

ORGANIZATIONAL FACTORS AND E-COMMERCE ADOPTION IN SMES OF UNITED ARAB EMIRATES: MEDIATING ROLE OF PERCEIVED STRATEGIC VALUE

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ABSTRACT

E-commerce adoption is gaining importance throughout the world because it helps organizations to become more efficient to gain competitive advantage. However, the literature has revealed that e-commerce adoption among small and medium enterprises operating in United Arab Emirates is limited. Therefore, the purpose of this study is to identify the impact of organizational factors over the adoption of e-commerce. While conducting critical literature review a major gap in the body of knowledge was observed because of the missing link of perceived strategic value. Thus, while conducting the empirical analysis mediating role of perceived strategic value has been analyzed with the help of Smart PLS-3 using structural equation modeling technique. The findings revealed that organizational factors have a significant impact over e-commerce adoption intentions as well as over perceived strategic value. Furthermore, perceived strategic value also influences e-commerce adoption intentions. Likewise, the mediating role of perceived strategic value has also been confirmed empirically. Considering the limitations of the study future researchers are guided to conduct exploratory studies with the help of interviews to get more understanding and more information about the factors that may affect e-commerce adoption intentions.

Keywords: Organizational Factors, Organizational Culture, Performance, E-Commerce Adoption

INTRODUCTION

The current study focuses on inspecting the vital predictors of E-Commerce Adoption Intentions in SMEs of the United Arab Emirates (UAE) mediating role of perceived strategic value. Organizational factors (Financial Strength and Decision Makers' Knowledge) have been researched for their determining effect over the Adoption Intentions of electric commerce intentions. This study also considered to spot out the underlying mechanism throughout which certain various circumstances appear into E-commerce adoption intentions, Organizational PSV (Perceived Strategic Value) has vital a role in adoption intentions of E-commerce, and acts as a mediator between organizational factors and E-commerce adoption intentions in this study.

Business across the web or what is habitually pointed to as e-commerce includes conducting monetary activities across the Web, the Internet and/or Smart Phone applications in the transaction for commodities or services (Garrett, Jackson & Wilson, 2015; Jackson et al., 2019; Sultan, Noor, Sultan, Noor & Nasirun, 2018). There are no conventional explanations for the phrase E-commerce and it has many interpretations from varying perspective aspects from researchers, practitioners, and academicians (Lim, Suhaimi Baharudin & Low, 2016).

According to Pham, Pham & Nguyen (2011), Electronic commerce is an efficient way of minimizing the business cost and providing quality service and products, which leads to better relationship with all the stakeholders. It also provide many other opportunities for the stake holders (Arshad et al., 2018). Yet the pace of e-commerce adoption is not very fast due to cultural factors of the enterprises. The slow adoption rate of internet is inconsistent with whole pace of the UAE region (Makki & Chang, 2015).

According to Statista (2018) in upcoming years (2020-2022) the overall development rate will be at CAGR of 11% of the middle east and Africa. In 2016 in middle east only 15% businesses had an online offering, only 10% shopping was done by local and 90% by international transactions. It was also publicised that only 2% of merchandising in the Middle East took place online, although the sector owning one of the utmost consistent internet penetration standards in the globe.

Businesses have prospered, brought opportunities to many fields with the inclusion of technology and internet, processes have evolved as well (Khoo, Ahmi, Al- & Saad, 2016). The advancement of information technology around the globe has brought a more significant phenomena of e-commerce (Khoo et al., 2016). The significant growth in the users of the internet has led e-commerce industry to grow significantly all over the globe, this has positive effect for e-commerce industry (Jain & Kumar, 2018). "Electronic Commerce is any form of business or administrative transaction or information exchange that has been performed through any form of communication and information technology and has positive impacts on the overall productivity of the organization"(p.22) (Yeng & Othman, 2015).

Electronic commerce is change, easy and has plenty of benefits over the more traditional and old way of doing business "brick and mortar". Electronic commerce adds to business in many ways it adds value to income by maximizing it and reduces costs by making business processes simpler and selling and reaching customers easily (Paris & Bahari, 2016). Therefore, e-commerce is a significant arena for study due to its potential encouraging and certain encouragement on industry accomplishment.

Preceding researches have empirically pointed out the factors influencing e-commerce adoption (Abualrob & Kang, 2016; Khoo et al., 2016). Although there has been considerable universal development in electronic commerce, there is gap available for studying adoption of electronic commerce in UAE region as the acceptance rate of the e-commerce has been slow (Makki & Chang, 2014). Based on multiple reasons studies has identifies a low acceptance rate of e-commerce from both businesses and users (Bahaddad, AlGhamdi & Alkhalaf, 2015).

In UAE many businesses have not approved the e-commerce in their business processes although the number of the internet users is increasing highly in UAE. This phenomena is because many hurdles which are non-availability of the updated infrastructure of laws of e-commerce (Bahaddad et al., 2015), the absence of confidentiality and protection (Brdese, et al., 2012) insufficient distribution channels (Bahaddad et al., 2015; Makki & Chang, 2015), the widespread alarm of scams related to credit card (Abed, Dwivedi & Williams, 2015; Alghamdi et al., 2015). This study focuses on significance in several areas of UAE in electronic commerce. E-commerce is helpful in making the business processes simpler and more profitable, reachable to more customers and suppliers, multinational companies after adoption of e-commerce have reached the height of success (Billal, Shin & Sim, 2019).

SMEs contribution to the economy of the countries have a positive impact, creating opportunities and employment for people and adding to economy of the country directly or indirectly. SMEs, especially in Middle East states, are considered slow for technology adoption, particularly in context of e-commerce. There are many categories of SMEs, which are advancing continuously by utilizing the e-commerce practices (Yilmaz et al., 2016). The stage where organizations are confronting the intimidation of disintermediation from the international markets. The "E-commerce adoption" is a mean of encouraging businesses' competitiveness and future survival at this stage. E-commerce's adoption will have positive impact on the overall outcome of the enterprises (Billal et al., 2019). There is very limited

research available in context of e-commerce adoption by SMEs in UAE regions and is considered to be an emerging area of research. Therefore, this research is conducted to formulate a systematic approach by recognising the potential aspects which can influence SMEs to adopt e-commerce in SMEs in UAE countries.

Similarly, Perceived Strategic value leads towards e-commerce adoption and PSV act as a mediator in this study. Therefore, it is important to study perceived personalization as mediator between organizational factors and e-commerce adoption intentions in the SMEs, in United Arab Emirates. As multiple benefits are associated with the use of e-commerce over conventional courses that organizations might not recognize and also basic concerns and challenges that they cannot understand by themselves. Therefore, the findings of this research may help in giving functional recommendation to SMEs of UAE to use e-commerce channels.

The most significant point of this study is based on the context of SMEs in UAE, which is unexplored and will bring significant practical and theoretical implications once completed and can be utilized by the SME sector. The results of the current thesis can also be applied to appraise prospective designs for the formulation of frameworks for e-commerce in the UAE and to other regions of the globe as well. As UAE is aimed to accomplish elasticity and productivity frameworks of particularly in the area of e-commerce, this comprises the cross-border sale of products and services *via* electronic means.

LITERATURE REVIEW

The literature review covers the main literature that is available in the field of e-commerce adoption especially for the SMEs. Initially, e-commerce adoption intentions have been discussed followed by organizational factors that play a major role in developing e-commerce adoption intentions. Afterwards the mediating role of perceived strategic value has been discussed in detail to form the framework of the study.

