literature review. *International Journal of Mobile Communications*, 13(3), 244. doi:10.1504/IJMC.2015.069120
- Sandner, P., Gross, J., Grale, L., & Schulden, P. (2020). *The digital programmable Euro, Libra and CBDC: Implications for European Banks*. Working Paper. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3663142
- Sangeetha, J., & Mahalingam, S. (2011). Service Quality Models in Banking: A Review. *International Journal of Islamic and Middle Eastern Finance and Management*, 4(1), 83–103. doi:10.1108/17538391111122221
- Sanou, B. (2016). ICT Facts and Figures 2016. International Telecommunications Union - ICT Data and Statistics Division.
- Santoro, G., Vrontis, D., Thrassou, A., & Dezi, L. (2018). The Internet of Things: Building a knowledge management system for open innovation and knowledge management capacity. *Technological Forecasting and Social Change*, 136, 347–354. doi:10.1016/j.techfore.2017.02.034
- Santouridis, I., & Kyritsi, M. (2014). Investigating the determinants of Internet banking adoption in Greece. *Procedia Economics and Finance*, 9(1), 501–510. doi:10.1016/S2212-5671(14)00051-3
- Santpal & Pradeep. (2015). Consumer buying behaviour: An empirical study on personal computer. *International Journal of Research in Commerce and Management*, 6(3), 54–58. https://ijrcm.org.in/article_info.php?article_id=5287
- Sarstedt, M., & Mooi, E. (2019). Regression Analysis. In *A Concise Guide to Market Research*. Springer. doi:10.1007/978-3-662-56707-4_7
- Sashi, C. M. (2012). Customer engagement, buyer-seller relationships, and social media. *Management Decision*, 50(2), 253–272. doi:10.1108/00251741211203551
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research methods for business students* (7th ed.). Pearson Education Limited.
- Saxenian, A. (1996). *Regional advantage*. Harvard University Press. doi:10.2307/j.ctvjnrsqh
- Scheers, L., & Prinsloo, C. (2012). Investigating Word of Mouth as Advertising Tool for Mobile devices in South Africa. *International Journal of Academic Research in Business & Social Sciences*, 4(11). Advance online publication. doi:10.6007/IJARBSS/v4-i11/1315
- Schirr, G. (2013). Community-Sourcing a New Marketing Course: Collaboration in Social Media. *Marketing Education Review*, 23(3), 225–240. doi:10.2753/MER1052-8008230302
- Schlachter, E. (1995). Generating revenues from websites. *Board Watch*, (July), 374.
- Schmidt, A. P. (2019). The Impact of Cognitive Style, Consumer Demographics and Cultural Values on the Acceptance of Islamic Insurance Products Among American Consumers. *International Journal of Bank Marketing*.
- Schneider, C. J. (2016). Police presentational strategies on Twitter in Canada. *Policing and Society*, 26(2), 129–147. doi:10.1080/10439463.2014.922085
- Schreyögg, G. (1980). Contingency and choice in organization theory. *Organization Studies*, 1(4), 305–326. doi:10.1177/017084068000100401
- Schumpeter, J. A. (1982). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle (1912/1934)*. Transaction Publishers.
- Schwab, K. (2016). *The fourth industrial revolution: what it means, how to respond*. World Economic Forum.
- Scott, J., & Carrington, P. J. (2011). *The SAGE Handbook of Social Network Analysis*. London: SAGE.

Compilation of References

- Scott, B., Loonam, J., & Kumar, V. (2017). Exploring the rise of blockchain technology: Towards distributed collaborative organizations. *Strategic Change*, 26(5), 423–428. doi:10.1002/jsc.2142
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-building Approach* (7th ed.). Haddington: John Wiley and Sons.
- Sekaran, U. (2003). *Research Methods for Business A Skill-Building Approach* (4th ed.). John Wiley & Sons.
- Sekaran, U. (2003). *Research Methods for Business: A Skill-Building Approach* (4th ed.). John Wiley and Sons, Inc.
- Sekaran, U., & Bougie, R. (2010). *Research methods for business. A skill-building approach*. John Wiley & Son Ltd.
- Sekaran, U., & Bougie, R. (2013). *Research Methods for Business A Skill- Building Approach* (6th ed.). Wiley.
- Sekaran, U., & Bougie, R. J. (2017). *Research Methods for Business 7E Wiley Plus Learning Space Student Package*. John Wiley & Sons, Limited.
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education*, 49(2), 396–413. doi:10.1016/j.compedu.2005.09.004
- Setiawan, B., & Wiet Aryanto, V. D. (2017). The effects of brand image on online perceived quality, online brand personality and purchase intention. *International Journal of Economics and Business Administration*, 5(3), 70–80. doi:10.35808/ijebe/136
- Seyedsayamdost, E., & Vanderwal, P. (2020). From good governance to governance for good: Blockchain for social impact. *Journal of International Development*, 32(6), 943–960. Advance online publication. doi:10.1002/jid.3485
- Shafiee, M., & Bazargan, N. (2017). Behavioral Customer Loyalty in Online Shopping: The Role of E-Service Quality and E-Recovery. *Journal of Theoretical and Applied Electronic Commerce Research*, 13(1), 26–38. doi:10.4067/S0718-18762018000100103
- Shahid, A., Saeed, H., & Tirmizi, S. M. A. (2015). Economic development and banking sector growth in Pakistan. *Journal of Sustainable Finance and Investment*, 5(3), 121–135.
- Shaikh, A. A., & Karjaluto, H. (2016). On some misconceptions concerning digital banking and alternative delivery channels. *International Journal of E-Business Research*, 12(3), 1–16. doi:10.4018/IJEER.2016070101
- Shamout, M. (2016). The Impact of Promotional Tools on Consumer Buying Behavior in Retail Market. *International Journal of Business and Social Science*, 7(1).
- Shamout, M. D. (2016). The impact of promotional tools on consumer buying behavior in retail market. *International Journal of Business and Social Science*, 7(1), 75–85.
- Shang, X., Zhang, R., & Chen, Y. (2012). Internet of things (IoT) service architecture and its application in e-commerce. *Journal of Electronic Commerce in Organizations*, 10(3), 44–55. doi:10.4018/jeco.2012070104
- Shareef, M., Baabdullah, A., Dutta, S., Kumar, V., & Dwivedi, Y. (2018). Consumer adoption of mobile banking services: An empirical examination of factors according to adoption stages. *Journal of Retailing and Consumer Services*, 43, 54–67. doi:10.1016/j.jretconser.2018.03.003
- Sharma, S., Menard, P., & Mutchler, L. A. (2017). Who to Trust? Applying Trust to Social Commerce. *Journal of Computer Information Systems*, 59(1), 32–42. doi:10.1080/08874417.2017.1289356
- Shaw, N., & Sergueeva, K. (2016). Convenient or Useful? Consumer Adoption of Smartphones for Mobile Commerce. *Association for Information Systems, DIGIT Proceedings*, 3.

