

# The Relationship Technological, Organizational, and Environmental Factors, Social Media Adoption and SMEs Performance

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## Abstract

Social media marketing has become the new mantra for several businesses that seek to create value and contribute economically to the nation's GDP. However, research literature shows that its adoption in SMEs is still slow-paced despite its perceived and recognized benefits. The UAE government recognizes the importance of SMEs as instrumental to the economic growth and development of the UAE. Despite this, the limited research scope in this area reveals that questions regarding how SMEs should select and deploy social media channels and how these impacts their business performance still lingers. This paper examined the relationship technological, organizational, and environmental factors, social media adoption and SMEs performance. A quantitative research design and positivist research paradigm, the researcher sought to attain the study's research objectives. A sample of 452 respondents consisting of SME business owners, CEO and top management were selected from each of the seven districts in the UAE. The study recorded a 92.9% response rate as only 423 questionnaires were useable for data analysis. Data were analyzed using descriptive statistics and the Partial Least Squares structural equation modelling. The results showed that technological, organizational and environmental factors had significant and positive impact on the social media adoption. However, only technological factor had significant and positive influence on SMEs performance. While organizational and environmental factors had negative impact on SMEs performance. The results also showed that social media adoption mediates the relationship between technological, organizational and environmental factor and SMEs performance.

## Keywords:

Technological, Organizational, and Environmental, Social media, SMEs Performance

## 1. Introduction

The UAE government recognizes the importance of SMEs as being instrumental to the economic growth and development of the United Arab Emirates (UAE) as a result of their significant contribution to the Gross Domestic Product (GDP) and job creation (Ahmad et al., 2019). According to Ahmad et al. (2019) the UAE is a developing country with a growing and thriving large SMEs landscape. It accounts for about 95 percent of private business enterprises employing about 86 percent of the UAE workforce (Ahmad et al., 2019). Furthermore, in the UAE, it was estimated that SMEs contributed 60 percent of the GDP in 2015 and the government is aiming to boost its share to 70 percent by 2021 (John, 2016).as cited in (Ahmad et al., 2018). Given that SMEs have led the growth in productivity over the past decade, strengthening SMEs business environment is now more essential for the UAE to retain and improve its competitive edge among other growing and dynamic global economies. One of such ways is by developing and promoting the development of tools to help SMEs maximize and optimize their business performance sustainably (Ahmad et al., 2019; Effendi et al., 2020; Olanrewaju et al., 2020; Tajudeen et al., 2018).

Social media according to Kaplan and Haenlein (2010) is “a group of internet-based application that builds on the ideological and technological foundations of web 2.0 and allows the creation and exchange of user generated content”. The advent of web 2.0 and social media applications such as (Facebook, Instagram, Twitter, Snapchat etc.) has revolutionized communications channels. Social media channels can now be utilized by SMEs without additional resources dues to its ease of accessibility, low cost of set up and use as well as minimal technical manageability and

its ability for reaching and connecting many consumers (Ahmad et al., 2019). The use of social media in business management has seen exponential growth due to its benefits in increasing value for enterprises. Social media adoption is hence becoming a critical business management tool (Alford & Page, 2015; Almotairy et al., 2020; Pan & Crotts, 2012; Tajudeen et al., 2018; Vithayathil et al., 2020).

The benefits of social media to businesses and its impact have been investigated in many settings. For example, social media has been deployed in analytics, publishing, conversion tracking, content management, automated publishing and customer targeting (Ali Qalati et al., 2021). Ahmad et al. (2019) notes social media has become increasingly popular among SMEs because it allows for communication to go beyond private one-for-one conversations to become many-to-many. Studies have investigated the effects of social media on several organizational variables/ For instance, the impact of social media have been reported in consumer purchase decisions (Vithayathil et al., 2020), its impact on purchasing intention and brand awareness (Wang et al., 2019), customer retention, digital word of mouth and purchase decision involvement (Alalwan, 2018).