In the current context of United Arab Emirates, SMEs do not have a specific, framed or precise description has not been authenticated (Aswad & Al-Saleh, 2013). Various organizations have described SMEs differently according to their own interpretation. Organizations use main three standards to describe an SME; which are the amount of assets a company possess, seasonal turnover and the number of workers (Shemi & Procter, 2018). These SMEs are prosperity engines for particular economies; they provide 99% of corporations and 62% employment in the UAE. According to Kingdom of opportunities (2016), SMEs in UAE adds to significant economic activities and help achieve the objectives of the particular economies by creating economic activities, leading to GDP and GNP growth. These SMEs are prosperity engines for particular economies; they provide 99% of corporations and 62% employment in the UAE.

E-Commerce Adoption Intentions

Any sort of transaction conducted over the internet what is commonly known as (e-commerce) includes conducting monetary activities over the Internet, mobile applications and the Web in a swap for goods or (Garrett et al., 2015; Jackson et al., 2019). Scholars agreed that there is not a single or universal definition of e-commerce besides trying to state one (Jackson et al., 2019). The electronic methods refer to electronic technologies, tools, equipment and systems, including telephone, telegram, television, facsimile, e-mail, electronic data interchange, computer, the communication network, credit card, electronic money and the Internet etc.” (p.3). Poon & Swatman (1999), followed (Vladimir, 1996) description of electronic commerce but revised it to encompass the modern information technology of the web. They described e-commerce as “the sharing of business information, maintaining business relationships, and conducting business transactions by means of Internet-based technology” (Poon & Swatman, 1999). Subsequently, the stated description

has been applied, implemented by various scholars (Murphy, Jones, Swayne & Thomas, 2010).

There are many levels in e-commerce, the first level known as business to customer (B2C) in which business offers products or service to their customer on the web directly. This level is followed by business to business also known as B2B where businesses offer their products and services to other businesses *via* online platform. And finally, Customer to customer, also known as C2C where customer sells their products or services direct to other customers online (Schneider, 2014). With the development and emergence of electronic platforms new types of e-commerce has also emerged, these types are social commerce (selling goods and services *via* social sites) and m-commerce (selling goods and services using mobile apps).

This research acknowledges that certain standings describe the identical general purpose of technology application and, academically, it produces collectively forms that were earlier investigated individually, in diverse settings. The advantages and scope of this study related to e-commerce has been guided through a comprehensive framework for the adoption of the technology related to SMEs from the previous studies. Samples of these types involve Internet adoption models, technology acceptance models, the Information Systems (IS) adoption model, IT adoption models, the diffusion of innovation theory, EDI adoption models and e-commerce adoption (Grandon & Pearson, 2004; Kuan & Chau, 2001; Mehrtens & Cragg, 2001; Riemenschneider, Harrison & Mykytyn, 2003; Venkatesh & Bala, 2008). An effective and efficient process of communications leads towards significantly achieving the goals of the organization. A sound communication leads to sound processing of orders and distribution and ultimately leading to fulfilment of the payment. The last phase is the response phase this is where the clients give review and feedbacks.

Empowering communication and connection is different mechanism by which firms overcome the traditional barriers of communication and this leads to higher growth by achieving competitive advantages over other SMEs (Bourgouin, 2002; Mehrtens & Cragg, 2001; Pease & Rowe, 2005) connecting with a new industry in other waste markets will provide more opportunities for the SMEs, these association with new market partners can be achieved by adopting technological advancements. Further benefits of e-commerce incorporate achieving efficient ways of production, producing higher number products and achieving economies of scales, which leads to higher productivity and also lower the cost of production (Harindranath, Dyerson & Barnes, 2008; Karanasios & Burgess, 2008; Migiro & Ocholla, 2005).

The focus is on increasing and repeating business and building a faithful buyer and seller foundation, achievable by the SMEs over e-commerce in many forms. These aspects can be accomplished *via* enhancing consumer offerings in a way more accelerated acknowledgment times to requests and improving and following customers' fulfilment (Harindranath, Dyerson & Barnes, 2008; Quayle, 2002; Teo, Lin & Lai, 2009). Better communication with suppliers and customers and other partner will lead to better relationships (Azam, 2007; Karanasios & Burgess, 2008) which is beneficial for strengthening associations.

Competing edge over other organizations can be accomplished by “e-competitive transformation” (Straub & Horizons, 2001); the process can be produce by accumulations covering non-online contestants (Poon & Swatman, 1999) or from persevering ground facing online opponents (Dyerson & Harindranath, 2007; Harindranath, Dyerson & Barnes, 2008) E-business consequential publicising resources can also be indispensable for SME continuation and engagement. This helps accomplishes important advantages such as boosting businesses and income increase and, consequently, earnings. To have better distribution channels and to reach customer more efficiently and effectively SMEs should invest in technologies (Sheffield, 2019). Building an image of the organization and making a room by achieving certain representation like building character in a global market provides firms with certain benefits and enhances their competitive edge of their competitors (Adjei, Adiku, Kumi & Hesse, 2006; Liao & Par, 2006; Scarborough, Zimmerer & Wilson, 2006).

Thus, organizational factors are among the major motivators behind e-commerce adoption intentions.

Organizational Context

Organizational context is related to the expressive dimensions regarding the company, *i.e.*, structure, scope, managerial, size, and available resources of the organization (Oliveira & Martins, 2010). Though a non-centralized institutional construction with a level of sleekness in competencies for representatives and parallel communication among the employees is significant for productive acceptance of innovative technologies (Baker, 2012), preceding analysis also highlights legal describing connections and centralized judgment producing for executing innovative technologies (Baker, 2012; Bourne et al., 2013). Organizational context's function is important in encouraging innovativeness inside businesses (Bartel, Wrzesniewski & Wiesenfeld, 2012).

Furthermore, although organizational means in courses of material, people, information, and technology are necessary for cultivating innovativeness inside an institution, economic resources are presumably the fundamental component in encouraging innovation and performing new methods, commodities, or offerings. This is because adopting novel technologies wants a financial expense that stretches exceeding those required to direct paramount operational requirements and because monetary sources are necessary for gaining and encouraging the employees, facilities, technology, and foundation required in innovation (Herold, Jayaraman & Narayanaswamy, 2006).

Finally, concerning the part of executive administrative assistance, despite modern technologies in businesses may be significant to magnify productivity, analysis has shown that representatives are frequently rebellious to accept latest technologies mainly because of inadequate information regarding the strategic advantages of modern devices by the executive administration and decision makers (Knight, 2015). Executive management being supportive of innovativeness can lead the organization and its employees to adopt new technologies, encourage and add up to the organization's principle and main vision and mission, by the introduction of modern and up to dated technologies within the organization's processes from top to bottom (Baker, 2012).

Consequently, the determinants considered under the comprehensive dimension of the organization are “decision-makers’ knowledge” and “financial strength”. The “decision-makers’ knowledge” and innovativeness perform a pivotal function in the technology adoption, the more prominent certain characteristics are more chances for new technology adoptions (Thong, 1999). Employees’ consciousness and practice are supposed a necessary character of channel selection (Kim, Jang & Morrison, 2011). The user must possess the understanding and Experience to commence unspecified “innovation adoption”, accompanied by acceptance and implementation of the declaration (Hameed, Counsell & Swift, 2012). In an examination administered across diverse topographies, “81% of senior business executives” recommended information as the fundamental achievement determinant of an enterprise’s invention and maturity (Green, 2016). Scupola (2009) concluded that employees’ knowledge in an organization as an important determinant for the “adoption of e-commerce”. Secondly, financial readiness regards to financial means possible for information technology to compensate for adoption and installation expenses, implementation of any following improvements, and continuing investments throughout practice. Modern technology recognition are influenced by the firms’ capacity as well as resources (Kim et al., 2011). Inadequate monetary sources can require organizations to be over-cautious in their financing and resource investment. On the other side, economic vitality is remarkably important for any “technological innovation” in a firm; which controls and regulate the multiple sources of any organization, finally promoting the innovation investment of an organization (Zhu, Kraemer & Xu, 2006).