- Shaw, N., & Sergueeva, K. (2019). The non-monetary benefits of mobile commerce: Extending UTAUT2 with perceived value. *International Journal of Information Management*, 45, 44–55. doi:10.1016/j.ijinfomgt.2018.10.024
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology*, 73(6), 1380–1393. doi:10.1037/0022-3514.73.6.1380
- Sheldon, P. J. (1989). Professionalism in tourism and hospitality. *Annals of Tourism Research*, 16(4), 492–503. doi:10.1016/0160-7383(89)90004-2
- Shemwell, D. J. Jr., & Cronin, J. J. Jr. (1995). Trust and commitment in customer/service-provider relationships: An analysis of differences across service types and between sexes. *Journal of Customer Service in Marketing & Management*, 1(2), 65–75. doi:10.1300/J127v01n02_07
- Shenglin, B., Jiamin, L., Xiaoxia, Q., Kang, H., Dan, L., Zeyu, X., & Peiwen, Z. (2018). *The future of finance is emerging: New hubs, new landscapes*. Cambridge Centre for Alternative Finance. https://www.jbs.cam.ac.uk/fileadmin/user_upload/research/centres/alternative-finance/downloads/2018-ccaf-global-fintech-hub-report-eng.pdf
- Shimizu, N., & Sakata, T. (Eds.). (2012). *The 1st Step of Retail Management [Ichikarano rite-ru manejimennnto]*. Chuou-oukeizaisha Publishing.
- Shively, K. (2014). *How top brand marketers used Twitter during Q4 of 2013*. Academic Press.
- Short, C. R., & Graham, C. R. (2020). (forthcoming). Meaningful online learning: Integrating strategies, activities, and learning technologies for effective designs. *TechTrends*, 64(6).
- Shujahat, M., Hussain, S., Javed, S., Malik, M. I., Thurasamy, R., & Ali, J. (2017). Strategic management model with lens of knowledge management and competitive intelligence. *VINE Journal of Information and Knowledge Management Systems*, 47(1), 55–93. doi:10.1108/VJIKMS-06-2016-0035
- Shum, H.-Y., He, X., & Li, D. (2018). From Eliza to XiaoIce: Challenges and opportunities with social chatbots. *Frontiers of Information Technology & Electronic Engineering*, 19(1), 10–26. doi:10.1631/FITEE.1700826
- Sigala, M., Christou, E., & Gretzel, U. (Eds.). (2012). *Social media in travel, tourism and hospitality: Theory, practice and cases*. Ashgate Publishing, Ltd.
- Sinfield, J. V., Calder, E., McConnell, B., & Colson, S. (2012). How to identify new business models. *MIT Sloan Management Review*, 53(2), 85–90.
- Singh, S. (2004). Impersonalisation of electronic money: Implications for bank marketing. *International Journal of Bank Marketing*, 22(7), 504–521. doi:10.1108/02652320410567926
- Sirmon, D. G., Hitt, M. A., Ireland, R. D., & Gilbert, B. A. (2011). Resource orchestration to create competitive advantage: Breadth, depth, and life cycle effects. *Journal of Management*, 37(5), 1390–1412. doi:10.1177/0149206310385695
- Sivesan, S. (2012). Service Quality and Customer Satisfaction: A Case Study – Banking Sectors in Jaffna District, Sri Lank. *International Journal of Marketing. Financial Services and Management Research*, 1(10), 1–9.
- Skaržauskienė, A., Tamošiūnaitė, R., & Žalėnienė, I. (2013). Defining Social Technologies: Evaluation of social collaboration tools and technologies. *The Electronic Journal Information Systems Evaluation*, 16(3), 232–241.
- Skillsoft. (2001). *E-learning in USA & Canada benchmark survey*. Author.
- Skrbina, D. (2015). *The Metaphysics of Technology*. Routledge.

Compilation of References

- Smith, A., and Anderson, M. (2018). *Social Media Use 2018: Demographics and Statistics*. Pew Research Center.
- Smith, P. R., & Chaffey, D. (2001). *eMarketing eXcellence-at the heart of eBusiness*. Oxford, UK: Butterworth Heinemann.
- Smith, J. R., Mohan, R., & Li, C. S. (1998, October). Content-based transcoding of images in the Internet. In *Proceedings 1998 International Conference on Image Processing. ICIP98 (Cat. No. 98CB36269)* (pp. 7-11). IEEE. 10.1109/ICIP.1998.998987
- Smith, K. G., Smith, K. A., Olian, J. D., Sims, H. P. Jr, O'Bannon, D. P., & Scully, J. A. (1994). Top management team demography and process: The role of social integration and communication. *Administrative Science Quarterly*, 39(3), 412–438. doi:10.2307/2393297
- Söderberg, I. L., Sallis, J. E., & Eriksson, K. (2014). The dark side of trust and the light side of working alliances in financial services. *International Journal of Bank Marketing*, 32(3), 245–263. doi:10.1108/IJBM-02-2013-0014
- So, K. K. F., King, C., Sparks, B. A., & Wang, Y. (2016). The role of customer engagement in building consumer loyalty to tourism brands. *Journal of Travel Research*, 55(1), 64–78. doi:10.1177/0047287514541008
- Somyurek, S., Brusilovsky, P., Cebi, A., Akhuseyinoglu, K., & Guyer, T. (2020). How do students perceive their own and their peers' progress in e-learning? *International Journal of Information and Learning Technology*, 38(1), 49–74. doi:10.1108/IJILT-05-2020-0073
- Speed Test Global Index. (n.d.). Global Speeds June 2020. *Speed Test*. <https://www.speedtest.net/global-index>
- Sramova, B., & Pavelka, J. (2019). Gender differences and wellbeing values in adolescent online shopping. *International Journal of Retail & Distribution Management*, 47(6), 623–642. doi:10.1108/IJRDM-08-2017-0173
- Srinivasan, R., & Moorman, C. (2005). Strategic firm commitments and rewards for customer relationship management in online retailing. *Journal of Marketing*, 69(4), 193–200. doi:10.1509/jmkg.2005.69.4.193
- Staff, E. (2013). Bank of the Future. *Executive Magazine*. <https://www.executive-magazine.com/business-finance/finance/ebanking-lebanon>
- Stair, R. M., & Reynolds, G. W. (2016). *Principles of information systems* (13th ed.). Cengage Learning.
- Stankevich, A. (2017). Explaining the consumer decision-making process: Critical literature review. *Journal of International Business Research and Marketing*, 2(6), 7–14. doi:10.18775/jibrm.1849-8558.2015.26.3001
- StatCounter. (2019). *Social Media Stats Malaysia*. StatCounter Global Stats.
- Statista Research Department. (2019). *Malaysia: social media penetration 2018*. Statista.
- Statista. (2015). *Mobile Phone Penetration Worldwide 2013-2019*. Available from: <https://www.statista.com/statistics/470018/mobile-phone-user-penetration-worldwide/>
- Statista. (2019). *Malaysia: social media penetration 2018 Statistic*. Author.
- Statista. (2019). *Worldwide mobile app revenues in 2014 to 2023 (in billion U.S. dollars)*. Available from: <https://www.statista.com/statistics/269025/worldwide-mobile-app-revenue-forecast/>
- Statista. (2019a). *Robo-advisors – Malaysia | statista market forecast*. <https://www.statista.com/outlook/337/122/robo-advisors/malaysia#market-arpu>
- Statista. (2019b). *Robo-advisors – Sweden | statista market forecast*. <https://www.statista.com/outlook/337/154/robo-advisors/sweden>

