



Mediating role of Perceived Strategic Value between Technological Factors and E-Commerce Adoption intentions in SMEs in United Arab Emirates

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ABSTRACT

The purpose of the study was to identify the mediating role of perceived strategic value between technological factors and e-commerce adoption intentions among Small and medium enterprises operating in United Arab Emirates. For the said purpose critical review of the literature was conducted to develop the framework for empirical testing. The data was collected from the middle top and lower-level employees and the owners. A questionnaire was used as an instrument to collect the data, the instrument was adopted based on previous studies. The results of structural equation modeling confirmed the framework of the study and ensured that perceived strategic value significantly and positively mediates the relationship between technological factors and e-commerce adoption intentions. The future researchers are guided to conduct longitudinal studies to find the long-term effect.

KEYWORDS

Perceived strategic value, technological factors, e-commerce adoption. Small and medium enterprises

INTRODUCTION

Technological advancement has paved the path for substitute sales means for businesses in the system of electronic market web channels, this activity has benefited the consumers and the businesses (Ledwaba, Pelsler, & Fatoki, 2019). Napier, Rivers, and Wagner (2005) declared that nowadays scholars used to exchange the definition of e-Business and e-commerce, accordingly he continued reach of e-commerce into more widespread understanding to incorporate not only the purchasing and sale of products but also incorporate distribution and transfer of data, give consumer service before vending and after-sale, the association with marketing associate and the struggle to enhance potency inside businesses (Lim et al., 2019, p. 1566). Currently the e-commerce activities are on the surge by Small and Medium Enterprises (SMEs). These activities not only add to the profit the SMEs but also a better way of engagement with customers and suppliers (Yusri Arshad et al., 2018).

Electronic commerce cannot just benefit the multinational and large companies but SMEs the same way. The development of e-commerce is positively effecting all of the industries, and it is because the availability of internet infrastructure (Arshad, Ibrahim, & Chook, 2016). Enterprises have profited from electronic commerce in various perspectives. Few of these advantages incorporate distinct universally convenient sales channels (Schleicher, Baumann, Sullivan, & Yim, 2019) obtaining straight profits from the decrease of expenses throughout the business process enhanced consumer assistance (Gregory, Albritton, & Osmonbekov, 2010), achieving a competitive edge by decreasing the duration among making and retailing (Olatokun et al., 2010), and familiarizing the manufacturer name or corporate brand (Wanyoike et al., 2012,). Yet e-commerce adoption rate in the region is slow, however, new technological development has paved the way for new possibilities for SMEs in the region to overcome the hurdles and constraints faced by e-commerce.

SME's can also join the road of adopting e-commerce as the "adoption of e-commerce" is relatively cheaper comparing to previous decades. As the e-commerce exercises emerged, which can support the business in enhancing their value and investigating for the current potential market, most of the large company have embraced and extended their business via e-commerce applications (McGill, Klobas, & Renzi, 2014). Despite of the fact that the acceptance rate of e-commerce among SMEs in UAE nations is quite ample in its infancy phase. It is very crucial because SMEs have a signification contribution towards the development of economy of UAE (Shemi & Procter, 2018).

Enterprises have embraced and updated their business models and achieved best procedures to do businesses by adopting technological change and improving their capabilities (Enginkaya

& Yilmaz, 2014; Rathore, Ilavarasan, & Dwivedi, 2016), e-commerce activities of SMEs in United Arab Emirates has been using and adopting technology via different stages. 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 mediating role of perceived strategic value between technological factors and e-commerce adoption intentions of SMEs in UAE. Thus, this study could be used as a functional recommendation to SME of UAE to use e-commerce channels in a better way.

LITERATURE REVIEW

In the literature review initially e-commerce adoption intentions have been discussed followed by technological factors and perceived strategic value. In this section the available literature is gathered and compared. Initially, there is a need to understand the importance and role of SMEs in the current context of United Arab Emirates. SMEs do not have a specific, framed or precise description has not been authenticated (Ghazal 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).

E-Commerce Adoption Intentions

With the development and emergence of internet and web offerings produced with its innovative patterns of communication technologies where surfers and users can about immediately transfer information between one another (Cruz-Jesus, Pinheiro, & Oliveira, 2019). Scholars agree that the fundamental idea of e-commerce is regarding managing various types of trading ventures on the web, while the difference is their main domain of the trade. While, some scholars use the words e-commerce and e-business reciprocally and some of the scholars states that these terms means different things (Chandra & Kumar, 2018). For instance, Garrett et al. (2015) describes electronic commerce as “the type of business that delivers services and products over electronic-based systems through marketing, distribution, buying,

and selling” (p.6). Otherwise, Qin et al. (2014) describes e-business as “the process whereby traditional trade is carried out by electronic methods.