Perceived Strategic Value

Grandon & Pearson (2004) observed that understanding of “strategic value comprises of three determinants consisting, managerial productivity, organizational support, and strategic decision aids. Writers were motivated by (Subramanian & Nosek, 2016). Cuddy et al., (2009) explored that understanding of the “perceived strategic value of e-commerce” was inspired by firms' adaptability, innovative attitude and business attractiveness. Investigations about the consequence of information technology expenditure on organization's production (researchers explain organization's execution further as an outcome variable, such as profitability, while others define it more as a mediating variable, such as productivity (Lin & Lee, 2005), have usually produced uncertain or incompatible outcomes (Strassmann, 1985). Loveman (1994), stated that organizational technological investment has had substantially no influence on productivity. While, some researchers have advised adopting alternating levels of positive production influence due to technological investment (Barua, Kriebel & Mukhopadhyay, 1995; Brynjolfsson & Hitt, 1996; Colgate & Stewart, 1998).

Overall conclusions designate that tech has enhanced richness and generated abundant value for customers while enterprise productivity is maintained. Their theoretical examination recommends that firms can accomplish productivity advantages from the competent administration of Information Technology, without understanding these advantages interpret into more extraordinary profitability. Enterprises are executing the tech purchases inevitable to sustain contentious correspondence but are not able to obtain competitive advantage (Brynjolfsson & Hitt, 1996).

TOE Framework

Wade & Quarterly (2004) considered “Technology, Organization, Environment (TOE) framework”, “Diffusion of Innovations (Rogers, 1995)”, “Theory of Planned Behavior (Ajzen, 1991; Ajzen, 1985)”, “Technology Acceptance Model (Davis, 1985)” and “unified theory of acceptance and use of technology (Venkatesh et al., 2003)” etc. as the theoretical underpinning for his research. However, in this study “Technology, Organization, Environment (TOE) framework” is applied because in this model the unit of analysis is organization. At firm's level, TOE framework comprehends “technological, organizational, and environmental factors” to investigate about adoptions of IT (Sila, 2013). Different contexts have different features for example, the “organizational context” is associated to the several features and resources of firms including such as structure, hierarchy, type of business, volume, decision makers and financial strengths etc. Thus the use of TOM framework can facilitate the researcher to inspect the impact of organizational factors on “e-commerce adoption intentions” by providing a valuable model to elucidate the firms' adoption of “e-initiatives” in general, and e-commerce among SMEs in particular (Lippert & Govindarajulu, 2006; Ramdani et al., 2009).

Organizational Factors and E-commerce Adoption Intentions

The prerequisite for the adopters is to have expertise and required knowledge to initiate innovation adoptions along with confirmation of adoptive decisions and ultimately implementations of those adoptions (Hameed et al., 2012). Channels to achieve e-commerce adoption intentions are always largely based upon decision makers' knowledge and experience (Kim et al., 2011). Similarly, Chandra P Jain & Nanda Kumar (2018) stated that knowledge and innovativeness of the decision makers impart an imperative role in technology adoptions and these qualities are directly linked with technology adoptions in long terms.

According to Green (2016) in their survey which was conducted across multiple geographical areas, majority of the senior business leaders (81%) recommended the

knowledge as the major determinant of the organizational growth and “innovation adoption intentions”. In addition, for e-commerce firms it is imperative to have knowledgeable and competent decision makers based on the understating that technology is changing day by day and it demands for continuous innovations in almost all fields.

Financial resources owned by the organizations are considered to be very critical for adopting new technologies as, high cost incurred with long term investments for installation and implementation of new technologies (Yilmaz & Gungordu, 2016). So, it is appropriate to say that organizations with right admittance to adequate financial resources are actually able to adopt technologies of their requirement and interest (Ghobakhloo et al., 2011).

Similarly, studies conducted by Augment (2017); Harborth (2017) depicted the same results related to importance of financial strengths of the organizations for adoption of e-commerce intentions. Similarly, theories like TOE framework stated the significance of organizational features in “e-commerce adoption intentions” and financial strength is one of the utmost important organization factors.

Relationship of Perceived Strategic Value with E-commerce Adoption Intentions

According to Grandon & Pearson (2004) “perceived strategic value” has three dimensions including managerial strategic decision aids, productivity and organizational as measured by (Subramanian & Nosek, 2016) in a study. Whereas, Kwun, Omar & Gentry (2009) explained the significance of “perceived strategic value” for of “e-commerce adoption intentions” which are deemed important for the prosperity of any organization in today’s competitive environment. Likewise, Yilmaz & Gungordu (2016) studied perceived strategic value as a determinant of the “e-commerce adoption intentions”. Similarly, Lim, et al., (2019) demonstrated the effect of “perceived strategic value” on “e-commerce adoption intentions” by SME’s that how PSV facilitate and provides grounds for the adoption of technological advancements and innovative measures to SMEs of any category. Yet, there is immitted research available related to the impact of perception of strategic value on e-commerce adoptions (Lim et al., 2019).

Perceived Strategic Value as a Mediator between Organizational Factors and E-Commerce Adoption Intentions

The adoption of e-commerce is being studied by different scholars in multiple contexts *i.e.*, in context of SMEs (Ates et al., 2013; El-Gohary, 2012; Grandon & Pearson, 2004; MacGregor, 2011; Alam, Ali & Jani, 2011) and in context of customers (Pavlou & Fygenson, 2006). Organizations with more innovation-oriented cultures are more supportive (Billal & Shin, 2019). Alam et al., (2011) also specified that “relative advantage” and “manager’s characteristics” significantly affect adoptions of e-commerce. Among the organizational factors decision makers’ knowledge and final strength is deemed important (Jain & Kumar, 2018), as in a study related to Augmented reality adoptions (Jain & Kumar, 2018) found the impact of decision makers’ knowledge and final strength on adoptions of AR in e-commerce. Likewise, positive impact of financial strengths of the organizations for adoption of e-commerce intentions was studied by (Augment, 2017; Harborth, 2017). Competitive pressure and consumers’ readiness are the critical factors impacting the “e-commerce adoptions” of the firms (Boyajian, 2017). Lee & Runge (2001) stated the importance of financial strength are more important to make strategic decisions about value co-creation at firms’ level, along with this many scholars found that perception of managers/owners is very important in creation perceived strategic value. Still the mediatory role of perceived strategic value between organizational factors and “e-commerce adoption intentions” by SME’s is less explored and tested. TOE framework which deals with all internal and external factors that

facilitate “e-commerce adoption intentions” and also perceived strategic value in SMEs. Thus, the proposed framework in the light of the available literature and TOE framework is as follows

