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Small and medium emprises performance in Dubai: A critical role of technological factor and environmental factor

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ABSTRACT

In Dubai, the government alone cannot bring about economic development and provide jobs to all and sundry. Businesses established by individuals and corporate entities aid the government in the provision of jobs to people and contribute to the economic growth and development of a country. The role of SMEs is crucial in most of the countries of the world and they contribute significantly towards provision of employment opportunities in their local communities and development of their economies. The main objective of this study is to examine the factors influencing the performance of SMEs in the UAE. The findings from the analysis found that technological factors and environmental factors have a positive and significant impact on SMEs performance. This study has a significant contribution to the body of literature as it provides a worthy theoretical framework in it. Besides theoretical contribution, this study also provides practical implications to SMEs, government and policymakers. The future direction of this study would enhance the future body of literature.

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1. Introduction

The performance of Small and Medium-scale Enterprises (SMEs) has attracted attention in the literature in recent time (Lutfi, 2022; Smerecnik & Andersen, 2011). This is because it is considered as a tool for enhancing the economy, springboard for sustaining economic development, and a major provider of employment (Kareem et al., 2021; Petzold et al., 2019). In every country, the government alone cannot bring about economic development and provide jobs to all and sundry (Andarwati et al., 2020). Businesses established by individuals and corporate entities aid the government in the provision of jobs to people and contribute to the economic growth and development of a country (Jeong & Chung, 2022; Sin et al., 2016). Thus, the impact of Small and Medium-scale Enterprises (SMEs) cannot be globally underestimated (Sin et al., 2016), in complementing government efforts in enhancing economic development especially when the performance of SMEs is appreciable (Albassami et al., 2019; Udriyah et al., 2019). SME is a household concept and has been defined differently by researchers because there is no universally agreed definition (Al Badi, 2018; Khalili & Asmawi, 2012). Majorly, its definitions focus on the economic, social and cultural characteristics of each country and are often dependent on turnover, capital assets, size, labor skills, ownership or firm's legal status (Al Badi, 2018; Chege & Wang, 2020). The general principles for SME definition comprise staff numbers, sales volume, and the level of investment. For instance, the European Commission defines SMEs as firms having employees ranging from 10-49 and medium-sized businesses as those having 50-250 employees (Ju et al., 2013; Purwanto, 2022). In the global economy, the operations of SMEs occupy a central position in the economic landscape particularly for countries that are developing (Lo et al., 2016; Petzold et al., 2019).

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In the context of UAE, the framework for defining SMEs is derived from Cabinet Resolution No. 22 of 2016 which applies number of employees, gross assets, and annual sales turnover to classify small businesses into categories (Alshirah et al., 2021; Nuseir, 2018). Arising from this, small businesses in UAE refer to firms that have less than AED 2m as an annual turnover and a maximum of 50 full-time employees, while medium-sized firms refer to any firm that has an annual turnover ranging from AED 2 to 200m and 50-200 employees on full time basis (Gupta & Mirchandani, 2018; Muhammad Siddique, 2015). However, the two Emirates comprising Dubai and Abu Dhabi adopt their own definitions of SME. The definition of SME in the context of Abu Dhabi was issued by a decree on 30 June 2013. It defines micro and SMEs by employees' number in each firm where a firm with less than 5 employees is considered as micro; between 5 and 19 employees as small; between 20 and 49 as medium; and more than 50 as large (Bin & Hui, 2021; Yaseen & Marwan, 2016). The SME sector in the country has an estimated number of 350,000 enterprises (Basri & Siam, 2019; Thaha et al., 2021). Globally, over 95% of enterprises are SMEs and they form about 60% of private sector global employment (Ng & Hamilton, 2021). Specifically, Lythreatis et al. (2019) argue that SMEs constitute 99% of the global business population. In UAE, small businesses constitute about 95 per cent of all private businesses, and the SME sector alone provides employment for about 86 per cent of the active workforce in the country (Hamad & Leslie, 2013; Temouri et al., 2022). Based on estimates, Dubai accounts for about 45% of the entire SMEs in UAE; Abu Dhabi has about 32% of it; while Sharjah has about 16% (Farouk Abdel Al et al., 2017; Kashmoola & Ahamat, 2021). Thus, SMEs are an essential mechanism for driving economic growth and job creation (Almtiri & Miah, 2019; AlSharji et al., 2018).

The role of SMEs is crucial in most of the countries of the world and they contribute significantly towards provision of employment opportunities in their local communities and development of their economies at large (Al Matroushi et al., 2018; Alshehhi & Kasim, 2020; Polas et al., 2021). In order to avoid excessive reliance on foreign direct investment, many countries have laid more emphasis and focused on SMEs as a new mechanism for improving the growth and development of their economy (Alzaabi & Omar, 2021; Ghandour, 2018; Zacca et al., 2017). However, the concept of small and medium enterprises SMEs is relative and dynamic; hence there is no universal definition for SMEs. Each country tends to adopt definitions based on the needs of public policy, the level of economic development, the role SMEs are expected to play in the economic development opment of that country and the programmed of assistance designed to achieve the goal (Bhatti, 2017; Sherif et al., 2019; Shrivastava & Riaz, 2022). SMEs have been discussed in the literature as the vital source of new product development and new technologies (AlMujaini et al., 2021; Alsharji et al., 2017). In the contemporary competitive business environment, the persistent problem confronting business stakeholders, government and other stakeholders is to recognize and support the factors that will encourage and motivate SMEs for the purpose of economic growth and development. Thus, the improvement of SMEs performance becomes a key to encouraging SMEs (Alkaabi, 2021; Bakhouche et al., 2020; Elbeltagi et al., 2013; Siddique, 2014). The SME sector provides over 86% of UAE employment, and 50% of its industrial output (Abudaqa et al., 2020; Ajmal et al., 2021; Ghak & Zarrouk, 2022; GHANEM & Hamid, 2020). Indeed, there appears to be an agreement that the development of SMEs in UAE is a step towards building a vibrant and diversified economy (Caiazza, 2016; Kumar, 2014; Zaidan, 2017; Zarrouk et al., 2020).