For the scope of this study, the term of e-commerce is utilized in a most widespread understanding and is described as the overall method of buying and selling services and goods via the internet through different sources. This includes all sorts of activities of engaging with customers before sales and after sales, promotional activities and providing warranty and quality assurance programs to its customers (Sparling, Cater-Steel, & Toleman, 2010). There are many levels into which e-commerce is categorized, the first level is business to customer (B2C). The Second level is known as business to business also known as B2B level. The third level is known as Customer to customer, also known as C2C.

Preceding researches have distributed the e-commerce implementation method into degrees of construction, which allows appraisal of stages of embracing inside companies to be adjusted (Billal & Shin, 2019). Willcock (2000) claimed that e-commerce design organizations are organized utilizing fundamental web means and the construction of websites. Levy and Powell (2003) stated that business used to start by distributing their brochure ware.

Chen and McQueen (2008) also stated four levels of electronic commerce. The first stage involves collecting information regarding the customer and emailing for communication building with the client and providers. The next level includes marketing the information through different websites and sending emails to different categories of users. The third level includes the order process of the client on the web and sorting out the way of payment through the traditional way. The last step is when the transaction is concluded via an online payment way, by transfer the due amount from the client to the provider via online transaction of m-payment.

Former investigation in SMEs has pointed out a difference of high level advantages of adoption of electronic commerce comprising developing organizational profits and income increase (Karagozoglu & Lindell, 2004) and covering durability and expected endurance in a vibrant, aggressive setting (Stansfield & Grant, 2003). In the global travel market where connecting with each other is an advantage and separation is for SMEs are considered as warning, encourages the growth of electronic commerce, which leads to sound finances and generation of innovative goods and services (Asia-Pacific Economic Cooperation, Telecommunications Working Group, Business Facilitation Steering Group (Azam, 2007). Additionally, increasing the consumer base from an enhanced experience to comprehend global businesses through the smooth process of information from one end to the with any extra cost and hurdles on a universal scale may be accomplished (MacGregor, 2011; Qin et al., 2014).

More extended advantages incorporate improving SMEs' business experience by strengthening their overall technological capacities (Kim & Srivastava, 2007), advancing the manner of inner information distribution (Daniel & Wilson, 2002), and sending out connected dealings (América Álvarez Domínguez, 2012) counting both order receiving and following methods (Adjei et al., 2006; Klein, 1999). Overabundance of benefits and rewards in e-commerce application recognized in existing studies insinuates these benefits and advantages will be valuable in the decision formulation of SMEs' supervisors concerning the adoption method, the extent to which e-commerce is practiced in today's markets.

Moreover, in contradiction with those investigations that have manifested the advantages as outcomes of e-commerce adoption (Alcaniz, Manzano, Simo, & Mafe, 2009) this analysis distinguishes how the advantages of adoption influence the actual adoption of e-commerce. This study specifically focuses on investigating the advantages of the e-commerce influence the performance of small-medium enterprises United Arab Emirates Country, to accomplish this objective the aspirations of the research are to recognize and categorise the most prominent advantages of e-commerce.

Technological Context

Technological context is the sum of all features related to an organization whether its inside processes conducted via updated technology or the outside activities facilitated and initiated by the modern technology, adding to the productivity and increasing the capabilities of the organization (Yoshikawa, 1978). To adopt up to date technology productively organizations have to be technical regarding the process of adoption by having the necessary knowledge related to the technology and expertise needed to run and implement these technologies. The traditional system that is used the essential procedures for examining the adoption of modern technology. Modification are synthetic, productive, or thoroughly irregular in kind (Chandra & Kumar, 2018).

An incremental shift describes enumerating characteristics to the existent technological setting. Artificial modifications are approaches that take out a distinct procedure design for subsisting equipment, and completely irregular inventions are those wherein the new technology completely reshapes the whole process comparing to the old traditional ways (Hristov & Reynolds, 2015).

As new technology proceeds to completely interrupt enterprises, it also can seldomly overpowering the enterprises are not scientifically qualified to examine the new technologies (Hashim, 2009). Furthermore, it is remarkably significant for enterprises to recognize the competing influence that modern technology grants in connection to the present technologies,

as corporations are reluctant to investigate new technologies (Hashim, 2009). Consequently, relative advantage and technological competence are the two determinants which are going to be studied.