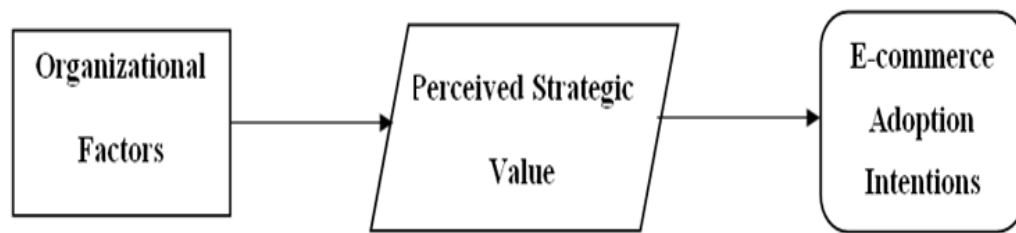


FIGURE 1
THEORETICAL FRAMEWORK

RESEARCH METHODOLOGY

The current research is the understanding about mediating role of perceived strategic value between organizational factors and e-commerce adoption intentions by SMEs operating in UAE. Barnes, Grove & Burns (2003) described that research methodology cover research design which is an outline for directing a research while considering validity and reliability of the instrument used in the research. Quantitative approach is used in the current study for data collection. Current study emphasized to examine the adoption effect of E-commerce in United Arab Emirates by Organizational factors through Perceived Strategic Value. The managers and employees of the SMEs related to multiple industries *i.e.*, Information Technology, Telecom, Engineering, Education and development, Health care, Hospitality, Auto and Manufacturing etc. of United Arab Emirates were the population of the study to check the “adoption of e-commerce” by “organizational factors” of these SMEs. The total number of populations is 22 million in UAE. SMEs in UAE are utilizing technological advancements to better perform their business practices. Therefore, these research emphases on the “E-commerce adoption intentions” in SMEs of UAE countries. For the study anon-probability sampling approach was applied for data collection from managers and employees of the SMEs. An online questionnaire was designed and circulated to the respondents *via* email and other social media channels. Approximately 700 questionnaires were circulated among the managers and employees of the multiple sector SMEs and a response rate of 70.85% was achieved. Later SPSS 25 was used to find the descriptive of demographic variables and smartPLS3 was used to test the framework of the study. The data was collected with the help of a structured questionnaire. The questionnaire was translated into Arabic language for increasing understand ability. For measuring the constructs of the study, a Five-point Likert scale ranging from “1=strongly disagree to 5=strongly agree” was used. A five item scale was adopted from (Thong, 1999) to measure organizational factors of SMEs in United Arab Emirates. Likewise, a sixteen-item scale adopted from Grandon & Pearson, (2004) was used to measure perceived organizational value. And finally, a three-item scale adopted from (Venkatesh & Davis, 2000) was used to measure e-commerce adoption intentions.

DATA ANALYSIS AND RESULT

For this study, descriptive statistics was used for demographic information of the respondents using SPSS 25 (Babbie, 2015). Later on, Smart PLS3 was used to measure the path coefficients and significance of the framework developed in the study. The descriptive analysis starts with gender. The findings are mentioned in figure 2 below:

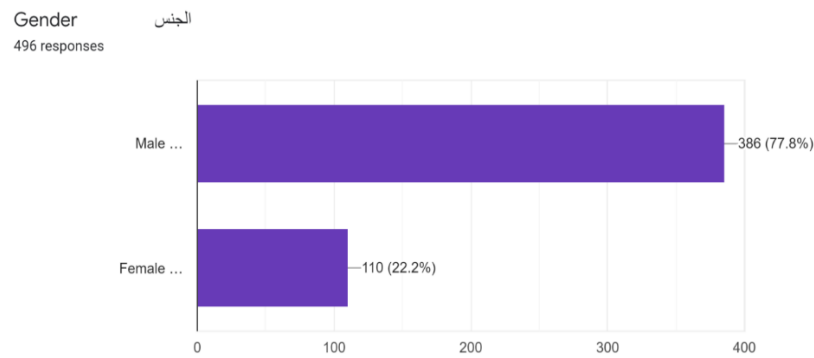


FIGURE 1
GENDER OF THE RESPONDENTS

The graph shows that maximum respondents' employees and owners were males covering 77.8 % of the respondents.

The next demographic variable was age. It was important to check age to know the age group of the respondents. The results of age are mentioned in figure 3 below:

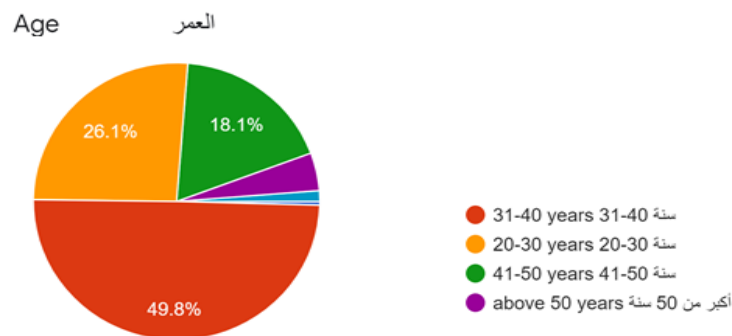


FIGURE 2
AGE OF THE RESPONDENTS

Figure 3 reflect the age distribution of the employees working in SME's who participated in the survey. It is evident from the figure 3 that young participants in age brackets of 20-30 years (26.1%) and 31-40 (49.8%) years old is higher as compared the participants (18.1%) above 41-50 years of age. Whereas only 5% respondents were above 50 years old. The next demographic variable is education.

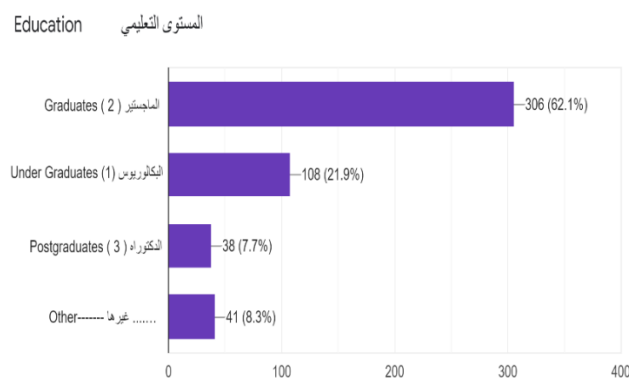


FIGURE 3
EDUCATION OF RESPONDENTS

As far as the educational qualification is concerned the results (figure 4) revealed that 306 respondents were graduates, 108 were undergraduates and 38 were postgraduate and about 8.3% respondents were also qualified other than these three criteria. Thus, the results revealed that most of the respondents were well qualified. Therefore, they have better tendency of adopting e-commerce technologies prevailing in their organizations. The next demographic variable is experience.

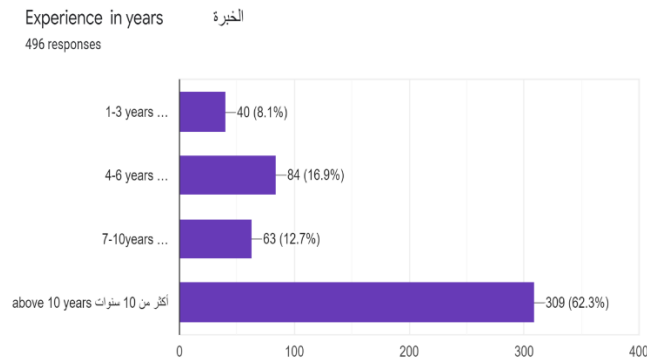


FIGURE 4
EXPERIENCE OF THE RESPONDENTS

The experience statistics stated in figure 5 show that most of the respondents were well experienced *i.e.*, 62.2% respondents were having experience of more than 10 years. 12.6 % had a service experience of 7-10 years, 17% had been serving their duties since, 4-6 years and very few respondents were having least experience of 1-3 years. This reflects that majority of the respondents (309 out of total 496) were well experienced therefore they had good tendencies to adopt the e-commerce practices prevailing in the organization. The next demographic variable is managerial position.