The main objective of this study is to examine the factors influencing the performance of SMEs in the UAE. To begin with, this study aims to examine the relationship between technological factors and SMEs performance in UAE. Secondly, this study is designed to examine the relationship between environmental factors and SMEs performance in UAE. Thirdly, the purpose of this study is to examine the relationship between ABC system adoption and SMEs performance in UAE. Furthermore, this study is to examine whether ABC system adoption mediates the relationship between technological factors and SMEs performance in UAE. In the same way, this study is to examine whether ABC system adoption mediates the relationship between environmental factors and SMEs performance in UAE. As regards to some issues covering theoretical, contextual, practical and methodological issues in the background of the study and problem statement, this study stands out in its contribution to the extant body of knowledge. In the first instance, the study will contribute to the body of knowledge by extending literature on SMEs performance to UAE particularly Dubai and Abu Dhabi. Additionally, the study made a novel significant to the body of existing knowledge by making use of ABC adoption as a mediator. This concept has rarely been applied in the SMEs research context and management research, hence bridging the existing research lacuna in this area of study.

2. Literature Review

2.1 Technological Factor, Environmental Factor and SME Performance

Environmental context relates to inhibiting and facilitating factors in the organizational areas of operations (Jeong & Chung, 2022; Petzold et al., 2019; Smerecnik & Andersen, 2011). The environment of an organization comprises the whole physical and social factors that have an impact on the decision-making process of an organization (Andarwati et al., 2020; Lutfi, 2022). The surroundings within which an enterprise operates can improve the development of a business or limit its operation simply because of changes in business environment (Jeong & Chung, 2022; Lo et al., 2016; Zarrouk et al., 2020). Thus, the business environment offers a window to market threats and opportunities which SMEs and other organizations have to take cognizance of and respond to (Ju et al., 2013; Muhammad Siddique, 2015; Tirupathi et al., 2020). In contemporary society, the business environment tends to be the most dynamic challenge organizations are confronting (Ju et al., 2013; Kareem et al., 2021). In order to enhance their performance, organizations are trying to reduce the fall-out from price wars, continuous cost efficiency

drives, and concurrently optimize new opportunities in the market (Ghak & Zarrouk, 2022; Kareem et al., 2021; Tirupathi et al., 2020). Business environment and its associated factors are described in different ways in the literature. Nuseir (2018) posits that the business environment is characterized by fast changes in market and technology that pose a risk to the processes of product or service. Environmental changes, as claimed by them, comprise continuous changes in technology, stiff competition, and market demands, which all have impact on business performance (Murad et al., 2022). According to Tirupathi et al. (2020), there are three perspectives to the business environment. The first one relates with the individuals outside the organization that interrupt the organizational undertakings, including government regulations, sellers, competitors, and clientele (Chege & Wang, 2020; Tirupathi et al., 2020). The second perspective lays emphasis on the exterior forces such as intricacy, munificence and lethargy. The third perspective is related to the sensitivities of decision-making on environmental aspects. Other studies such as Ju et al. (2013) look at the business environment from the view of competitive pressure and government support. Consequently, competitive pressure and government support are considered as environmental factors that influence the adoption of Management Accounting Innovations and the performance of SMEs in general (Chege & Wang, 2020; Nuseir, 2018). Although other environmental factors such as economic and social values, stakeholders' collaborations, consumers' readiness, partners' readiness, external pressure among others have been used in the literature but competitive pressure and government regulation are found to have more significant powers than the rest (Alshirah et al., 2021; Caiazza, 2016; Purwanto, 2022).

H₁. Technological factors have an impact on ACB system Adoption.

H₂. Technological factors have an impact on SME performance.

H₃. Environmental factors have an impact on ACB system Adoption.

H₄. Environmental factors have an impact on SME performance.