- Statista. (2020a). *Apple: Most Popular App Store Categories*. Available from: <https://www.statista.com/statistics/270291/popular-categories-in-the-app-store/>
- Statista. (2020b). *Indonesia Smartphone Penetration (Share of Population)*. Available from: <https://www.statista.com/statistics/321485/smartphone-user-penetration-in-indonesia/>
- Statistics Sweden. (2018). *Sveriges framtida befolkning 2018–2070* [Sweden's future population, 2018–2070]. Statistics Sweden.
- Stauvermann, P. J., & Kumar, R. R. (2016b). Economics of tourism & growth for small island countries. *Tourism Management*, 55, 272–275. doi:10.1016/j.tourman.2016.02.020
- Steiner, G. A. (1979). Contingency theories of strategy and strategic management. *Strategic management: A new view of business policy and planning*, 405-416.
- Steinfeld, C., & Klein, S. (1999). Local vs. Global Issues in Electronic Commerce. *Journal of Electronic Markets*, 9(1-2), 45–50. doi:10.1080/101967899359238
- Stepanova, E. (2011). The role of information communication technologies in the “Arab Spring”. *Ponars Eurasia*, 15(1), 1–6.
- Strauss, J., Ansary, A., & Raymond, F. (2006). *EMarketing*. Pearson Prentice-Hall.
- Strokechet, K., Arnold, T., & Perry, T. (2020). Lebanon's new government may have little reserves left to stabilize economy. *Reuters*. <https://uk.reuters.com/article/us-lebanon-crisis-reserves-analysis/lebanons-new-government-may-have-little-reserves-left-to-stabilize-economy-idUKKBN1ZL2Q4>
- Suhel, S., & Bashir, A. (2018). The role of tourism toward economic growth in the local economy. *Economic Journal of Emerging Markets*, 10(1), 32–39. doi:10.20885/ Ejem.vol10.iss1.art4
- Sujud, H., & Hachem, B. (2019). Effect of The Quality of The Accounting Information System Outputs on Customer Satisfaction in Lebanese Commercial Banks. *International Research Journal of Finance and Economics*, 176.
- Suki, N. M. (2013). Consumer shopping behaviour on the Internet: Insights from Malaysia. *Electronic Commerce Research*, 13(4), 477–491. doi:10.1007/10660-013-9131-2
- Sumitomo Mitsui Trust Bank. (2010). *Net supermarket seeking a business model -Comparison of the delivery methods*. Retrieved from https://dl.ndl.go.jp/view/download/digidepo_10363376_po_713_3.pdf?contentNo=1&alternativeNo=
- SUN. (2020). Uber announces the closure of its offices in Guadalajara The company adapts its business model in the midst of the crisis caused by COVID-19. *The Reporter*. <https://www.informador.mx/economia/Uber-anuncia-el-cierre-de-sus-oficinas-en-Guadalajara-20200522-0129.html>
- SUN. (2020). Uber anuncia el cierre de sus oficinas en Guadalajara La empresa adecua su modelo de negocios en medio de la crisis causada por el COVID-19. *El Informador*. <https://www.informador.mx/economia/Uber-anuncia-el-cierre-de-sus-oficinas-en-Guadalajara-20200522-0129.html>
- Sun, J., & Chi, T. (2017). Key factors influencing the adoption of apparel mobile commerce: An empirical study of Chinese consumers. *Journal of the Textile Institute*, 109(6), 785–797. doi:10.1080/00405000.2017.1371828
- Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183–1202. doi:10.1016/j.compedu.2006.11.007
- Sveriges Riksbank. (2019). *Payments in Sweden 2019*. Sveriges Riksbank.