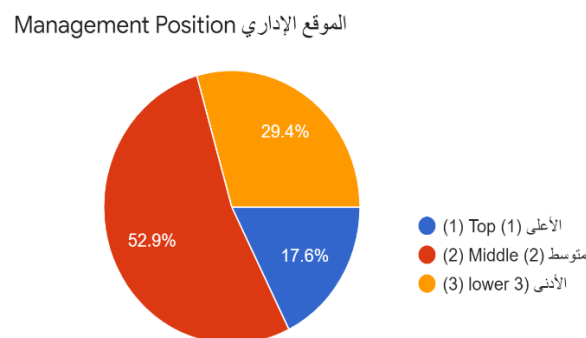


FIGURE 5
MANAGERIAL POSITIONS

As figure 6 depicts that more than half or the respondents (52.9%) were working on the middle level positions, as managers, and some of them were team leaders as well. whereas 29.4% respondents were working at lower-level positions as the employees of different companies working under the supervision of the middle managers. Results further revealed that 17.6% respondents were at top level positions, including owners, directors, CEOs; regional Heads, upper-level manager's managing a number of middle level managers as well as team leaders etc. These results reflect a diverse sample with different managerial positions reflecting a true representative of the whole population. The next demographic variable is firm age.

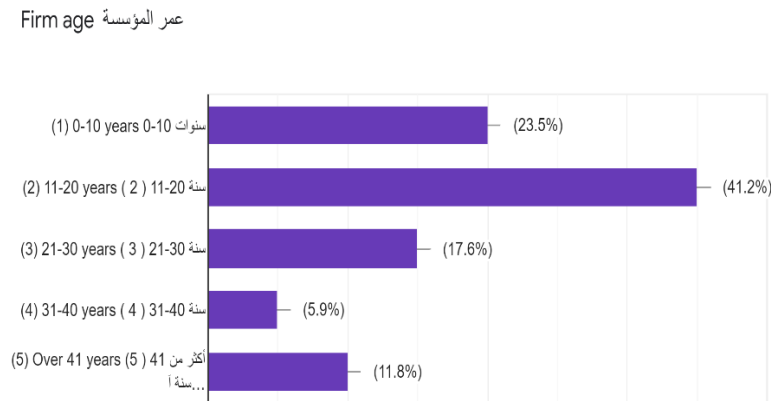


FIGURE 6
EXPERIENCE OF THE RESPONDENTS

Figure 7 revealed the information of the number of years the firm is operating from where the respondents of the study were selected. Survey results reveal that majority of the firms (41.2%) were operating for 11-20 years. 23.5% SMEs were established for 0-10 years, whereas 17.6% were operating for 21-30 years. In contrast only 5.9% were operating for 31-40% and 11.8% SMEs were working for over 41 years. These statistics reveals that most of the forms (64.7%) were operating for less than 20 years. The next demographic variable is ownership.

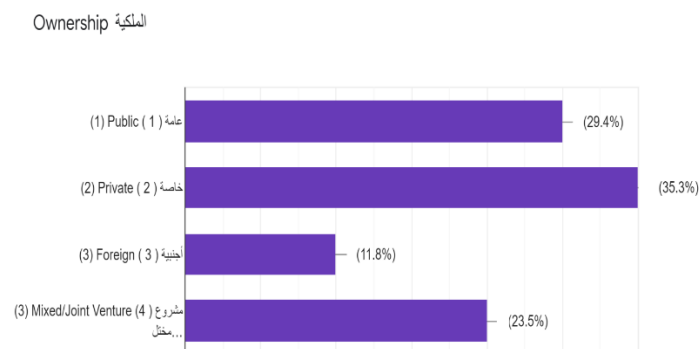


FIGURE 7
FIRM'S OWNERSHIP

Figure 8 reveals the results related to the type of ownership of the SMEs from where the data was collected the results showed that 29.4% SMEs were publicly owned 35.3% were privately owned 11.8% had the foreign ownership and 23.5% were mixed or joint ventures.

After ensuring the descriptive of the demographic variables. The next step is to check the reliability and validity of the instrument used in the study to test the relationships in the framework of the study. Validity is the extent to which a test covers what it aims to measure (Creswell, 1994). Similarly, "Content validity refers to the appropriateness of the content of an instrument. In other words, do the measures questions, observation logs, etc" (Aravamudhan & Krishnaveni, 2015). Likewise, "construct validity" refers to the extent of latent construct measure the underlying items (Creswell & Creswell, 2017). First of all, item loadings have been seen (Hair et al., 2017), followed by Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's alpha. According to (Chua, 2012) reliability is the degree to which variable measures the consistency of what it is intended to measure. "Cronbach's α " and "CR" have been calculated to assess the reliability of measures. In addition, AVE of latent variables should be above 0.50 for all the constructs as shown in the table 1 therefore, "convergent validity" was established (Hair et al., 2010).

	1	2	3	AVE	CR	Cronbach's α
Organizational Factors						
OF1	0.8			0.6	0.88	0.784
OF2	0.79					
OF3	0.7					
OF4	0.78					
OF5	0.79					
Perceived Strategic Value						
PSV1		0.786		0.57	0.91	0.823
PSV2		0.826				
PSV3		0.784				
PSV4		0.793				
PSV5		0.88				
PSV6		0.624				
PSV7		0.685				
PSV8		0.647				
PSV9		0.63				
PSV10		0.766				
PSV11		0.795				
PSV12		0.621				
PSV13		0.707				
PSV14		0.708				
PSV15		0.725				
PSV16		0.674				
E-Commerce Adoption Intentions						
ECAI1			0.84	0.6	0.82	0.81
ECAI2			0.82			
ECAI3			0.66			

Further, "Fornell & Larcker (1981) method" was used to establish the "discriminant validity", and results indicated that the shared variance between various constructs was less than the average variance shared in the latent constructs with their respective indicator variable. Heterotrait-Monotrait (HTMT) ratio is a more accurate measure of discriminant validity while using smart PLS. As it is the rule that the value of HTMT ratio should be less than 0.9. In current study all 3 that all values were less than 0.9 for the entire model depicted in Table 3. These results clearly signify that all the variables are discriminant from each other in terms of items use to measure them.

Constructs	Mean	STD	1	2	3
Technological Factors	3.97	0.59	0.71		
Perceived Strategic Value	4.02	0.39	0.621	0.76	
E-Commerce Adoption Intentions	3.91	0.44	0.612	0.509	0.77

After ensuring that the constructs are reliable and valid the path coefficients have been measured using Bootstrapping technique. 500 sub-samples were used in Bootstrapping. Results have been confirmed through B-coefficients and t-values. Overall model fitness of the model has been measured by the Coefficient of Determination (R^2) which showed a value of 51.6%. In Table 3, the results revealed that organizational factor have a significant positive impact on e-commerce adoption intentions ($\beta=0.199^{***}$, $t=4.928$). Likewise, results also revealed organizational factors have a significant positive impact over perceived strategic value ($\beta=0.213^{***}$, $t=5.904$). Similarly perceived strategic significantly influence e-commerce adoption intentions ($\beta=0.269^{***}$, $t=6.821$). After ensuring the direct relations mediation analysis has been conducted using indirect relationships. The results revealed that perceived strategic value significantly mediate between organizational factors and e-commerce adoption intentions ($B=0.172^{**}$, $t= 4.123$, $p<0.010$).