2.2 ABC System Adoption and SME Performance

To understand the relationship between ABC system adoption and SME performance, many studies have examined the performance of SMEs in different contexts most especially in the developed nations (Andarwati et al., 2020; Kareem et al., 2021; Lutfi, 2022; Petzold et al., 2019), and the consensus among the scholars is that the contribution of SMEs is germane for the development of a nation and that ABC reduces cost allocation inaccuracies and improves organizational performance (Lutfi, 2022; Nuseir, 2018). Also based on the reviewed literature above, this current research focuses on examining ABC adoption and SME performance. In Thailand, Ju et al. (2013) study was purposely on the assessment of activity-based costing and its impact on business performance. It was in their study that ABC extensive use for cost analysis, cost evaluation and cost strategy significantly impact business performance both financial and non-financial. Mohammed (2019) in their study found that there is a positive relationship between ABC implementation and performance. Similarly, Jeong & Chung (2022) examined the ABC implementation effect on SMEs performance. The model for the study was designed starting from the distinctive characteristics of the SMEs' collaborative culture. The findings of the study provided evidence that ABC influences the performance of SMEs in the Italian context. Likewise, in the research carried out by Bakhouche et al. (2020) it was found that ABC usage positively influences SMEs performance. It was further concluded that the modern cost management techniques such as ABC are relevant factors influencing SMEs performance in the context of the study. Similarly, Chege & Wang (2020) assessed how ABC application enhances firm performance in the Chinese manufacturing industry. From their analysis they established that successful application ABC significantly influences organizational performance and enhances quality production. Bakhouche et al. (2020) used a regression path-analysis in assessing how management account system information mediates decentralized structure and organizational performance in the developing countries of Africa. The findings from their study also established a mediating role of MAS such as ABC in enhancing the direct relationship between decentralized structure and organizational performance. Also, Abudaqa et al. (2020) investigated how ABC adoption enhances organization performance and the findings of their study affirm that ABC adoption impacts organization performance in the Moroccan firms. This finding was also affirmed by Elbeltagi et al. (2013) who found that ABC implementation has a positive impact on organizational financial performance. Temouri et al. (2022) extended on the previous studies and integrated ABC in evaluating information technology-organizational performance nexus in the context of Iraq. The findings from their study established that there is a direct relationship between information technology and organization performance. However, the relationship is partially mediated by ABC implementation. In a similar study, Abudaga et al. (2020) investigated the mediating effect of management account system (MAS) on organizational factors such as competition intensity, innovation and technological factor on the performance of organization in the context of Malaysia. They found that MAS mediates the relationship between the organizational factors and its performance. The theoretical framework of the study is available in Fig. 1.

H₅. ABC system adoption has an impact on SME performance.

Ho. ABC System Adoption mediates the relationship between technological factors and SME performance.

H₁. ABC System Adoption mediates the relationship between environmental factors and SME performance.

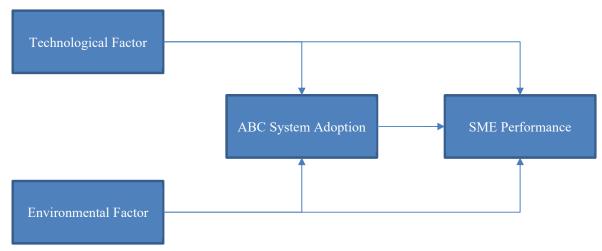


Fig. 1. Theoretical Framework

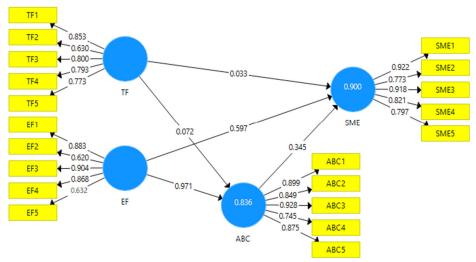
3. Methodology

Since this study involved the collection of data primarily from the owners and operators of SMEs, cross-sectional research design and survey method was employed. Cross-sectional design deals with the gathering of data from multiple units once or at a single point in time over a period of days, weeks or months in order to meet the research objectives. It is found appropriate in this study because it is capable of revealing the relationships among variables. In order words, cross-sectional design assist in achieving the objectives of this study and to answer the research questions by creating avenue for the assessment of the relationship between the independent variables of this study (technology, organization, environment), mediating variable (ABC system adoption), and the dependent variable (SMEs performance). The population of this study was all SMEs in Dubai and Abu Dhabi. Based on the statistical information available on the SME report of Dubai, a total number of SMEs stood at 151,875 (Tirupathi et al., 2020). Since the study intends to generalize its findings on the entire population, the use of probability sampling method and simple random sampling technique is justified. The scale items for ABC system adoption were taken from Ahmad et al. (2017). The scale items for environmental factors were taken from Chege & Wang (2020). The scale items for technological factors were taken from Chege & Wang (2020). The scale items for SME performance were taken from Lo et al. (2016). An online questionnaire was used to collect data from the respondents in this study. Employing the online data collection method aids in eliminating the problem associated with missing data which is predominant in selfadministering survey instruments. This is as result of the features of online data collection approach whereby respondents will not be able to proceed to the next page or submit the questionnaire form without filling all the required questionnaire boxes. Furthermore, online data collection procedure is common now in social and management sciences studies since the advent of the COVID-19 pandemic which interrupt face to face interaction due to the social distancing policy and work from home policy being implemented by various government organizations and business enterprises. Hence, it will be quite difficult for the researcher to follow the common traditional face to face meeting with SMEs owner and or managers of the sampled sectors. Therefore, the current study adopted the online data collection procedure. The period of collating data commenced in the early month of May 2021 through to the end of? June 2021. A total of 384 copies of questionnaires were sent to the study participants/respondents, however, 274 copies of the questionnaire were filled by the respondents. However, 110 sampled respondents were unable to fill the questionnaire. The analysis indicates that 274 filled questionnaires out of 384 questionnaires expected to be filled represent an overall response rate of 71 percent. Therefore, the valid response rate of the respondents is adequate for conducting this research.