Compilation of References

- Sweden, S. (2020). *Savings barometer by item, quarter 1996k1–2020k1*. http://www.statistikdatabasen.scb.se/pxweb/en/ssd/START__FM__FM0105/FM0105T01/
- Syam, N., & Sharma, A. (2018). Waiting for a sales renaissance in the fourth industrial revolution: Machine learning and artificial intelligence in sales research and practice. *Industrial Marketing Management*, 69, 135–146. doi:10.1016/j.indmarman.2017.12.019
- Szopiński, T. S. (2016). Factors affecting the adoption of online banking in Poland. *Journal of Business Research*, 69(11), 4763–4768. doi:10.1016/j.jbusres.2016.04.027
- Tabrani, M., Amin, M., & Nizam, A. (2018). Trust, commitment, customer intimacy and customer loyalty in Islamic banking relationships. *International Journal of Bank Marketing*, 36(5), 823–848. doi:10.1108/IJBM-03-2017-0054
- Tadic, D., Aleksic, A., Mimovic, P., Puskaric, H., & Misita, M. (2018). A Model for Evaluation of Customer Satisfaction with Banking Service Quality in An Uncertain Environment. *Total Quality Management & Business Excellence*, 29(11-12), 1342–1361. doi:10.1080/14783363.2016.1257905
- Takieddine, R. (2020). Riad Salameh: In Lebanon, depositors' money is still available. *Arab News*. <https://www.arabnews.com/node/1724476/business-economy>
- Tam, C., & Oliveira, T. (2017). Literature review of mobile banking and individual performance. *International Journal of Bank Marketing*, 35(7), 1042–1065. doi:10.1108/IJBM-09-2015-0143
- Tamilmani, K., Rana, N. P., Prakasam, N., & Dwivedi, Y. K. (2019). The battle of Brain vs. Heart: A literature review and meta-analysis of “hedonic motivation” use in UTAUT2. *International Journal of Information Management*, 46, 222–235. doi:10.1016/j.ijinfomgt.2019.01.008
- Tan, E., & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18–31 doi/ doi:10.1108/YC-07-2015-0053
- Tan, T. M., & Saraniemi, S. (2020). *Stakeholder well-being and engagement in a permissioned blockchain ecosystem*. Working paper.
- Tan, E., & Leby Lau, J. (2016). Behavioural intention to adopt mobile banking among the millennial generation. *Young Consumers*, 17(1), 18–31. doi:10.1108/YC-07-2015-00537
- Tanu, B., & Harpreet, K. (2016). Benefits of Essential Oil. *Journal of Chemical and Pharmaceutical Research*, 8(6), 143–149.
- Tanupabrungsun, S., Hemsley, J., Semaan, B., & Stromer-Galley, J. (2016). Noisy candidates and informative politicians: Analyzing changes in tweet behavior using tweet quality assessment framework. *Proceedings of the 2016 iConference*. 10.9776/16235
- Tao, F. (2014). Customer Relationship management based on Increasing Customer Satisfaction. *International Journal of Business and Social Science*, 5(5), 256–263.
- Tapscott, D., & Tapscott, A. (2016). *Blockchain Revolution: How the Technology behind Bitcoin is Changing Money, Business, and the World*. Penguin.
- Tariq, W., Mehboob, M., Khan, A., & Ullah, F. (2012). The Impact of Social Media and Social Networks on Education and Students of Pakistan. *International Journal of Computer Science Issues*, 9(4), 3.

- Tateke, T., Woldie, M., & Ololo, S. (2012). Determinants of patient satisfaction with outpatient health services at public and private hospitals in Addis Ababa, Ethiopia. *African Journal of Primary Health Care & Family Medicine*, 4(1), 1–11. doi:10.4102/phcfm.v4i1.384
- Tavangarian, D., Leybold, M. E., Nölting, K., Röser, M., & Voigt, D. E. (2004). Is e-Learning the solution for individual learning? *Electronic Journal of e-Learning*, 2(2), 273–280.
- Taylor, D. G., & Levin, M. (2014). Predicting mobile app usage for purchasing and information-sharing. *International Journal of Retail & Distribution Management*, 42(8), 759–774. doi:10.1108/IJRDM-11-2012-0108
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. doi:10.1002/mj.640
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long Range Planning*, 51(1), 40–49. doi:10.1016/j.lrp.2017.06.007
- Teece, D. J., & Pisano, G. (1994). The dynamic capabilities of firms: An introduction. *Industrial and Corporate Change*, 3(3), 537–556. doi:10.1093/icc/3.3.537-a
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. doi:10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z
- Teeny, J. (2015). *Perceived Affect and Cognition as Antecedents to Advocacy* (Master Thesis). Ohio State University. Retrieved from <https://etd.ohiolink.edu/>
- Teikoku Data Bank. (2011). *Investigation of the Food Home Delivery Company* [Shokuzaitakuhaikigyō no keiei jit-taichōsai]. Retrieved from <https://www.tdb.co.jp/report/watching/press/pdf/p110908.pdf>
- Teller, C., Kotzab, H., & Grant, D. B. (2012). The relevance of shopper logistics for consumers of store-based retail formats. *Journal of Retailing and Consumer Services*, 19(1), 59–66. doi:10.1016/j.jretconser.2011.09.001
- Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: A resource-based view. *Strategic Management Journal*, 31(8), 892–902. doi:10.1002/mj.841
- Thakahashi, I. (2016). Net Super as an Innovator - Characteristics and Challenges Seen from Analysis of Business Format Loyal Users [inobetatoshitenonettosupa-gyotairoiyaryuzanobunsekikaramitatokuchotokadai] [maketeingujanaru]. *Marketing Journal*, 36(2), 5–20.
- Thakur, R. (2018). Customer engagement and online reviews. *Journal of Retailing and Consumer Services*, 41, 48–59. doi:10.1016/j.jretconser.2017.11.002
- The Financial Access Survey. (2019). *Financial access survey*. <https://www.imf.org/en/News/Articles/2019/09/27/pr19359-imf-releases-the-2019-financial-access-survey-results>
- The Press. (2016). *Uber will receive payment in cash*. Obtained from https://www.prensa.com/economia/Uber-recibir-pago-efectivo_0_4543795641.html
- The Reporter. (2016). *New executive taxi platforms arrive*. Accessed on January 14, 2016. Available at <https://www.informador.mx/Jalisco/Llegan-nuevas-plataformas-de-taxi-ejecutivo-20160526-0207.html>
- The World Bank. (2017). *Financial inclusion in Malaysia: Distilling lessons for other countries*. <http://documents1.worldbank.org/curated/en/703901495196244578/pdf/115155-WP-PUBLIC-GFM08-68p-FIpaperwebversion.pdf>
- Thomas, L. C. (2010). Consumer finance: Challenges for operational research. *The Journal of the Operational Research Society*, 61(1), 41–52. doi:10.1057/jors.2009.104