Hypothesis	Std. Beta	t-Value	p-values	Findings
OF \square ECAI	0.199	4.928	0	Supported
OF \square PSV	0.213	5.904	0	Supported
PSV \square ECAI	0.269	6.821	0	Supported
OF \square PSV \square ECAI	0.172	4.123	0	Supported

DISCUSSION, IMPLICATIONS, LIMITATIONS AND FUTURE DIRECTIONS

All of the relationships of the study were found to be significant, which shows a significant positive impact of organizational factors over e-commerce adoption intentions in SMEs which is in line with the findings of the (Curran et al., 2017; Govinnage & Sachitra, 2019). Adding to that the findings of the current study regarding the relationship of organizational Factors and e-commerce adoption intentions the results are in line with the findings of (Hameed et al., 2012; Kumar, 2018). Additionally, taking into consideration the impact of perceived strategic value over e-commerce adoption intentions the findings are in line with (Subramanian & Nosek, 2016; Yilmaz & Gungordu, 2016). The current study also proved the mediating role of perceived strategic value between organizational factors and e-commerce adoption intentions. Likewise, different factors have been studied with perceived strategic value (Grover & Kohli, 2012; Jeansson et al., 2017; Jiang & Zhao, 2014; Lim et al., 2019; Cantele & Zardini, 2018) but the mediating role of perceived strategic value between organizational factors and e-commerce adoption intentions by SME's is less explored and tested, which is the main contribution of the study.

Thus, this study is a valuable addition in research by contributing to the body of knowledge and providing an avenue for the future researchers to explore the mediatory role of perceived strategic value between different constructs in future. Finally, the current research presents and proves a unique combination of the constructs and is conducted in context of SMEs at United Arab Emirates as they work on the principles of the modern technologies that further help the workforce to work more efficiently and effectively. Further theoretically this study will provide the guidelines for the scholars to further explore the underlying mechanism of Strategic Perceived Value between organizational factors and e-commerce adoption intentions especially in different sectors other than SMEs. In addition, this study is conducted in both individual and organizational context by explaining the benefits received from adopting the e-commerce technology. Further this study is particularly conducted in context of product and service providers at national and international level to the customers at large. The reputation of the individuals

as well as the organization is very important to be kept into consideration that can be build and maintained by providing the employees with latest technologies in accordance with the need of modern societies.

Along with theoretical implications this study provides some valuable insights for the practitioners as well. This will help the organizations to develop different strategies to tackle the problems and access the benefits of e-commerce adoption. This study can be applied as an input for further investigations in different contexts and in different countries related to their dealings with customers and provision of quality information on different channels and also for the other companies which are employing the e-commerce programs in order to test the effectiveness of such programs. Furthermore, along with providing the general training by conducting sessions at larger scale with more participants to brief them or to train them about the use of modern technology to deal with customers, to handle the routine matters and efficiently completion of multiple tasks. It is also likely for the authorities to identify the problems or shortcomings of the workforce at individual level and then individuals with identical results can be grouped together in small group levels and can be provided with the coaching keeping in view the strengths and weaknesses of that group thus making the e-commerce adoption easier and more beneficial according to the needs and requirements of the individual workers.

Along with multiple strengths, there are certain limitations associated with current study, which needs to be addressed in future to have more insights. Secondly, current study established only the mediation mechanism between the relationship of organizational factors and e-commerce adoption intentions, whereas future studies can also examine some moderating variables like motivation of the employees for e-commerce adoption. Finally, in future, qualitative studies can be conducted by the researchers in which interviews can be conducted from that employees as well as owners of the SMEs to know more factors that may motivate them do use the modern technologies. Finally, the same model can be tested empirically by collecting data from other organizations of different sectors.

REFERENCES

- Abed, S.S., Dwivedi, Y.K., & Williams, M.D. (2015). Social media as a bridge to e-commerce adoption in SMEs: A systematic literature review. *The Marketing Review*, 15(1), 39–57.
- Abualrob, A.A., & Kang, J. (2016). The barriers that hinder the adoption of e-commerce by small businesses: Unique hindrance in Palestine. *Information Development*, 32(5), 1528–1544.
- Adjei, A.A., Adiku, T.K., Ayeh-Kumi, P.F., & Hesse, I.F.A. (2006). Prevalence of human immunodeficiency virus infection among tuberculosis suspect patients in Accra, Ghana. *West African Journal of Medicine*, 25(1), 38–41.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes. The theory of planned behavior. Organizational Behavior and Human Decision Processes*.
- Alghamdi, M.A., Alam, M.S., Stark, C., Mohammed, N., Harrison, R.M., Shamy, M., ... & Göen, T. (2015). Urinary metabolites of polycyclic aromatic hydrocarbons in Saudi Arabian schoolchildren in relation to sources of exposure. *Environmental Research*, 140, 495–501.
- Aravamudhan, N., & Krishnaveni, R. (2015). Establishing and reporting content validity evidence of Training and Development Capacity Building Scale (TDCBS). *Management: Journal of contemporary management issues*, 20(1), 131–158.
- Yusri, A., Chin, W.P., Yahaya, N., Nizam, Z., Masrom, R., Nurhafiza, S., & Ibrahim, S. (2018). Small and medium enterprises' adoption for e-commerce in Malaysia Tourism State. *International Journal of Academic Research in Business and Social Sciences*, 8(10), 1457–1557.
- Ates, A., Garengo, P., Cocca, P., & Bititci, U. (2013). The development of SME managerial practice for effective performance management. *Journal of Small Business and Enterprise Development*, 20.
- Augment. (2017). AR in ecommerce: 3 ways augmented reality is benefitting retailers and shoppers - Augment News.
- Azam, R. (2007). E-commerce Taxation and cyberspace law: The integrative adaptation model. *Virginia Journal of Law and Technology*, 12(5), 1–34.
- Bahaddad, A.A., AlGhamdi, R., & Alkhalaf, S. (2015). *Adoption Factors for e-Malls in the SME Sector in Saudi Arabia*.
- Baker, R. (2012). *Membrane technology and applications*.
- Babbie, E.R. (2015). *The practice of social research*. Nelson Education.