4. Findings

4.1 Convergent Validity

In this section of the study, the convergent validity was checked with the help of factor loadings, composite reliability, and average variance extraction (Fig. 2). Furthermore, Smart PLS 3 software was used and PLS algorithm calculations were identified. The factor loadings for all the scale items are greater than 0.60 that is recommended by the study of Hair Jr et al. (2014) for modern studies. Similarly, the value of composite reliability for each variable was greater than 0.70 which is recommended by Hair et al. (2007) for these studies. On the other hand, the value of AVE for each variable was greater than 0.50. According to the calculation and values, it was concluded that there is validity and reliability in the scale items (see Table 1).



ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor Fig. 2. Measurement Model

Table 1

Convergent Validity Variables Factor Loadings Cronbach's Alpha CR AVE ABC System Adoption ABC1 Product costs must be highly reliable to compete in our markets. 0.899 0.911 0.935 0.742 0.849 ABC2 Operating cost data are extremely important because of our cost reduction efforts. ABC3 Cost information is the most important factor in pricing decisions. 0.928 0.745 ABC4 ABC receives strong active support from the owner of SMEs 0.875 ABC5 SME owners provide adequate resources to the ABC adoption effort. Environmental Factor EF1 Government regulations support SMEs. 0.883 0.830 0.880 0.604 EF2 Government makes available necessary infrastructure for the performance of SMEs. 0.620 EF3 Organization innovation and initiatives improve SMEs performance. 0.904 EF4 Our enterprise has a competitive advantage over its rivals. 0.868 EF5 Government develop polices for SMEs. 0.632 SME Performance SME1 We have more repeat sales in our enterprise. 0.922 0.902 0.927 0.720 SME2 0.773 It is easy to see repeat clients in our enterprise SME3 Most of our employees do not intend to work for a different company 0.918 SME4 Our project duration has been reduced 0.821 SME5 Our enterprise has more open sharing of information with our customers. 0.797 Technological Factor 0.881 0.598 TF1 Technology promotes business efficiency. 0.853 0.838 TF2 Use of technology enhances quick service to customers 0.630 TF3 0.800

Some applications were replaced by a new system in the firm. ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor

Use of technology enables the firm to get market information

New technology improves the existing business processes.

4.2 Discriminant Validity

TF4

TF5

This section of the study has results for discriminant validity that was calculated with the help of the PLS Algorithm calculator. Furthermore, the modern and most recommended method HTMT was used to check the discriminant validity between the variables. In this way, all the values for each variable were less than 0.90 which is recommended by Gold et al. (2001), for contemporary studies. According to these outcomes of Table 2, there was a clear discriminant validity between the variables used in the theoretical framework.

0.793

0.773

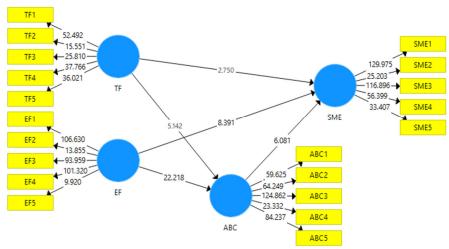
Table 2 Discriminant Validity

Biberiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiiii					
	ABC	EF	SME	TF	
ABC					
EF	0.872				
SME	0.853	0.791			
TF	0.754	0.683	0.681		

ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor

4.3 The PLS-SEMs Results

This section of the study has results of direct impacts available in Table 3. According to the findings of the study, TF has an impact on ABC and H1 is significant ($\beta = 0.072$, t = 5.142 and p = 0.000). Secondly, according to the findings of the study TF has an impact on SME and H2 is significant ($\beta = 0.033$, t = 2.750 and p = 0.012). Thirdly, according to the findings of the study EF has an impact on ABC and H3 is significant ($\beta = 0.971$, t = 22.218 and p = 0.000). Fourthly, according to the findings of the study EF has an impact on SME and H4 is significant ($\beta = 0.597$, t = 8.391 and p = 0.000). Lastly, according to the findings of the study ABC has an impact on SME and H5 is significant ($\beta = 0.345$, t = 6.081 and p = 0.000). The measurement model is available in Fig. 2.



ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor

Fig. 3. Measurement Model

Table 3
Direct Impacts

Direct impacts						
Direct Impacts	Original Sample	Standard Deviation	t Values	P Values	Results	
$TF \rightarrow ABC$	0.072	0.014	5.142	0.000	Significant	
$TF \rightarrow SME$	0.033	0.012	2.750	0.012	Significant	
$EF \rightarrow ABC$	0.971	0.044	22.218	0.000	Significant	
$EF \rightarrow SME$	0.597	0.071	8.391	0.000	Significant	
$ABC \rightarrow SME$	0.345	0.057	6.081	0.000	Significant	

ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor

4.4 Mediation Impacts

This section of the study has results of mediation analysis available in Table 4. According to the results, ABC mediates the relationship between TF and SME and H6 is significant ($\beta = 0.025$, t = 2.272 and p = 0.012). Furthermore, the findings of the study reveal that ABC mediates the relationship between EF and SME and H6 is significant ($\beta = 0.335$, t = 5.534 and p = 0.000).