Technological competence being the part of technological aspect is regarded to the organization's professional capabilities, comprising human resource capacities, information technology foundation and information technology (Zhu, Kraemer, & Xu, 2003). Technology Competence (TC) resembles to technology sources accessible in businesses, such as the Information Technology infrastructure, which includes established technologies, arrangements, and Software (Wang, Wang, & Yang, 2010).

Information Technology professionals attribute to personalities in the company who possess the technical skill sets to execute and practice communication results (Martins, Oliveira, & Thomas, 2016). Ritter and Gemünden (2004) declared TC as a way maker for companies, to comprehend, apply and utilize equipment within. In fact, TC is a means of assistance in developing a technological arrangement, comprising the adoption of a fundamental level of understanding as it compares to the accessible technology (Martins et al., 2016; Wang et al., 2010).

Is understanding not only of what technology is but it is also having the much needed expertise knowledge, to have technology and to use it efficiently are two different prospects and to achieve both will lead to achieving goals (Donaldson & Solomon, 2018). This determinant was considered because small firms manage to require the support that is imminent for IT expenditures (Bouchard, 1993; Hart & Saunders, 1998). Before-mentioned details were discovered appropriate in other researches, as well (Beatty et al., 2001; Thong, 1999; Ramayah, Ling, Taghizadeh, & Rahman, 2016). Furthermore, Bourne et al. (2013) described technological aspect as the standard to which a change is regarded as more dependable comparing the approach it replaces as the possible users of the technology will complete a specific or inevitable comparison of cost and benefits.

Technological aspects competence can be obtained by connecting the technological skill sets and ability of the enterprise to that of opponents or market values. The access and availability of operations in the industry acknowledged as the technical advancement that is widespread in the manufacturers, associates to the competency of the enterprise (Teo et al., 2009). Technological readiness is regarded with the level of refinement of information technology practice and information technology supervision in an enterprise (Iacovou et al., 1995a).

Perceived Strategic Value

The primary responsibility (productivity) determines whether technology has facilitated the generation of more extended "output" for a provided volume of "inputs." The Next (productivity) examines whether an organization can use technology to obtain a competitive edge and gain more extraordinary earnings than they would have gained contrarily. The conclusive argument (consumer surplus) is involved with the measurement of the advantages that have been transferred on to purchasers or conceivably recovered from them. Grandon and 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 and Nosek (2016).

To explain the connection connecting the three measures of information technology estimation it is beneficial to contemplate how the thought of value is handled in economics. There are solely two methods to capture value. Value can be generated, and value can be reclassified of other concepts. While the methods of value formulation and value redistribution are frequently combined, they can additionally be examined independently (Stabell & Fjeldstad, 1998).

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 (e.g. (Barua, Kriebel, & Mukhopadhyay, 1995; Colgate & Stewart, 1998). 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 (Colgate & Stewart, 1998).

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. The knowledge of Information Technology's market assessment is a profoundly critical concern in nowadays technological-adopted environment, and there is a requirement to install a system that properly describes technology's usefulness in management circumstances (Jeon, Han, & Lee, 2006). Enterprises are executing the tech purchases inevitable to sustain contentious correspondence but are not able to obtain competitive advantage (Brynjolfsson & Hitt, 1996).

On the other hand, Barua et al. (1995) inferred that tech investment leads the organization to normal or negative productivity accumulations. The researchers experiment with an innovative process-oriented methodology to investigate tech influences on a Strategic Business Unit

(SBU). They have practically confirmed that numerous of the meaningful tech consequences transpire at base levels in the enterprise and that they can be investigated and measured, also tech associated determinants revealed a meaningful positive impression on mediating level variables (Barua et al., 1995).

Considering the theoretical support, in context on e-commerce adoption intentions different scholars applied multiple theories (Wade & quarterly 2004) including Technology, Organization, Environment (TOE) framework (Tornatzky et al., 1990), diffusion of innovations (Rogers, 1995), theory of planned behaviour (Ajzen, 1991), technology acceptance model (Davis, 1985) and unified theory of acceptance and use of technology (Venkatesh et al., 2003) etc.

Current study is related to e-commerce adoption intentions of SMEs in UAE; therefore, TOE framework is the appropriate choice for this research study. In addition previous researches related to IT (information technology) adoptions has applied TOE framework (Tornatzky et al., 1990) to investigate the firm level technological adoptions.

Many studies related to technology adoptions have adapted TOE framework, based on its analytical characteristics which are helpful in studying about assimilations and adoptions of multiple kinds of innovations related to information technology. Rosario Oliveira Martins, Oliveira, and Fraga Martins (2011). At firms level, TOE framework comprehends “technological, organizational, and environmental factors” to investigate about adoptions of IT innovations (Sila, 2013). Therefore, the use of TOM framework can facilitate the researchers of the current study to inspect the impact of technological 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).