- Barnes, R.W., Grove, J.W., & Burns, N.H. (2003). Experimental assessment of factors affecting transfer length. *ACI Structural Journal*, 100(6), 740–748.
- Bartel, C.A., Wrzesniewski, A., & Wiesenfeld, B. (2012). The struggle to establish organizational membership and identification in remote work contexts. In *Identity and the Modern Organization*, 119–134.
- Barua, A., Kriebel, C.H., & Mukhopadhyay, T. (1995). Information technologies and business value: An analytic and empirical investigation. *Information Systems Research*, 6(1), 3–23.
- Billal, H., & Shin, H. (2019). Critical Success Factors (CSF) on e-Commerce Adoption in Bangladesh SMEs. *Search.Proquest.Com*. Retrieved from Bourgooin, F. (2002). Information communication technologies and the potential for rural tourism SMME development: The case of the Wild Coast. *Development Southern Africa*, 19(1), 191–212.
- Bourne, C., Aydemir, Ö., Martínez, B.V., Bora, E., Brissos, S., Cavanagh, J.T.O., ... & Goodwin, G.M. (2013). Neuropsychological testing of cognitive impairment in euthymic bipolar disorder: An individual patient data meta-analysis. *Acta Psychiatrica Scandinavica*, 128(3), 149–162.
- Boyajian, L. (2017). The 3 biggest challenges facing augmented reality.
- Brdesee, H., Corbitt, B., Pittayachawan, S., & Alsaggaf, W. (2012). Organisational culture and adoption of electronic commerce: A study of the Saudi Arabian tourism market. *ICCSE 2012 - Proceedings of 2012 7th International Conference on Computer Science and Education*, 857–862.
- Brynjolfsson, E., & Hitt, L.M. (1996). *Paradox Lost? Firm-Level Evidence on the Returns to Information Systems Spending*.
- Creswell, J.W., & Creswell, J.D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Cantele, S., & Zardini, A. (2018). Is sustainability a competitive advantage for small businesses? An empirical analysis of possible mediators in the sustainability–financial performance relationship. *Journal of Cleaner Production*, 182, 166–176.
- Chandra, P., Jain, S.S., & Kumar, P.K.S. (2018). Exploring factors influencing organizational adoption of augmented reality in e-commerce: Empirical analysis using technology-organization-environment model. *Journal of Electronic Commerce Research*, 19.
- Lim, C.S., Baharudin, S.A., & Low, Q.R. (2016). E-commerce adoption in Peninsular Malaysia: Perceived strategic value as moderator in the relationship between perceived barriers, organization readiness and competitor pressure. *Journal of Theoretical and Applied Information Technology*, 91(2). Retrieved from www.jatit.org
- Colgate, M., & Stewart, K. (1998). The challenge of relationships in services - A New Zealand study. *International Journal of Service Industry Management*, 9(5), 454–468.
- Creswell, J.W. (1994). Quantitative and qualitative paradigm assumptions. *Research Design: Qualitative and Quantitative Approaches*.
- Cuddy, A.J.C., Fiske, S.T., Kwan, V.S.Y., Glick, P., Demoulin, S., Leyens, J.P., ... & Ziegler, R. (2009). Stereotype content model across cultures: Towards universal similarities and some differences. *British Journal of Social Psychology*, 48(1), 1–33.
- Curran, V., Matthews, L., Fleet, L., Simmons, K., Gustafson, D.L., & Wetsch, L. (2017). A review of digital, social, and mobile technologies in health professional education. *Journal of Continuing Education in the Health Professions*, 37(3), 195–206.
- Davis, F.D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results. *Management*.
- Dyerson, R., & Harindranath, G. (2007). ICT adoption & use by SMEs in the UK: A survey of South East. *Portland International Conference on Management of Engineering and Technology*, 1756–1770.
- El-Gohary, H. (2012). Factors affecting E-Marketing adoption and implementation in tourism firms: An empirical investigation of Egyptian small tourism organisations. *Tourism Management*, 33(5), 1256–1269.
- Garrett, B.M., Jackson, C., & Wilson, B. (2015). Augmented reality m-learning to enhance nursing skills acquisition in the clinical skills laboratory. *Interactive Technology and Smart Education*, 12(4), 298–314.
- Aswad, G.N., & Al-Saleh, Y. (2013). IJIKMMENA 2,2 Clean energy awareness Campaigns in the Uae: An awareness promoters perspeCtive. In *International Journal of Innovation and Knowledge Management in Middle East & North Africa*, 2.
- Ghobakhloo, M., Aranda, A.D., & Amado, B.J. (2011). Adoption of e-commerce applications in SMEs. *Industrial Management and Data Systems*, 111(8), 1238–1269.
- Govinnage, D.Y., & Sachitra, K.M.V. (2019). Article no.AJARR.51511 Reviewers: (1) Atilla Akbaba. In *Asian Journal of Advanced Research and Reports*, 6.
- Grandon, E.E., & Pearson, J.M. (2004). Electronic commerce adoption: An empirical study of small and medium US businesses. *Information and Management*, 42(1), 197–216.
- Green. (2016). The knowledge advantage.
- Grover, A., & Kohli, K.A. (2012). Full-diversity high-rate space-time block-coded systems using estimated channel state information for symbol detection. *International Journal of the Physical Sciences*, 7(17), 2539–2548.

- Hameed, M.A., Counsell, S., & Swift, S. (2012). A conceptual model for the process of IT innovation adoption in organizations. *Journal of Engineering and Technology Management - JET-M*, 29(3), 358–390.
- Harborth, D. (2017). Augmented reality in information systems research: A systematic literature review a systematic literature review on augmented reality augmented reality in information systems research. *A Systematic Literature Review*.
- Harindranath, G., Dyerson, R., & Barnes, D. (2008). ICT adoption and use in UK SMEs: a Failure of Initiatives? *The Electronic Journal Information Systems Evaluation*, 11, 91–96.
- Herold, D.M., Jayaraman, N., & Narayanaswamy, C.R. (2006). What is the relationship between organizational slack and innovation? *Journal of Managerial Issues*, 18(3), 372–392.
- Hair, J.F., Black, W.C., Babin, B.J., & Anderson, R.E. (2010). *Multivariate Data Analysis – A Global Perspective*, (7 edition). Upper Saddle River, NJ: Pearson Prentice Hall.
- Hair, J.F., Sarstedt, M., Ringle, C.M., & Gudergan, S.P. (2017). *Advanced issues in partial least squares structural equation modeling*. Sage publications.
- Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. *Action Control*.
- Jackson, S.E., Perski, O., Crane, D., Michie, S., West, R., & Brown, J. (2019). Effectiveness of an offer of the Smoke Free smartphone application for smoking cessation: Protocol for a randomized controlled trial. *Addiction*, 114(11), 2078–2086.
- Jeansson, J., Nikou, S., Lundqvist, S., Marcusson, L., Sell, A., & Walden, P. (2017). SMEs' online channel expansion: Value creating activities. *Electronic Markets*, 27(1), 49–66.
- Jiang, Y., & Zhao, J. (2014). Co-creating business value of information technology. *Industrial Management and Data Systems*, 114(1), 53–69.
- Karanasios, S., & Burgess, S. (2008). Tourism and internet adoption: A developing world perspective. *International Journal of Tourism Research*, 10(2), 169–182.
- Khoo, V., Ahmi, A., Al-, R., & Saad, J. (2016). A comprehensive review on e-commerce research articles you may be interested. In *An analysis of e-business adoption by Indonesian manufacturing SMEs: A conceptual framework AIP Conference*. 2020.
- Kim, D.Y., Jang, S., & Morrison, A.M. (2011). Factors affecting organizational information technology acceptance: A comparison of convention and visitor bureaus and meeting planners in the United States. *Journal of Convention and Event Tourism*, 12(1), 1–24.
- Kingdom of opportunities. (2016).
- Knight, R. (2015). Convincing skeptical employees to adopt new technology. *Harvard Business Review*, 2, 1–7.
- Kuan, K., & Chau, P. (2001). A perception-based model for EDI adoption in small businesses using a technology–organization–environment framework. *Elsevier*.
- Kwun, O., Omar, A., & Gentry, D. (2009). Factors that influence strategic value in e-commerce. *Among Small Business*. 504, 60–69.
- Lee, J., & Runge, J. (2001). Adoption of information technology in small business: Testing drivers of adoption for entrepreneurs. *Journal of Computer Information Systems*, 42(1), 44–57.
- Liao, Y., & Par, R. (2006). The affect of e-commerce on travel agent in Taiwan. Retrieved from <http://www.airitilibrary.com/Publication/alDetailedMesh?docid=19911629-200612-1-4-102-114-a>
- Lim, S.C., Pan, X.Y., Lim, S.P., Lee, C.K., & Tan, J.S. (2019). Understanding of e-commerce adoption in Malaysia and the mediation effects of perceived strategic value. *Journal of Advanced Research in Dynamic and Control Systems*, 11(S5), 813–819.
- Lin, H.F., & Lee, G.G. (2005). Impact of organizational learning and knowledge management factors on e-business adoption. *Management Decision*, 43(2), 171–188.
- Lippert, S. K., & Govindarajulu, C. (2006). Technological, organizational, and environmental antecedents to web services adoption. In *Communications of the IIMA* (Vol. 6).
- Loveman, G.W. (1994). An assessment of the productivity impact of information technologies. *Information Technology and the Corporation of the 1990s*, 84–110.
- MacGregor, R.C. (2011). The role of strategic alliances in the ongoing use of electronic commerce technology in regional small business. *Journal of Electronic Commerce in Organizations*, 2(1), 1–14.
- Makki, E., & Chang, L.C. (2014). E-commerce in Saudi Arabia: Acceptance and implementation difficulties. *The 2014 International Conference on E-Learning, e-Business, Enterprise Information Systems, and e-Government (EEE'14)*, 114–120.
- Makki, E., & Chang, L.C. (2015). Understanding the effects of social media and mobile usage on e-commerce: An exploratory study in Saudi Arabia. In *International Management Review*, 11.
- Mehrtens, J., & Cragg, P. (2001). A model of Internet adoption by SMEs. *Elsevier*.
- Migiros, S., & Ocholla, D. (2005). Information and communication technologies in small and medium scale tourism enterprises in Durban, South Africa information support for students with disabilities view project macroeconomic new announcements and volatility of stock returns in Nigeria View project.
- Murphy, L., Jones, J., Swayne, H., & Thomas, B. (2010). *The “Knock-on” effect of e-business upon graphic design SMEs in South Wales*.
- Oliveira, T., & Martins, M.F. (2010). Information technology adoption models at Firm Level: Review of literature. *4th European Conference on Information Management and Evaluation, ECIME 2010*, 14, 312–322.