Compilation of References

- Thomas, N. T. (2016). An e-business chatbot using AIML and LSA. In *2016 International Conference on Advances in Computing, Communications and Informatics (ICACCI)*, (pp. 2740–2742). IEEE. 10.1109/ICACCI.2016.7732476
- Timmers, P. (1998). Business models for electronic markets. *Electronic Markets*, 8(2), 3–8. doi:10.1080/10196789800000016
- Ting, H., Wong, W., De Run, E.C., & Lau, S.Y.C. (2015). Beliefs about the use of Instagram: An exploratory study. *International Journal of Business and Innovation*, 2(2), 15-23.
- Tiongson, J. (2015). Mobile App Marketing Insights: How Consumers Really Find and Use Your Apps. *Think with Google*. Obtenido de <https://www.thinkwithgoogle.com/articles/mobile-app-marketing-insights.html>
- Tiongson, J. (2015). Mobile App Marketing Insights: How Consumers Really Find and Use Your Apps. *Think with Google*. Retrieved from <https://www.thinkwithgoogle.com/articles/mobile-app-marketing-insights.html>
- Torlak, O., Ozkara, B. Y., Tiltay, M. A., Cengiz, H., & Dulger, M. F. (2014). The effect of electronic word of mouth on brand image and purchase intention: An application concerning cell phone brands for youth consumers in Turkey. *Journal of Marketing Development and Competitiveness*, 8(2), 61–68.
- Totonchi, J., & Kakamanshadi, G. (2011). Globalization and E-Commerce. In *2011 2nd International Conference on Networking and Information Technology*. IACSIT Press.
- Toure, H. (2015). Foreword. In K. Andreasson (Ed.), *Digital divides: The new challenges and opportunities of e-inclusion* (pp. ix–x). CRC Press.
- Trading Economics. Lebanon Government Debt to GDP. (2000-2018). *Union of Arab Banks. About*. <https://uabonline.org>
- Trafficzmg. (2016). *Uber launches the XL version for Guadalajara*. <https://traficozmg.com/2016/01/uber-lanza-la-version-xl-para-guadalajara/>
- Tráficozmg. (2016). *Uber lanza la versión XL para Guadalajara*. <https://traficozmg.com/2016/01/uber-lanza-la-version-xl-para-guadalajara/>
- Trainor, K. J., Andzulis, J., Rapp, A., & Agnihotri, R. (2014). Social media technology usage and customer relationship performance: A capabilities-based examination of social CRM. *Journal of Business Research*, 67(6), 1201-1208.
- Triacca, L., Bolchini, D., Botturi, L., & Inversini, A. (2004). Mile: Systematic usability evaluation for e-Learning web applications. *AACE Journal*, 12(4), 4398–4405.
- Tsai, M. T., Chen, K. S., & Chien, J. L. (2012). The factors impact of knowledge sharing intentions: The theory of reasoned action perspective. *Quality & Quantity*, 46(5), 1479–1491. doi:10.1007/11135-011-9462-9
- Tucker, M., Jubb, C., & Yap, C. J. (2019). The theory of planned behaviour and student banking in Australia. *International Journal of Bank Marketing*, 38(1), 113–137. doi:10.1108/IJBM-11-2018-0324
- Tufano, P. (2009). Consumer finance. *Annual Review of Financial Economics*, 1(1), 227–247. doi:10.1146/annurev.financial.050808.114457
- Tuten, T. L., & Solomon, M. R. (2017). *Social media marketing*. Sage.
- Tzavara, D., Clarke, P., & Misopoulos, F. (2019). An investigation of the impact of Facebook and Instagram on consumer buying behaviour: The case of retail fashion consumers in Rhodes, Greece. *International Journal of Business and Economic Sciences Applied Research*, 12(2), 81–87. doi:10.25103/ijbesar.122.07
- Uber. (2016). *Uber moves Guadalajara*. Obtained from <https://www.uber.com/es-US/cities/guadalajara/>
- Uber. (2016). *Uber mueve a Guadalajara*. Obtenido de <https://www.uber.com/es-US/cities/guadalajara/>

- Uber. (2017). *Newsroom*. Retrieved from <https://newsroom.uber.com/locations/#na-region>
- Uber. (2017). *Sala de redacción*. Retrieved from <https://newsroom.uber.com/locations/#na-region>
- Umanath, N. S. (2003). The concept of contingency beyond “It depends”: Illustrations from IS research stream. *Information & Management*, 40(6), 551–562. doi:10.1016/S0378-7206(02)00080-0
- Uncles, M., Dowling, G., & Hammond, K. (2003). Customer loyalty and customer loyalty programs. *Journal of Consumer Marketing*, 20(4), 294–316. doi:10.1108/07363760310483676
- United Nations. (2011). *Report of the special rapporteur on the promotion and protection of the right to freedom of opinion and expression*. United Nations.
- Uppal & Chawlai. (2009). E-Delivery Channels. *The ICAI Journal of Management Research*, 8(7), 8-9.
- Usher, A. P. (2013). *A History of mechanical inventions* (Revised edition). Courier Corporation.
- Van den Broeck, E., Zarouali, B., & Poels, K. (2019). Chatbot advertising effectiveness: When does the message get through? *Computers in Human Behavior*, 98, 150–157. doi:10.1016/j.chb.2019.04.009
- Van der Cruysen, C., Hernandez, L., & Jonker, N. (2017). In love with the debit card but still married to cash. *Applied Economics*, 49(30), 2989–3004. doi:10.1080/00036846.2016.1251568
- Van Doorn, J., Lemon, K. N., Mittal, V., Nass, S., Pick, D., Pirner, P., & Verhoef, P. C. (2010). Customer Engagement Behaviour: Theoretical foundations and research directions. *Journal of Service Research*, 13(3), 253–266. doi:10.1177/1094670510375599
- Varadarajan, P. R., & Yadav, M. S. (2002). Marketing strategy and the internet: An organizing framework. *Journal of the Academy of Marketing Science*, 30(4), 296–312. doi:10.1177/009207002236907
- Varadarajan, R., & Yadav, M. S. (2009). Marketing strategy in an internet-enabled environment: A retrospective on the first ten years of JIM and a prospective on the next ten years. *Journal of Interactive Marketing*, 23(1), 11–22. doi:10.1016/j.intmar.2008.10.002
- Vazifehdoust, H., Taleghani, M., Esmailpour, F., Nazari, K., & Khadang, M. (2013). Purchasing green to become greener: Factors influence consumers’ green purchasing behaviour. *Management Science Letters*, 3(9), 2489–2500. doi:10.5267/j.msl.2013.08.013
- Veil, S. R., Buehner, T., & Palenchar, M. J. (2011). A Work-In-Process Literature Review: Incorporating Social Media in Risk and Crisis Communication. *Journal of Contingencies and Crisis Management*, 19(2), 110–122. doi:10.1111/j.1468-5973.2011.00639.x
- Vella, J., & Caruana, A. (2012). Encouraging CRM systems usage: a thesis among bank managers. *Management Research Review*, 35(2), 121-133. doi:10.1108/01409171211195152
- Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Servitization, digitization and supply chain interdependency. *Industrial Marketing Management*, 60, 69–81. doi:10.1016/j.indmarman.2016.06.013
- Venkatesh, T., Thong, & Xu. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. *Management Information Systems Quarterly*, 36(1), 157. doi:10.2307/41410412
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *Management Information Systems Quarterly*, 27(3), 425–478. doi:10.2307/30036540