Table 4
Mediation Impacts

Wicdiation impacts					
Indirect Impacts	Original Sample	Standard Deviation	t Values	P Values	Results
$TF \rightarrow ABC \rightarrow SME$	0.025	0.011	2.272	0.012	Significant
$EF \rightarrow ABC \rightarrow SME$	0.335	0.061	5.534	0.000	Significant

ABC = ABC System Adoption, EF = Environmental Factor, SME = SME Performance, and TF = Technological Factor

5. Discussion and Conclusions

The findings from the analysis found that technological factors have a positive and significant impact on SMEs performance. Earlier research has also highlighted technological factors as a critical component in enhancing a company's overall commercial performance (Khalili & Asmawi, 2012; Nuseir & Aljumah, 2020; Petzold et al., 2019). This finding provides support to extant literature (Andarwati et al., 2020; Gupta & Mirchandani, 2018; Lutfi, 2022; Smerecnik & Andersen, 2011). The findings solidify the existing evidence on positive technological factors and SMEs performance relationship. This gives support to the assumption of TOE framework which states that technological factor forms an indispensable part of the whole organizational competitive advantage that enhance task, targets and performance of organizations (AlMujaini et al., 2021; Caiazza, 2016; Gupta & Mirchandani, 2018; Sidek & Abdulraqeeb, 2022). In addition, technological resources remain the basis of new

era organizational competitive advantage (Al Matroushi et al., 2018; Zacca et al., 2017). Technological factors are seen as a tool in managing organizational capabilities while a firm's human resource constitutes the drivers of such capabilities (AlMujaini et al., 2021; Smerecnik & Andersen, 2011). The assumption of Resource-Based View theory of value, rareness, inimitability, and substitutability cannot be achieved without the influence and contribution of the technological capabilities of the organization (AlMujaini et al., 2021; Zaidan, 2017). The result of these findings revealed that organizations should recognize that the adoption and implementation of technology will provide solutions to the organizational existing problems and offer new opportunities for production which will further enhance its performance (Sherif et al., 2019). In addition, this finding purported that enhanced organizational performance and organizational accomplishment are contingent upon its technological availability (Alkaabi, 2021; Andarwati et al., 2020; Caiazza, 2016). Hence, it can be asserted that technological factor increases information flows both within and outside of firms by removing interaction obstacles and enhancing the interconnection of corporate networks, thereby promoting creativity and enhancing organizational performance (Alshirah et al., 2021; Kareem et al., 2021; Sin et al., 2016). The result of the analysis shows that environmental factors have no positive and significant effect on SMEs performance in UAE. This finding is inconsistent with the findings of some extant literature such as Gupta & Mirchandani (2018) whose result indicated a significant relationship between environmental factors and organizational performance. However, the findings are in tandem with the result of (Al Badi, 2018; Ghak & Zarrouk, 2022) who found that environmental factors or context have no significant impact in enhancing organizational performance and innovativeness. Although, one of the justifications for the inconsistency of the current findings and that of extant literature could be related to industry/sector under consideration, contextual background and organizational size. Another explanation for such findings is also related to the fact that changing environmental factor may force businesses to involve in exploitative and exploratory activities (Andarwati et al., 2020; Kareem et al., 2021; Petzold et al., 2019), which although influence the operational activities of the business but not on its performance (Bin & Hui, 2021; Yaseen & Marwan, 2016). Even so, the findings are not in tandem with the assumption of the TOE framework which also described environmental factors as a catalyst for organizational performance enhancement. The finding from the study discovered that ABC system adoption has a positive and significant effect on SMEs performance in UAE. Though, studies such as the work of (Ajmal et al., 2021; Alshirah et al., 2021) showed that ABC system adoption has no positive and significant effect on SMEs performance because lack of resources, expertise, and cost factor are the main reasons for the rejection of ABC system in SMEs. But this current study in line with Kumar (2014) has shown that ABC system adoption has a positive and significant effect on SMEs performance.

6. Implications

6.1 Theoretical Implications

This study has added knowledge towards SMEs performance in UAE regarding the direct relationship between ABC adoption, technologically factor, organizational factor and environmental factor use consistent term throughout on SMEs performance. In fact, the study discovered that environmental factors are not impressive in UAE SMEs, therefore this research integrates various constructs into one comprehensive research framework, which included technology factor, organization factor, environmental factor and ABC adoption. The reasons for choosing these variables are due to the fact that it is a superior platform that can help in acquiring valuable information and knowledge from customers in which assisting the development of products or services and indirectly impact on the SMEs performance of an organization in UAE. Secondly, this study contributes by examining ABC adoption as a mediator between the independent variables (technological factor and environmental factor) and dependent variable (SMEs performance). There are empirical studies that have examined the relationship between technological factor, environmental factor and ABC adoption and SMEs performance in UAE. Unfortunately, the context of ABC adoption acting as a mediator is scanty. Therefore, the purpose of this study is to add knowledge to the mediating role of ABC adoption in the relationship between the independent variables and dependent variables among SMEs. From the findings, it has indicated that ABC adoption acts as a mediator to strengthen the relationship between technological factor, organizational factor and environmental factor and SMEs performance.