Finally, “The TOE framework” is a well-established framework based on compact hypothetical foundation along with reliable pragmatic provision, which also provides an effective analytical model for examining the “e-commerce adoption intentions” at firm level based on being most regularly applied theory in technology adoption research studies (Sila, 2013; Teo et al., 2009; Teo, Ranganathan, & Dhaliwal, 2006).

Technological Factors and E-commerce Adoption Intentions

Organizations with more innovation-oriented cultures are more supportive towards technological adoptions (Anandarajan, Igbaria, & Anakwe, 2002). The tendency of the firms’ technological adoption is built on the technological competencies of the organizations (Zhu et al., 2003). In another study Ramayah et al. (2016) demonstrated those firms who have a strong

believe in the fact that relative advantage gained from website business is a great source of effectiveness and efficiency of their business, are more flexible towards retaining and investing in creating and maintaining websites. Curran et al. (2017) stated that, employee's technological competencies are the major source of firm's technological competencies and training and development of the employees is very important in building such competencies. Technological competencies significantly impact the e-commerce adoption intentions (Govinnage & Sachitra, 2019).

In SMEs context, for "e-commerce adoptions" firms need to enhance their technological competencies along with workings of robust teams for development and research (Boyajian, 2017). As technologically competent organization will automatically be more confident towards adoption of new technologies. Therefore, based on above literature support and theories like TOE Framework which strongly recommend that technological competencies of the organizations improve their "adopt e-commerce intentions".

Previous researches described the positive association of the relative advantage with technology adoptions in organizations (Oh, Cruickshank, & Anderson, 2009). As a practice of technology implementation and innovation results into a sustainable edge organization over competitors (John Greathouse, 2011). In SMEs context in United Arab Emirates, it is quite difficult for e-commerce firms to calculate the complete advantage gained as a result of technological advances that probably differentiate them from their competitors (Yilmaz & Gungordu, 2016).

In fact, many SMEs all over the world are gaining notoriety and achieving novelty in their business tractions and business dealings by incorporating e-business practices and are ultimately gaining the complete edge (Hussein, Baharudin, Jayaraman, & Kiumarsi, 2019). In a study related to SMEs, according to, Mohtaramzadeh et al. (2018) relative advantage of the organizations have an imperative role in adoptions for e-commerce which leads to enhanced productivity of the organizations. Therefore, based on the above literature evidences, "TOE framework and DOI theory" it is proposed that the SMEs with a distinctive relative advantage over competitors based on the technological advancements and innovative edge are the ones who are more adaptable to e-commerce practices.

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, and 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. Yilmaz and 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 small and medium enterprises of any category. The adoption of e-commerce is being studied by different scholars in multiple contexts i.e. in context of SMEs (Ates et al., 2013; Grandon & Pearson, 2004; MacGregor, 2011). While discussing about technological factors effecting the “e-commerce adoption intentions” the important factors that come to mind are technological competencies (Boyajian, 2017) and relative advantage (Hussein et al., 2019). In a study related to SMEs (Mohtaramzadeh et al., 2018) specified that relative advantage of the firms has an imperative role in adoptions for e-commerce which leads to enhanced productivity of the organizations.

In addition, Macgregor and Vrazalic (2004) found that while considering the e-commerce adoption intentions, technical barriers are faced by the organizations. Same were outcomes of El-Gohary (2012) associated to “e-commerce adoption intentions”. According to Grover and Kumar Kohli (2012) Technological factors and especially technological competencies are among most debated and most important factors effecting the perceived strategic value creation. Scholars also studied the corporate value of technological advancements and its impact on co creation of strategic value and found positive results (Jeansson et al., 2017; Jiang & Zhao, 2014). Still the mediatory role perceived strategic value between technological 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. Therefore, based on the reviewed literature and the theoretical support the proposed framework for empirical testing is mentioned below:

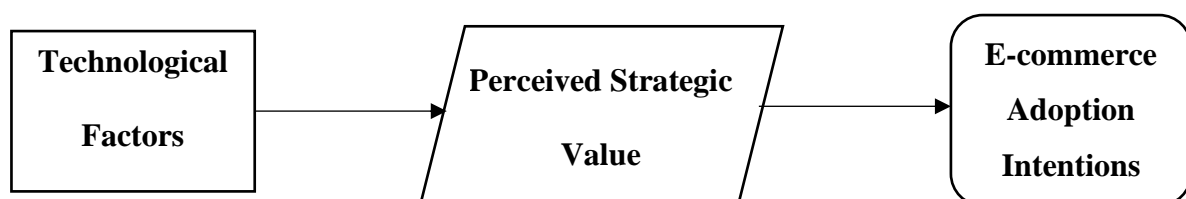


Figure 1: *Theoretical framework*

RESEARCH METHODOLOGY

In this methodology the procedures used to collect and analyse the data has been discussed. For the current study Quantitative approach for the collection of data has been used

as the current study emphasized to examine the adoption effect of E-commerce in United Arab Emirates by Technological aspects through Perceived Strategic value. All the managers and employees of the SMEs operating in United Arab Emirates were the population of the study. The total number of populations is 22 million in UAE. Convenience sampling was adopted to collect the data from the managers and employees of the SMEs related to multiple industries of UAE. A final data of 496 respondents was included in the analysis after getting a response rate of 70.85%.

A questionnaire was designed to obtain the data from the respondents i.e., employees and managers of SMEs in UAE nations. Structured questionnaire was designed with already establish scales applied by many scholars in their research studies for primary data collection. The questionnaire was further translated into Arabic language in order to make it easy to understand to the native speakers and to avoid any kind of validity issues based on the language understandability. Five-point Likert scale ranging from “1 = strongly disagree to 5= strongly agree” was used for the measurement of all items of technological competencies, perceived strategic value and e-commerce adoption intentions. A six-item scale adopted from Chandra and Kumar (2018) was used to measure Technological Competence of SMEs in United Arab Emirates. Likewise, a sixteen-item scale has been adopted from Grandon and Pearson, (2004) to measure perceived strategic value of SMEs in United Arab Emirates. Finally, a three-item scale adopted from Venkatesh and Davis (2000) was used to measure e-commerce adoption intentions of SMEs in United Arab Emirates. The data was analysed initially by SPSS 25 for descriptive of the demographic variables and later on for validity and reliability of external model and structural equation modelling Smart PLS3 was used.

Data Analysis

In this section the data analysis has been mentioned. The data analysis starts with identification of the descriptive of demographic variables using SPSS 25. After that validity and reliability tests have been applied. After ensuring that the data is fit for analysis, framework of the study has been analysed using Smart PLS3.

The first demographic variable is gender. The results shows that majority of the respondents were males. The results are mentioned in the graph below:

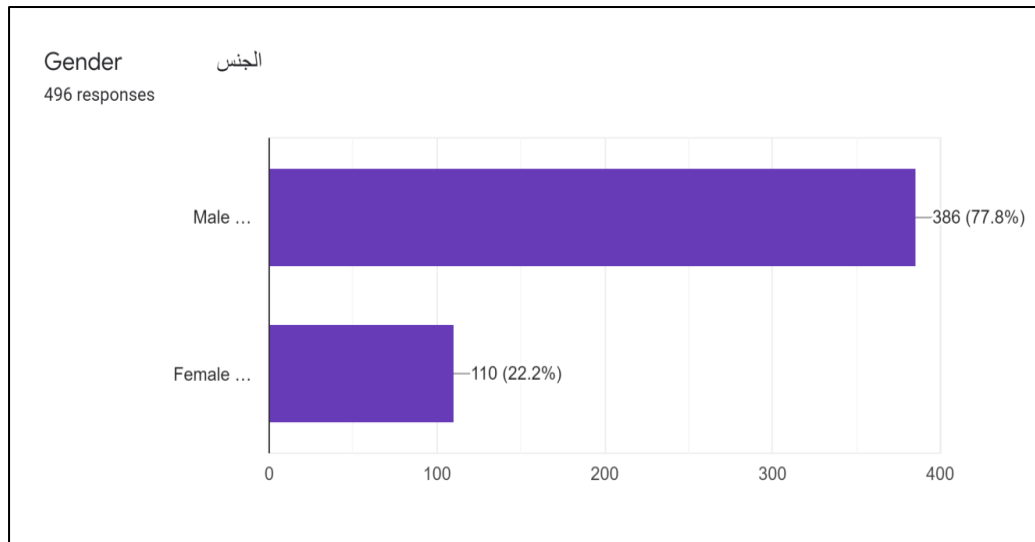


Figure 2: Gender of the respondents

After ensuring that majority of the respondents are females, age of the respondent is shown in figure 3 below:

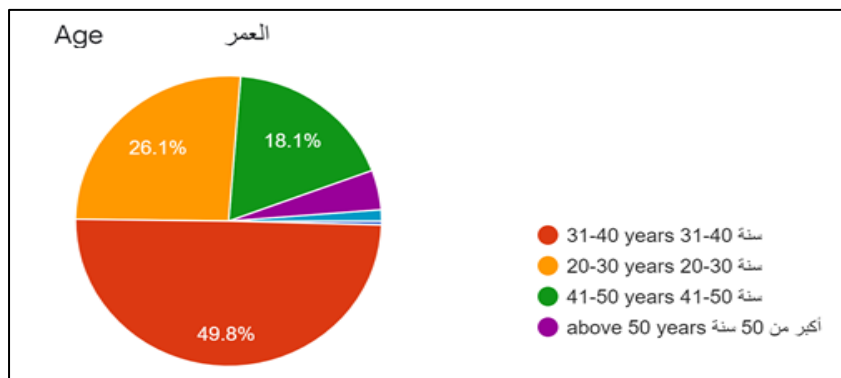


Figure 3: Age of Respondents

Figure 4 represents the qualification of the respondents. Figure 4 showed that majority of the respondents have graduation. The results are mentioned in figure 4 below:

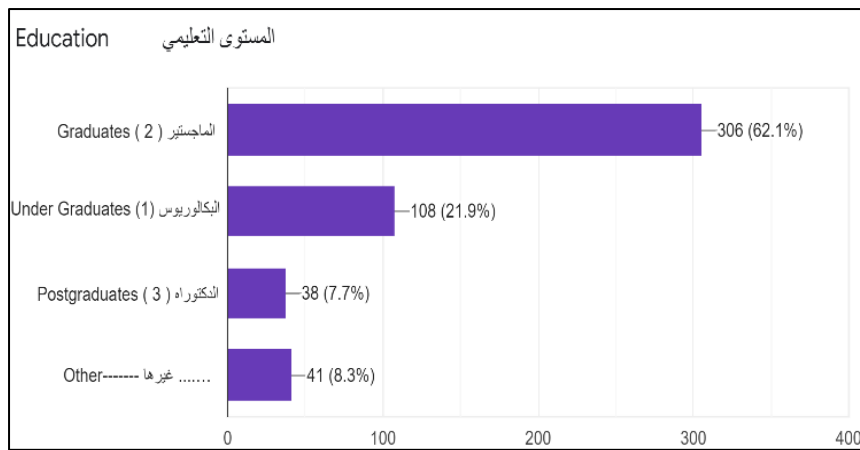


Figure 4: Qualification of Respondents

After qualification experience of the respondents is mentioned. Figure 5 showed that majority of the respondents have more than 10 years of experience.

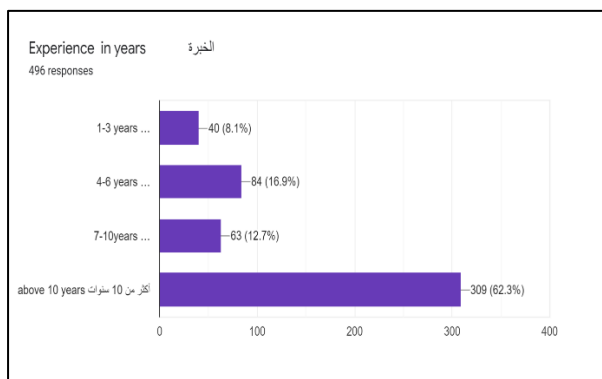
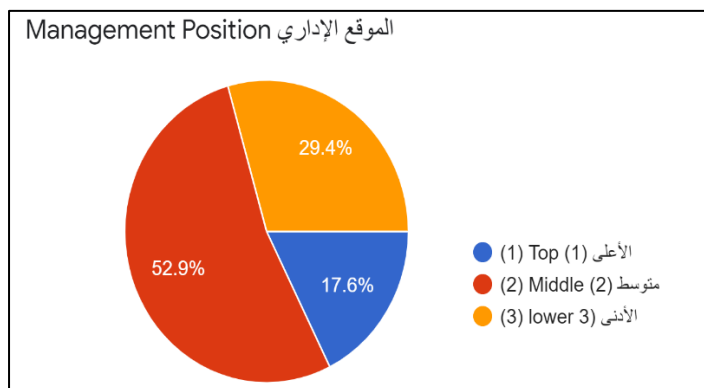


Figure 5: Experience of Respondents

Regarding the job position the managerial position was asked and the responses showed that majority of the respondents were in the middle level managerial position followed by lower-level managerial positions and least number of respondents belong to top management.



The firm was considered as very important because that shows the stability of the firm. The descriptive analysis showed that majority of the firms belong to 11 to 20 years of age which

shows that SMEs should have grown to large firms but even after such an age they were still in the group of SMEs.