Compilation of References

- Venkatraman, N., & Camillus, J. C. (1984). Exploring the concept of “fit” in strategic management. *Academy of Management Review*, 9(3), 513–525.
- Venturini, F. (2009). The long-run impact of ICT. *Empirical Economics*, 37(3), 497–515. doi:10.1007/00181-008-0243-9
- Venturini, W. T., & Benito, Ó. G. (2015). CRM software success: A proposed performance measurement scale. *Journal of Knowledge Management*, 19(4), 856–875. doi:10.1108/JKM-10-2014-0401
- Verhagen, T., Swen, E., Feldberg, F., & Merikivi, J. (2015). Benefitting from virtual customer environments: An empirical study of customer engagement. *Computers in Human Behavior*, 48, 340–357. doi:10.1016/j.chb.2015.01.061
- Verhoef, P. C., & Langerak, F. (2002). Eleven misconceptions about customer relationship management. *Business Strategy Review*, 13(4), 70–76. doi:10.1111/1467-8616.00235
- Verhoef, P. C., Reinartz, W. J., & Krafft, M. (2010). Customer engagement as a new perspective in customer management. *Journal of Service Research*, 13(3), 247–252. doi:10.1177/1094670510375461
- Verkijika, S. (2018). Factors influencing the adoption of mobile commerce applications in Cameroon. *Telematics and Informatics*, 35(6), 1665–1674. doi:10.1016/j.tele.2018.04.012
- Vivek, S. D., Beatty, S. E., & Morgan, R. M. (2012). Customer engagement: Exploring customer relationships beyond purchase. *Journal of Marketing Theory and Practice*, 20(2), 122–146. doi:10.2753/MTP1069-6679200201
- Volberda, H. W., & Karali, E. (2015). Reframing the compositional capability: A resource-based view on ‘a composition-based view of firm growth. *Management and Organization Review*, 11(3), 419–426. doi:10.1017/mor.2015.39
- Volti, R. (2009). *Society and Technological Change* (7th ed.). Worth Publishers.
- Voorn, R., Veen, G. V. D., Rompay, T. V., & Pruyn, A. (2018). It takes time to tango: The relative importance of values versus traits in consumer brand relationships. *Journal of Consumer Behaviour*, 17(6), 532–541. doi:10.1002/cb.1737
- Voramontri, D., & Klieb, L. (2018). Impact of social media on consumer behaviour. *International Journal of Information and Decision Sciences*, 11(3), 1–25. doi:10.1504/IJIDS.2019.10014191
- Vu, K., Hanafizadeh, P., & Bohlin, E. (2020). ICT as a driver of economic growth: A survey of the literature and directions for future research. *Telecommunications Policy*, 44(2), 101922. doi:10.1016/j.telpol.2020.101922
- Wahlberg, O., Öhman, P., & Strandberg, C. (2016). How personal advisors make a difference in serving “almost rich” bank customers. *International Journal of Bank Marketing*, 34(6), 904–923. doi:10.1108/IJBM-03-2015-0027
- Walaski, P. (2013). Social Media. *Professional Safety*, 58(4), 40–49. PMID:23288529
- Walsham, G. (2017). ICT4D research: Reflections on history and future agenda. *Information Technology for Development*, 23(1), 1–24. doi:10.1080/02681102.2016.1246406
- Walsham, G., & Sahay, S. (2006). Research on information systems in developing countries: Current landscape and future prospects. *Information Technology for Development*, 12(1), 7–24. doi:10.1002/itdj.20020
- Wang, L., Law, R., Guillet, B. D., Hung, K., & Fong, D. K. C. (2015). Impact of hotel website quality on online booking intentions: eTrust as a mediator. *International Journal of Hospitality Management*, 47(1), 108–115. doi:10.1016/j.ijhm.2015.03.012
- Wang, Y. H. (2017). Expectation, service quality, satisfaction and behavioural intention-evidence from Taiwan’s medical tourism industry. *Advances in Management and Applied Economics*, 7(1), 1–16.

- Wang, Y., & Bramwell, B. (2012). Heritage protection and tourism development priorities in Hangzhou, China: A political economy and governance perspective. *Tourism Management*, 33(4), 988–998. doi:10.1016/j.tourman.2011.10.010
- Wang, Y., Han, J. H., & Beynon-Davies, P. (2019). Understanding blockchain technology for future supply chains: A systematic literature review and research agenda. *Supply Chain Management*, 24(1), 62–84. doi:10.1108/SCM-03-2018-0148
- Wang, Y., Tseng, T., Wang, W., Shih, Y., & Chan, P. (2019). Developing and validating a mobile catering app success model. *International Journal of Hospitality Management*, 77, 19–30. doi:10.1016/j.ijhm.2018.06.002
- Warr, P., & Inceoglu, I. (2012). Job engagement, job satisfaction, and contrasting associations with person-job fit. *Journal of Occupational Health Psychology*, 17(2), 129–138. doi:10.1037/a0026859 PMID:22308964
- Watanabe, T. (2014). Profitable Online grocery(Net Super): Comparing Center Shipment Model and Store Shipment Model in terms of advantages and disadvantages [riekinoderunettosupa—sentahaisototempohaisomerittokosutowohi-kaku]. *Sales Innovation (Hanbai-Kakushin)*, 87-90.
- Webster, C., & Ivanov, S. (2014). Transforming competitiveness into economic benefits: Does tourism stimulate economic growth in more competitive destinations? *Tourism Management*, 40, 137–140. doi:10.1016/j.tourman.2013.06.003
- Wee, C. S., Ariff, M. S., Zakuan, N., Tajudin, M. N., Ismail, K., & Ishak, N. (2014). Consumers Perception, Purchase Intention and Actual Purchase Behavior of Organic Food Products. *Review of Integrative Business and Economics Research*, 3(2), 378–397.
- Wells, J. D., Valacich, J. S., & Hess, T. J. (2011). What signal are you sending? How website quality influences perceptions of product quality and purchase intentions. *Management Information Systems Quarterly*, 35(2), 373–396. doi:10.2307/23044048
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171–180. doi:10.1002/mj.4250050207
- Werthner, H., & Klein, S. (1999). *Information technology and tourism: a challenging relationship*. Springer-Verlag Wien. doi:10.1007/978-3-7091-6363-4
- Westerman, G., & Bonnet, D. (2015). Revamping your business through digital transformation. *MIT Sloan Management Review*, 56(3), 10.
- White, C. (2015). The Impact of Motivation on Customer Satisfaction Formation: A Self-Determination Perspective. *European Journal of Marketing*, 49(11/12), 1923–1940. doi:10.1108/EJM-08-2014-0501
- William, A. R. T., Dale, B. G., Visser, R. L., & Van der Wiele, T. (2001). B2B, Old Economy Businesses and the Role of Quality: Part 1 – The Simple Alternative. *Journal of Measuring Business Excellence*, 5(2), 39–44. doi:10.1108/13683040110403925
- Wilson, D. T. (1995). An integrated model of buyer-seller relationships. *Journal of the Academy of Marketing Science*, 23(4), 335–345. doi:10.1177/009207039502300414
- Winer, R. S. (2001). A framework for customer relationship management. *California Management Review*, 43(4), 89–105. doi:10.2307/41166102
- Wirtz, J., Den Ambtman, A., Bloemer, J., Horváth, C., Ramaseshan, B., van de Klundert, J., & Kandampully, J. (2013). Managing brands and customer engagement in online brand communities. *Journal of Service Management*, 24(3), 223–244. doi:10.1108/09564231311326978