6.2 Practical Implications

Besides theoretical contribution, this study also provides practical implications to SMEs, government and policymakers. In this study, some of the variables are found to have a significant relationship in SMEs performance. In contrast, one of the variables was found to have a non-significant relationship on SMEs performance. As a result, SMEs, government and policymakers should be aware of the important variables to an organization in UAE. The findings of the study serve as a guide for SME owners and managers, and can assist them in understanding the elements needed for successful SMEs performance that supports the long-term viability of their business. The findings of the study indicated that technological factors and organizational factors are the key determinants of SMEs performance in UAE. In fact, organizational factors provide good and supportive learning for employees and employees can acquire knowledge and skills from the training, and this will, in the end, affect SME performance. In terms of technological factors, if an organization is technology-oriented, the organization is more likely to offer a supportive working environment, encourage employees to discover new ideas, and empower employees with resources to innovation, which benefits the organization's activities, and help in improving the SMEs performance. Thus, SME owners and managers need to integrate these elements in their strategic planning to enhance their SMEs performance, in turn help the business to remain competitive in the market.

7. Future Directions

First, a longitudinal study is proposed for a future research study to generalize the results. This is because the current study was based on a cross-sectional design, which is the measurement of the sample that was gathered at a time, and the self-report might be subjected to social desirability bias. Hence, it could be helpful if future researchers employ a longitudinal study to provide more insights regarding the relationship between technology, organizational and environmental factors on ABC adoption among SMEs in UAE. Furthermore, the future research can be considered with a vast number of sample sizes, to get a large number of sample sizes as the number of collections in the current study was not representative of the whole population of SMEs in Dubai and Abu Dhabi. Thus, it is suggested to get involved both online and offline methods when collecting data such as walk-in physically to companies and token appreciation should be given as well as online email and other online methods.

References

- Abudaqa, A., Hilmi, M., Dahalan, N., & AlMujaini, H. (2020). Impact of supply chain integration and intelligent information systems in achieving supply chain innovation: A study of retail trading SMEs in Abu Dhabi, UAE. *Uncertain Supply Chain Management*, 8(4), 721–728.
- Ahmad, K., Teng, N. W., & Zabri, S. M. (2017). The Implementation of activity-based costing in Malaysian small and medium-sized enterprises. *Advanced Science Letters*, 23(4), 3170–3173.
- Ajmal, M., Jabeen, S. S., & Vihari, N. S. (2021). Business model innovation and financial performance: a study of trading and services SMEs in UAE. *International Journal of Business Innovation and Research*, 26(3), 261–272.
- Al Badi, K. S. (2018). The impact of marketing mix on the competitive advantage of the SME sector in the Al Buraimi Governorate in Oman. SAGE Open, 8(3), 2158244018800838.
- Al Matroushi, H., Jabeen, F., & All, S. A. (2018). Prioritising the factors promoting innovation in Emirati female-owned SMEs: AHP approach. *International Journal of Entrepreneurship and Innovation Management*, 22(3), 220–250.
- Albassami, A. M., Hameed, W. U., Naveed, R. T., & Moshfegyan, M. (2019). Does knowledge management expedite SMEs performance through organizational innovation? An empirical evidence from small and medium-sized enterprises (SMEs). *Pacific Business Review International*, 12(1), 11–22.
- Alkaabi, K. A. (2021). Customers' purchasing behavior toward home-based SME products: evidence from UAE community. Journal of Enterprising Communities: People and Places in the Global Economy.
- Almtiri, Z. H. A., & Miah, S. J. (2019). Impact of e-commence technology adoption in Dubai SMEs. 2019 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE), 1–8.
- AlMujaini, H., Hilmi, M., Abudaqa, A., & Alzahmi, R. (2021). Corporate foresight organizational learning and performance: The moderating role of digital transformation and mediating role of innovativeness in SMEs. *International Journal of Data and Network Science*, 5(4), 703–712.
- AlSharji, A., Ahmad, S. Z., & Bakar, A. R. A. (2018). Understanding social media adoption in SMEs: Empirical evidence from the United Arab Emirates. *Journal of Entrepreneurship in Emerging Economies*.
- Alsharji, A., Ahmad, S. Z., & Jabeen, F. (2017). Factors Affecting Social Media Adoption in SMEs: Evidence from the UAE. *Academy of Management Proceedings*, 2017(1), 12425.
- Alshehhi, A., & Kasim, R. (2020). A Relationship of Project Management Process Factors with SMEs Performance. *International Journal of Sustainable Construction Engineering and Technology*, 11(2), 212–218.
- Alshirah, M., Lutfi, A., Alshirah, A., Saad, M., Ibrahim, N., & Mohammed, F. (2021). Influences of the environmental factors on the intention to adopt cloud based accounting information system among SMEs in Jordan. *Accounting*, 7(3), 645–654.
- Alzaabi, M. O. H. K., & Omar, R. Bin. (2021). Organizational factors and e-commerce adoption in SMEs of United Arab Emirates: Mediating role of perceived strategic value. *International Journal of Entrepreneurship*, 25, 1–18.
- Andarwati, M., Zuhroh, D., & Amrullah, F. (2020). Determinants of perceived usefulness and end-user accounting information system in SMEs. *International Journal of Advanced Science and Technology*, 29(8), 46–61.
- Bakhouche, A., Elchaar, R., & Emam, M. (2020). Survey of financing options and key challenges faced by SMEs in the UAE: Economic Environment, finance, and regulatory landscape. In *Entrepreneurial Innovation and Economic Development in Dubai and Comparisons to Its Sister Cities* (pp. 115–145). IGI Global.
- Basri, W. S. M., & Siam, M. R. A. (2019). Social media and corporate communication antecedents of SME sustainability performance: A conceptual framework for SMEs of Arab world. *Journal of Economic and Administrative Sciences*, 35(3).
- Bhatti, T. (2017). Influences on adoption of cloud-based ERP systems in SMEs: The technological-organizational-environmental framework. *Corporate Ownership & Control*, 15(1–2), 370–380.
- Bin, M., & Hui, G. (2021). A systematic review of factors influencing digital transformation of SMEs. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(11), 1673–1686.
- Caiazza, R. (2016). Internationalization of SMEs in high potential markets. Trends in Food Science & Technology, 58, 127–132.
- Chege, S. M., & Wang, D. (2020). Information technology innovation and its impact on job creation by SMEs in developing countries: an analysis of the literature review. *Technology Analysis & Strategic Management*, 32(3), 256–271.
- Elbeltagi, I., Al Sharji, Y., Hardaker, G., & Elsetouhi, A. (2013). The role of the owner-manager in SMEs' adoption of information and communication technology in the United Arab Emirates. *Journal of Global Information Management*