- Paris, D., Bahari, M., Iahad, N., & Ismail, W. (2016). Systematic literature review of e-commerce implementation studies. *Search.Ebscohost.Com*.
- Pavlou, P.A., & Fygenson, M. (2006). Understanding and predicting electronic commerce adoption: An extension of the theory of planned behavior. *MIS Quarterly: Management Information Systems*, 30(1), 115–143.
- Pease, W., & Rowe, M. (2005). Diffusion of innovation - The adoption of electronic commerce by Small and Medium Enterprises (SMES)- A comparative analysis. *Australasian Journal of Information Systems*, 13(1).
- Pham, L., Pham, L.N., Nguyen, D.T.T. (2011). Determinants of e-commerce adoption in Vietnamese small and medium sized enterprises. *Search.Ebscohost.Com*.
- Poon, S., & Swatman, P.M.C. (1999). An exploratory study of small business Internet commerce issues. *Elsevier*.
- Quayle, M. (2002). E-commerce: The challenge for UK SMEs in the twenty-first century. *International Journal of Operations and Production Management*, 22(9–10), 1148–1161.
- Ramdani, B., Kawalek, P., & Lorenzo, O. (2009). Predicting SMEs' adoption of enterprise systems. *Journal of Enterprise Information Management*, 22, 10–24.
- Riemenschneider, C.K., Harrison, D.A., & Mykytyn, P.P. (2003). Understanding it adoption decisions in small business: Integrating current theories. *Information and Management*, 40(4), 269–285.
- Rogers, E.M. (1995). Diffusion of innovations: Modifications of a model for telecommunications. In *Die Diffusion von Innovationen in der Telekommunikation*, 25–38.
- Scarborough, N., Zimmerer, T., & Wilson, D. (2006). *Effective small business management: An entrepreneurial approach*.
- Schneider, G.P. (2014). *Electronic Commerce, (11th edition)*.
- Scupola, A. (2009). SMEs' e-commerce adoption: Perspectives from Denmark and Australia. *Article in Journal of Enterprise Information Management*.
- Alam, S., Ali, Y.M., & Jani, F.M. (2011). An empirical study of factors affecting electronic commerce adoption among smes in Malaysia. *Journal of Business Economics and Management*, 12(2), 375–399.
- Sheffield, G. (2019). An examination of e-commerce and its influence on the traditional and e-commerce supply chain models.
- Shemi, A.P., & Procter, C. (2018). E-commerce and entrepreneurship in SMEs: Case of my Bot. *Journal of Small Business and Enterprise Development*, 25(3), 501–520.
- Sila, I. (2013). Factors affecting the adoption of B2B e-commerce technologies. *Electronic Commerce Research*, 13(2), 199–236.
- Statista, T. (2018). Number of apps available in leading app stores as of 3rd Quarter.
- Strassmann, P. (1985). Information payoff: The transformation of work in the electronic age.
- Straub, D., & Horizons, R.K. (2001). *E-competitive transformations*.
- Subramanian, G.H., & Nosek, J.T. (2016). An empirical study of the measurement and instrument validation of perceived strategy value of information systems an empirical study of the measurement and instrument validation of perceived strategy value of information systems. *Journal of Computer Information Systems*.
- Sultan, A., Noor, S.M., Sultan, A., Noor, M.S., & Nasirun, N. (2018). Technological factors and e-commerce adoption among small medium enterprises in Kurdistan, Iraq. *Article in Journal of Engineering and Technology Management*, 8(1), 10–13.
- Teo, T.S.H., Lin, S., & Lai, K.H. (2009). Adopters and non-adopters of e-procurement in Singapore: An empirical study. *Omega*, 37(5), 972–987.
- Thong, J.Y. (1999). An integrated model of information systems adoption in small businesses. *Journal of Management Information Systems*, 15(4), 187–214.
- Venkatesh, V., & Bala, H. (2008). Technology acceptance model 3 and a research agenda on interventions. *Decision Sciences*, 39(2), 273–315.
- Venkatesh, V., & Davis, F.D. (2000). Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.
- Venkatesh, V., Morris, M.G., Davis, G.B., & Davis, F.D. (2003). User acceptance of information technology (1). *MIS Quarterly*.
- Vladimir, Z. (1996). Electronic commerce: Structures and Issues. *International Journal of Electronic Commerce*, 1(1), 3–23.
- Wade, M, quarterly, J.H.M. (2004). The resource-based view and information systems research: Review, extension, and suggestions for future research. *DI.Acm.Org*.
- Yeng, K., & Othman, H.Y. (2015). E-Commerce adoption among Small and Medium Enterprises (SMEs) in Northern State of Malaysia. *(Print) Mediterranean Journal of Social Sciences MCSER Publishing*, 6, 2039–2117.
- Yilmaz, K., & Gungordu, A. (2016). E-Commerce adoption as a predictor of the perceived strategic value of e-commerce among e-commerce adopter SMEs in Turkey. *International Journal of Managerial Studies and Research*, 4(3).

Yilmaz, K., Gungordu, A., Ayci, A., & Yumusak, T. (2016). E-commerce adoption as a predictor of the perceived strategic value of e-commerce among e-commerce adopter SMEs in Turkey. *International Journal of Managerial Studies and Research*, 4(3).

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