Compilation of References

- Wolf, M. V., Sims, J., & Yang, H. (2017). *Value Creation Through Relationships Building On Private And Public Social Media*. Paper presented at the 11th Multi Conference on Computer Science and Information Systems (MCCSIS 2017), Lisbon, Portugal.
- Wolf, D. M., Wenskovitch, J., & Anton, B. B. (2016). Nurses' use of the Internet and social media: Does age, years of experience and educational level make a difference? *Journal of Nursing Education and Practice*, 6(2), 68–75.
- Won, J., & Kim, B.-Y. (2020). The effect of consumer motivations on purchase intention of online fashion-sharing platform. *The Journal of Asian Finance, Economics, and Business*, 7(6), 197–207. doi:10.13106/jafeb.2020.vol7.no6.197
- Wood, S. L., & Lynch, J. G. Jr. (2002). Prior knowledge and complacency in new product learning. *The Journal of Consumer Research*, 29(3), 416–426. doi:10.1086/344425
- Woodside, A. G., & Wilson, E. J. (2003). Case study research methods for theory building. *Journal of Business and Industrial Marketing*, 18(6/7), 493–508. doi:10.1108/08858620310492374
- World Bank Lebanon's Economic Update. (2020). *World Bank Group*. <https://www.worldbank.org/en/country/lebanon/publication/economic-update-april-2020>
- World Economic Forum Report. (2017-2018). Quality of Electricity Supply. *We Forum*. http://reports.weforum.org/pdf/gci-2017-2018/scorecard/WEF_GCI_2017_2018_Scorecard_EOSQ064.pdf
- World Economic Forum. (2017). *The global competitiveness report 2017–2018*. <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>
- Wu, C. C. (2011). The impact of hospital brand image on service quality, patient satisfaction and loyalty. *African Journal of Business Management*, 5(12), 4873–4882.
- Wu, S. I., & Tsai, H. T. (2017). A comparison of the online shopping behavior patterns of consumer groups with different online shopping experiences. *International Journal of Marketing Studies*, 9(3), 24–38. doi:10.5539/ijms.v9n3p24
- Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31(2), 179–188. doi:10.1016/j.tourman.2009.02.016
- Xiao, J. J. (2016). Consumer financial capability and wellbeing. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 3–17). Springer International Publishing. doi:10.1007/978-3-319-28887-1_1
- Xiao, B., & Benbasat, I. (2018). An empirical examination of the influence of biased personalized product recommendations on consumers' decision making outcomes. *Decision Support Systems*, 110, 46–57. doi:10.1016/j.dss.2018.03.005
- Xu, A., Liu, Z., Guo, Y., Sinha, V., & Akkiraju, R. (2017). A new chatbot for customer service on social media. *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, 3506–3510. 10.1145/3025453.3025496
- Xue, W., Li, D., & Pei, Y. (2016). The Development and Current of Cross-border Ecommerce. *Proceedings of Wuhan International Conference on e-Business*, 130-138.
- Xu, Y., Ahokangas, P., Yrjölä, S., & Koivumäki, T. (2018). The blockchain marketplace as the fifth type of electricity market. In *International Conference on Smart Grid Inspired Future Technologies* (pp. 278-288). Springer. 10.1007/978-3-319-94965-9_28
- Yang, F. X. (2017). Effects of restaurant satisfaction and knowledge sharing motivation on eWOM intentions: The moderating role of technology acceptance factors. *Journal of Hospitality & Tourism Research (Washington, D.C.)*, 41(1), 93–127. doi:10.1177/1096348013515918

- Yang, Q., Pang, C., Liu, L., Yen, D. C., & Tarn, J. M. (2015). Exploring consumer perceived risk and trust for online payments: An empirical study in China's younger generation. *Computers in Human Behavior*, 50, 9–24. doi:10.1016/j.chb.2015.03.058
- Yan, M. R., Wang, C. H., Cruz Flores, N. J., & Su, Y. Y. (2019). Targeting open market with strategic business innovations: A case study of growth dynamics in essential oil and aromatherapy industry. *Journal of Open Innovation*, 5(1), 7. doi:10.3390/joitmc5010007
- Yavas, U., Benkenstein, M., & Stuhldreier, U. (2004). Relationships Between Service Quality and Behavioral Outcomes: A Study of Private Bank Customers in Germany. *International Journal of Bank Marketing*, 22, 144–157.
- Yelkikalan, N., Hacıoglu, G., Kiray, A., Ezilmez, B., Soylemezoglu, E., Cetin, H., Sonmez, R., & Öztürk, S. (2012). Emotional intelligence characteristics of students studying at various faculties and colleges of universities. *European Scientific Journal*, 8(8), 33–50.
- Yen, Y., & Wu, F. (2016). Predicting the adoption of mobile financial services: The impacts of perceived mobility and personal habit. *Computers in Human Behavior*, 65, 31–42. doi:10.1016/j.chb.2016.08.017
- Yeoh, E., Othman, K., & Ahmad, H. (2013). Understanding medical tourists: Word-of-mouth and viral marketing as potent marketing tools. *Tourism Management*, 34, 196–201. doi:10.1016/j.tourman.2012.04.010
- Yeo, V., Goh, S., & Rezaei, S. (2017). Consumer experiences, attitude and behavioral intention toward online food delivery (OFD) services. *Journal of Retailing and Consumer Services*, 35, 150–162. doi:10.1016/j.jretconser.2016.12.013
- Yetton, P., Henningsson, S., & Bjorn-Andersen, N. (2013). Ready to acquire': IT resources for a growth-by-acquisition strategy. *MIS Quarterly Executive*, 12(1), 19–35.
- Yeung, E. (2012). How to Launch Your App in an International Market. *Mashable*. Obtenido de <http://mashable.com/2012/02/13/mobile-apps-international/#aeYWOgIPIOq8>
- Yeung, E. (2012). *How to Launch Your App in an International Market*. Mashable. Retrieved from <http://mashable.com/2012/02/13/mobile-apps-international/#aeYWOgIPIOq8>
- Ye, Z., Hashim, N. H., Baghirov, F., & Murphy, J. (2018). Gender differences in Instagram hashtag use. *Journal of Hospitality Marketing & Management*, 27(4), 386–404. doi:10.1080/19368623.2018.1382415
- Yin, R. K. (2012). Case study methods. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.), *APA handbooks in psychology. APA handbook of research methods in psychology*, Vol. 2. Research designs: Quantitative, qualitative, neuropsychological, and biological (pp. 141–155). doi:10.1037/13620-009
- Yuan, S., Ma, W., Kanthawala, S., & Peng, W. (2015). Keep Using My Health Apps: Discover Users' Perception of Health and Fitness Apps with the UTAUT2 Model. *Telemedicine Journal and e-Health*, 21(9), 735–741. doi:10.1089/tmj.2014.0148 PMID:25919238
- Yu, Y., & Kim, H.-S. (2019). Online retailers' return policy and prefactual thinking. *Journal of Fashion Marketing and Management*, 23(4), 504–518. doi:10.1108/JFMM-01-2019-0010
- Zach, F., Gretzel, U., & Xiang, Z. (2010). Innovation in the web marketing programs of American convention and visitor bureaus. *Information Technology & Tourism*, 12(1), 47–63. doi:10.3727/109830510X12747489979628
- Zahra, S. A., Sapienza, H. J., & Davidsson, P. (2006). Entrepreneurship and dynamic capabilities: A review, model and research agenda. *Journal of Management Studies*, 43(4), 917–955. doi:10.1111/j.1467-6486.2006.00616.x