- (JGIM), 21(2), 23–50.
- Farouk Abdel Al, S., Jabeen, F., & Katsioloudes, M. (2017). SMEs capital structure decisions and success determinants: empirical evidence from the UAE. *Journal of Accounting, Ethics and Public Policy*, 18(2).
- Ghak, T. El, & Zarrouk, H. (2022). Opportunities and Challenges Facing SMEs' Access to Financing in the UAE: An Analytical Study. *Contemporary Research in Accounting and Finance*, 311–328.
- Ghandour, A. (2018). FAHP-based to-do-list for eCommerce websites the case of SMEs in Abu Dhabi. *International Journal of Economics and Business Research*, 15(1), 52–71.
- GHANEM, S. K. R., & Hamid, N. (2020). The effect of Facebook, WhatsApp, Twitter and email on SMEs performance: empirical evidence from United Arab Emirates. *Journal of Internet Social Networking and Virtual Communities*, 2020, 1–17.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems*, 18(1), 185–214.
- Gupta, N., & Mirchandani, A. (2018). Investigating entrepreneurial success factors of women-owned SMEs in UAE. *Management Decision*.
- Hair, J. F., Money, A. H., Samouel, P., & Page, M. (2007). Research methods for business. Education+ Training.
- Hair Jr, J. F., Sarstedt, M., Hopkins, L., & Kuppelwieser, V. G. (2014). Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. *European Business Review*.
- Hamad, E., & Leslie, A. (2013). Entrepreneurship in SMEs through business incubators in UAE. International Journal of Innovation and Knowledge Management in the Middle East and North Africa, 2(1), 21.
- Jeong, S. W., & Chung, J.-E. (2022). Enhancing competitive advantage and financial performance of consumer-goods SMEs in export markets: how do social capital and marketing innovation matter? *Asia Pacific Journal of Marketing and Logistics*.
- Ju, P.-H., Chen, D.-N., Yu, Y.-C., & Wei, H.-L. (2013). Relationships among open innovation processes, entrepreneurial orientation, and organizational performance of SMEs: The moderating role of technological turbulence. *International Conference on Business Informatics Research*, 140–160.
- Kareem, H. M., Dauwed, M., Meri, A., Jarrar, M., Al-Bsheish, M., & Aldujaili, A. A. (2021). The Role of Accounting Information System and Knowledge Management to Enhancing Organizational Performance in Iraqi SMEs. Sustainability, 13(22), 12706.
- Kashmoola, B. W., & Ahamat, A. (2021). Job Satisfaction and Intention to Leave among Middle-Level Managers of SMEs in Dubai, UAE. *Indonesian Management and Accounting Research*, 19(2), 163–180.
- Khalili, A., & Asmawi, A. (2012). Appraising the impact of gender differences on organizational commitment: Empirical evidence from a private SME in Iran. *International Journal of Business and Management*, 7(5), 100.
- Kumar, V. (2014). Readiness of SMEs in UAE for an accounting standard transition to IFRS for SMEs: an empirical analysis. *International Journal of Strategic Business Alliances* 1, 3(4), 282–296.
- Lo, M. C., Wang, Y. C., Wah, C. R. J., & Ramayah, T. (2016). The critical success factors for organizational performance of SMEs in Malaysia: a partial least squares approach. Revista Brasileira de Gestão de Negócios, 18, 370–391.
- Lutfi, A. (2022). Factors Influencing the Continuance Intention to Use Accounting Information System in Jordanian SMEs from the Perspectives of UTAUT: Top Management Support and Self-Efficacy as Predictor Factors. *Economies*, 10(4), 75
- Lythreatis, S., Mostafa, A. M. S., & Wang, X. (2019). Participative leadership and organizational identification in SMEs in the MENA Region: Testing the roles of CSR perceptions and pride in membership. *Journal of Business Ethics*, 156(3), 635–650.
- Mohammed, A. Q. (2019). Barriers and enablers of innovation in United Arab Emirates (UAE) small and medium enterprises (SMEs) sector. *International Journal of Entrepreneurship*, 23(3), 1–9.
- Muhammad Siddique, C. (2015). A comparative study of strategic planning practices of SMEs and large-sized business organizations in emerging economies: The case of UAE. *Strategic Change*, 24(6), 553–567.
- Murad, M., Bhatti, A., Bakar, A., Ahmad, R., & Khan, A. J. (2022). Exploring the Relationship between Effective Management & Social Equity: A CSR Perspective. *Journal of South Asian Studies*, 10(1), 103–111.
- Ng, P. Y., & Hamilton, R. T. (2021). Socioemotional wealth and the innovativeness of family SMEs in the United Arab Emirates. *Journal of Small Business & Entrepreneurship*, 1–24.
- Nuseir, M. T. (2018). Digital media impact on SMEs performance in the UAE. *Academy of Entrepreneurship Journal*, 24(2), 1_13
- Nuseir, M. T., & Aljumah, A. (2020). The role of digital marketing in business performance with the moderating effect of environment factors among SMEs of UAE. *International Journal of Innovation, Creativity and Change*, 11(3), 310–324.
- Petzold, S., Barbat, V., Pons, F., & Zins, M. (2019). Impact of responsive and proactive market orientation on SME performance: The moderating role of economic crisis perception. *Canadian Journal of Administrative Sciences/Revue Canadianne Des Sciences de l'Administration*, 36(4), 459–472.
- Polas, M. R. H., Tabash, M. I., Bhattacharjee, A., & Dávila, G. A. (2021). Knowledge management practices and green innovation in SMES: the role of environmental awareness towards environmental sustainability. *International Journal of Organizational Analysis*.
- Purwanto, A. (2022). The Role of Transformational Leadership and Organizational Citizenship Behavior on SMEs Employee Performance. *Journal of Industrial Engineering & Management Research*.