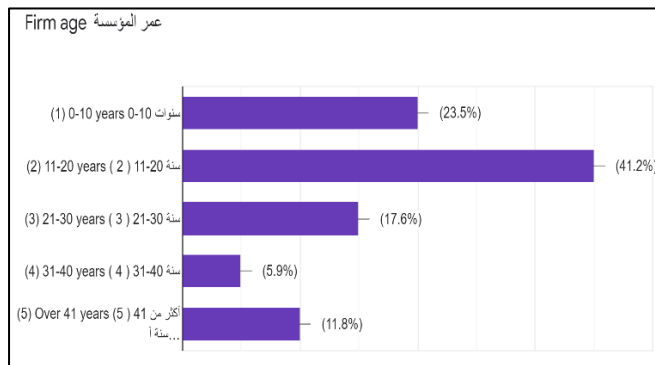


Figure 6: Age of Firm

The next demographic variable was regarding ownership structure. The descriptive analysis of ownership structure showed that majority of the firms were private firms followed by public sector and then joint ventures. The least proportion belongs to foreign firms.

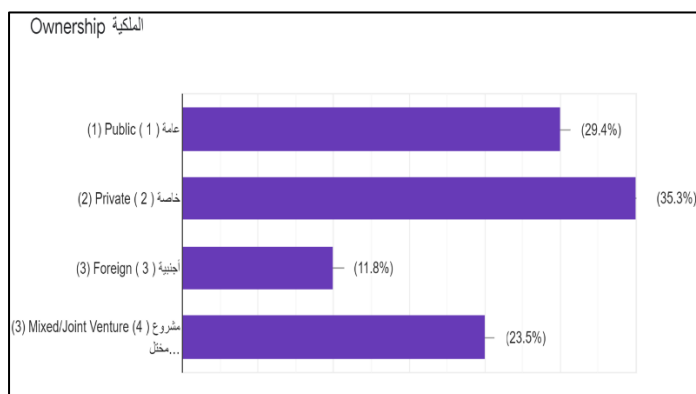


Figure 7: Ownership Structure

After identifying the characteristics of the businesses and the respondents, it was important to ensure the reliability and validity of the instrument. For analysing the validity and reliability of the instrument; Factor loadings of the items, Cronbach's alpha, Composite Reliability (CR), Average Variance Extracted (EVA), and discriminant validity has been measured (Creswell & Creswell, 2017; Hair et al., 2017).

Table 1: Factor loadings, reliability, and validity

Constructs/indicators	1	2	3	AVE	CR	Cronbach's α
Technological Factors				0.501	0.854	0.807

TF1	0.76			
	8			
TF2	0.67			
	3			
TF3	0.66			
	3			
TF4	0.67			
	4			
TF5	0.70			
	7			
TF6	0.72			
	7			
Perceived Strategic Value		0.574	0.914	0.823
PSV1	0.78			
	6			
PSV2	0.82			
	6			
PSV3	0.78			
	4			
PSV4	0.79			
	3			
PSV5	0.88			
	0			
PSV6	0.62			
	4			
PSV7	0.68			
	5			
PSV8	0.64			
	7			
PSV9	0.63			
	0			
PSV10	0.76			
	6			

PSV11	0.79	5
PSV12	0.62	1
PSV13	0.70	7
PSV14	0.70	8
PSV15	0.72	5
PSV16	0.67	4
E-Commerce Intentions	Adoption	0.600 0.817 0.810
ECAI1	0.836	
ECAI2	0.815	
ECAI3	0.662	

The above-mentioned results in table one ensures that all the variables have the calculated values above the threshold levels and the instrument along with the items of the instrument are good for structural modelling. Furthermore, the discriminant validity has also been ensured using Heterotrait-Monotrait (HTMT) ratio.

Table 0-1 Heterotrait-Monotrait Ratio

Constructs	Mean	STD	1	2	3
Technological Factors	3.97	0.59	0.707		
Perceived Strategic Value	4.02	0.39	0.621	0.757	
E-Commerce Adoption Intentions	3.91	0.44	0.612	0.509	0.774

The results of discriminant validity ensured that the items used in the construct have significant discriminant validity. After ensuring the reliability and validity of the instrument, structural equation modelling has been conducted to test the direct relationships and the mediating effect of perceived strategic value. For the said purpose bootstrapping has been performed using 500

sub-samples. The results showed that the value of r^2 is 51.6 % which shows that the model is good in determining the dependent variable. The findings of the path coefficients are mentioned in table 3 below:

Hypotheses	Std. Beta	t-Value	p-values	Findings
TF → ECAI	0.130	3.925	0.010	Supported
TF → PSV	0.160	4.155	0.000	Supported
PSV → ECAI	0.269	6.821	0.010	Supported
TF → PSV → ECAI	0.191	4.738	0.000	Supported

The results showed that e-commerce technological factors have a significant positive impact over e-commerce adoption intentions ($\beta = 0.130^{**}$, $t=3.925$). Furthermore, technological factors have a significant positive impact over perceived strategic value ($\beta = 0.160^{**}$, $t=4.155$). likewise, perceived strategic values have a significant positive impact over e-commerce adoption intentions ($\beta = 0.269^{***}$, $t = 6.821$). Thus, the results ensures that independent variable has a significant impact over mediating variable and dependent variable and likewise mediating variable has a significant impact over dependent variable. After finding the direct relationship, indirect effect has been analysed. The results of mediation testing ensured that perceived strategic value mediates between technological factors and e-commerce adoption ($B=.191^{***}$, $t= 4.738$, $p < 0.010$). Thus, there is no harm is claiming that perceived strategic value mediates the relationship between technological factors and e-commerce adoption intentions.

DISCUSSION, CONCLUSIONS, LIMITATIONS AND FUTURE DIRECTIONS

The relationships developed in the framework are supported by data analysis. The findings regarding impact of Technological Factors on E-commerce Adoption Intentions is significant and in line with the findings of the Curran et al. (2017) and Govinnage and Sachitra (2019). The results showed that a positive impact of technological competencies over e-commerce adoptions exists. It further shows that the ways technological advancements effect the e-commerce adoption intentions by SMEs in developing realms based on understanding that SMEs context, for “e-commerce adoptions” firms need to enhance their technological competencies along with workings of robust teams for development and research. Likewise extensive study of the literature reveals that relative advantage is one of the important predictor

of the e-commerce adoption (Oh, Cruickshank, & Anderson, 2009; John Greathouse, 2011) as many SMEs all over the world are gaining notoriety and achieving novelty in their business transactions and business dealings by incorporating e-business practices, therefore, relative advantage is considered to be one of the competitive edge among the digital players. (Hussein, Baharudin, Jayaraman, & Kiumarsi, 2019).

The findings of the study for the impact of Technological factors over perceived strategic value are in line with results of the Grover and Kumar Kohli (2012) and Wang et al. (2019) based on understanding that firms with technological advancements have the potential to easily adopt e-commerce. These results are in line with the findings of the previous researches (Tallon & Kraemer 2011). Additionally, taking into consideration the relationship of perceived strategic value with e-commerce adoption intentions the current research revealed that same facts as the studies of Subramanian and Nosek (2016) and Yilmaz and Gungordu, (2016) unearth on grounds of the fact that perceived strategic value is a strong predictor of the “e-commerce adoption intentions”. This study adds to the valuable literature regarding impact of perception of strategic value over e-commerce adoptions intentions.

Furthermore, the main contribution of the study was the mediating role of perceived strategic value between technological factors and e-commerce adoption intentions. As although the adoption of e-commerce is being studied by different scholars in multiple contexts (El-Gohary, 2012; MacGregor, 2011; Hussein et al., 2019; Billal & Shin, 2019). The current findings ensured that technological factors has been studies with perceived strategic value (Grover & Kumar Kohli 2012; Jeansson et al., 2017; Jiang & Zhao, 2014; Lim et al. (2019), but the mediatory role of perceived strategic value between technological factors and e-commerce adoption intentions by SME’s significant which has less explored and tested in past literature. Therefore, the current study filled the gap in the existing literature regarding mediating role of perceived strategic value between technological factors and e-commerce adoption intention and found positive results.

The findings contribute to the body of knowledge regarding a unique mediating effect of perceived strategic value between technological factors and e-commerce adoption intentions of SME’s operating in UAE. Theoretically this study provides guidelines for scholars to further explore the underlying mechanism of Perceived Strategic value between technological factors and e-commerce adoption intentions especially in organizations where the main power is human resource, and that human resource is in direct contact with the customers. As in case

of SME's the employees are in direct contact with customers to facilitate them in different scenarios.

Despite significant contribution of the study there were certain limitations that were faced during the research. The study has employed a cross sectional methodology in which the data has been collected at one point of time from the employees and owners of the SMEs, whereas, future studies can implement the longitudinal or time lag studies in which actual adoption level can be checked to have more accurate results and to create the generalizability of the results. Secondly, the current study utilized only quantitative methodology to examine the relationships, so in order to have more general results it is better for the future researchers to conduct the mixed method approach in which the quantitative as well as the qualitative methodology can be applied to explore more factors for e-commerce adoption intentions.

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