Compilation of References

- Zamani, E. D., & Giaglis, G. M. (2018). With a little help from the miners: Distributed ledger technology and market disintermediation. *Industrial Management & Data Systems*, 118(3), 637–652. doi:10.1108/IMDS-05-2017-0231
- Zarouali, B., Van den Broeck, E., Walrave, M., & Poels, K. (2018). Predicting consumer responses to a chatbot on Facebook. *Cyberpsychology, Behavior, and Social Networking*, 21(8), 491–497. doi:10.1089/cyber.2017.0518 PMID:30036074
- Zeithaml, V., Berry, L., & Parasuraman, A. (1996). The Behavioral Consequences of Service Quality. *Journal of Marketing*, 60, 31–46.
- Zeithaml, V., Bitner, M. J., & Gremler, D. D. (2013). *Services Marketing: Integrating Customer Focus across the Firm* (6th ed.). McGraw Hill.
- Zekiri, J., & Hasani, V. V. (2015). The role and impact of the packaging effect on consumer buying behaviour. *Ecoforum Journal*, 4(1), 232–240.
- Zhang, D., Zhao, J., Zhou, L., & Nunamaker, J. Jr. (2004). Can e-learning replace classroom learning? *Communications of the ACM*, 47(5), 75–79. doi:10.1145/986213.986216
- Zhang, H., Lu, Y., Gupta, S., & Zhao, L. (2014). What motivates customers to participate in social commerce? The impact of technological environments and virtual customer experiences. *Information & Management*, 51(8), 1017–1030. doi:10.1016/j.im.2014.07.005
- Zhang, J., & Danish. (2019). The dynamic linkage between information and communication technology, human development index, and economic growth: Evidence from Asian economies. *Environmental Science and Pollution Research International*, 26(26), 26982–26990. doi:10.1007/11356-019-05926-0 PMID:31313229
- Zhang, K. Z., & Benyoucef, M. (2016). Consumer behavior in social commerce: A literature review. *Decision Support Systems*, 86, 95–108. doi:10.1016/j.dss.2016.04.001
- Zhao, L., Lu, Y., Wang, B., Chau, P. Y., & Zhang, L. (2012). Cultivating the sense of belonging and motivating user participation in virtual communities: A social capital perspective. *International Journal of Information Management*, 32(6), 574–588. doi:10.1016/j.ijinfomgt.2012.02.006
- Zheng, X., Men, J., Yang, F., & Gong, X. (2019). Understanding impulse buying in mobile commerce: An investigation into hedonic and utilitarian browsing. *International Journal of Information Management*, 48, 151–160. doi:10.1016/j.ijinfomgt.2019.02.010
- Zhou, T. (2019). *The effect of flow experience on users' social commerce intention*. Kybernetes. doi:10.1108/K-03-2019-0198
- Zhou, W., Chong, A. Y. L., Zhen, C., & Bao, H. (2018). E-supply chain integration adoption: Examination of buyer–supplier relationships. *Journal of Computer Information Systems*, 58(1), 58–65. doi:10.1080/08874417.2016.1189304
- Zhu, D. H., & Chang, Y. P. (2015). Effects of interactions and product information on initial purchase intention in product placement in social games: The moderating role of product familiarity. *Journal of Electronic Commerce Research*, 16(1), 22–33.
- Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business Research Method* (9th ed.). Thomson South-Western.
- Zolkepli, I. A., & Kamarulzaman, Y. (2015). Social media adoption: The role of media needs and innovation characteristics. *Computers in Human Behavior*, 43, 189–209. doi:10.1016/j.chb.2014.10.050
- Zott, C., & Amit, R. (2008). The fit between product market strategy and business model: Implications for firm performance. *Strategic Management Journal*, 29(1), 1–26. doi:10.1002/mj.642

Zott, C., & Amit, R. (2010). Business model design: An activity system perspective. *Long Range Planning*, 43(2-3), 216–226. doi:10.1016/j.lrp.2009.07.004

Zott, C., Amit, R., & Massa, L. (2011). The business model: Recent developments and future research. *Journal of Management*, 37(4), 1019–1042. doi:10.1177/0149206311406265

Zulkefli, N. A., Iahad, N. A., & Yusof, A. F. (2018). Benefits of social media platform in healthcare. *International Journal of Innovative Computing*, 8(3), 59–63. doi:10.11113/ijic.v8n3.201

Zulkepli, M., Sipan, I., & Jibril, J. D. (2017). An exploratory factor analysis and reliability analysis for green affordable housing criteria instrument. *International Journal of Real Estate Studies*, 11(4), 10–21.

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