- Sherif, M., Galloway, L., & Zarrouk, H. (2019). Performance and entrepreneurial orientation in SMEs: the case of Abu Dhabi. *International Journal of Accounting, Auditing and Performance Evaluation*, 15(3), 241–261.
- Shrivastava, V. K., & Riaz, S. (2022). Business Development Using Big Data within UAE SMEs Retail Sector: Prospects & Questions. 2022 14th International Conference on Computer and Automation Engineering (ICCAE), 145–150.
- Siddique, C. M. (2014). Impediments to market orientation: An exploratory study of retail SMEs in the United Arab Emirates. Education, Business and Society: Contemporary Middle Eastern Issues.
- Sidek, S., & Abdulraqeeb, R. M. A. (2022). The Moderating Effects of Government Supports towards VAT Compliance Among SMES in UAE: A Conceptual Framework. *Mathematical Statistician and Engineering Applications*, 71(3), 84–102.
- Sin, K. Y., Osman, A., Salahuddin, S. N., Abdullah, S., Lim, Y. J., & Sim, C. L. (2016). Relative advantage and competitive pressure towards implementation of e-commerce: Overview of small and medium enterprises (SMEs). *Procedia Economics and Finance*, *35*, 434–443.
- Smerecnik, K. R., & Andersen, P. A. (2011). The diffusion of environmental sustainability innovations in North American hotels and ski resorts. *Journal of Sustainable Tourism*, 19(2), 171–196.
- Temouri, Y., Shen, K., Pereira, V., & Xie, X. (2022). How do emerging market SMEs utilize resources in the face of environmental uncertainty? *BRO Business Research Quarterly*, 25(3), 212–223.
- Thaha, A. R., Maulina, E., Muftiadi, R. A., & Alexandri, M. B. (2021). Digital marketing and SMEs: a systematic mapping study. *Library Philosophy and Practice (e-Journal)*, 5113.
- Tirupathi, A., Banerjee, A., & Riaz, S. (2020). Factors leading to sustained growth of SMES in the UAE: A concept paper. Journal of Advanced Research in Economics and Administrative Sciences, 1(2), 91–105.
- Udriyah, U., Tham, J., & Azam, S. (2019). The effects of market orientation and innovation on competitive advantage and business performance of textile SMEs. *Management Science Letters*, 9(9), 1419–1428.
- Yaseen, Z. K., & Marwan, Y. (2016). The influence of social media on recruitment and selection process in SMEs. *Journal of Small Business and Entrepreneurship Development*, 4(2), 21–27.
- Zacca, R., Dayan, M., & Elbanna, S. (2017). The influence of conflict and intuition on explorative new products and performance in SMEs. *Journal of Small Business and Enterprise Development*.
- Zaidan, E. (2017). Analysis of ICT usage patterns, benefits and barriers in tourism SMEs in the Middle Eastern countries: The case of Dubai in UAE. *Journal of Vacation Marketing*, 23(3), 248–263.
- Zarrouk, H., Sherif, M., Galloway, L., & El Ghak, T. (2020). Entrepreneurial orientation, access to financial resources and SMEs' business performance: The case of the United Arab Emirates. The Journal of Asian Finance, Economics and Business, 7(12), 465–474.



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