Ali Qalati et al. (2021) explains that despite the significant impact of SME in the economic development of nations and the perceived value of social media to SMEs, research is still limited especially in substantiating how SMEs deploy and select social media channels and the impacts these have on their business performance. SME performance is a multifaceted phenomenon.

According to Cicea et al. (2019), SMEs' performance can be understood from a quantitative standpoint to imply: efficiency, financial results, level of production, number of customers (Anggadwita & Mustafid, 2014) market share, profitability, productivity, dynamics of revenues, costs and liquidity (Gupta & Batra, 2016), etc. in contrast, from a qualitative perspective: goals achievement, leadership style, employee behaviour (Anggadwita & Mustafid, 2014) customer satisfaction product and process innovation, organisational and marketing innovation (Cicea et al., 2019). Some practitioners evaluate an SMEs performance on the basis of their financial performance and their ability to create value. Hence in this study, SME performance would be hitherto defined in terms of their financial performance. To boost a firms' performance, organizations rely on several resources. Research has shown that larger corporations usually have lot of resources to deploy any form of technology unlike SMEs which rely on very little investment. Hence, the growing interest in the adoption of social media by entrepreneurs and SMEs.

It becomes increasingly important to investigate what factors influence social media adoption in a developing country context such as the UAE given the role SMEs plays in the economic development of the country. Research literature has shown that several studies have been carried out on the use of social media to advance business practices and their impact on organizational performance (Ali Qalati et al., 2021).

Social media has become an increasingly predominant tool for building reputable brands in the modern business landscape (Ahmad et al., 2019). Eze et al. (2020) notes that social media positively transforms the growth and survival of SMEs because it has become a vital advertising tool in the ever dynamic and changing business environment. According to Eze et al. (2020) social media aid in the promotion of a merchandise, by means of Web-based facilities and assist SMEs to promote their products on the internet, consequently enabling advertisers to contact potential customers anytime and anywhere. Furthermore, Eze et al. (2020) explains that SMEs that implement social media marketing technology via their marketing mix need to develop strategies that will not only create awareness but also promote dialogue and win the trust of the target customers. However, in many developing countries including the UAE, social media adoption by SMEs has failed to prove such relationships because of the uncertainty of the usage by SMEs (Ahmad et al., 2019; Eze et al., 2019). Therefore, examining the roles of social media adoption on SME performance helps explain the impact of social media adoption on SME performance is vital for promoting the further development of SMEs in the UAE. Such understandings can lead to better decision making with regards the adoption of social media by SMEs as well as help SMEs navigate the social media landscape for optimal performances and organizational success.

## 2. Methodology

In this study the sample used was randomly selected from the UAE directory of Small and medium sized enterprises (SMEs). This lists all the SMEs operating in the country, across the seven main emirates. Thus, a quantitative approach was used; with a survey questionnaire comprises of five sections: section A the demographic background information

of the participants. While section B consist of the independent variables technological, organizational and environmental factor as adopted from Ahmad et al (2019) and Qalati et al. (2021) which incorporate 23 items technology, organization and environment. Next, section C comprises mediating variable (Social media adoption) as adopted from Qalati et al. (2021). Lastly, section E comprises of the dependent variable (SMEs performance) as adopted from Ahmad et al (2019) and Qalati et al. (2021). Thus, items were examined with the support of the 5-item scale ranging from 1= strongly disagree to 5= strongly agree as the instrument for data collection. Thus, in this research, the researcher used both face-to-face questionnaire and online ([www. docs.google.com/forms](http://www.docs.google.com/forms)) survey. From total of 452 distributed questionnaire a total of 423 was returned. The validity and reliability of the measurement and structural models were established using PLS-SEM to test the hypotheses of the study.

### 3. Findings of the Analysis

This section discusses the key findings of the study, the main objective of this paper is to examine the direct relationship between technological organizational and environmental factor (TOE characteristic) and SMEs performance. Also, to determine the mediating role of the social media adoption between TOE characteristic and SMEs performance in the UAE.

Table 1: Constructs Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Bandwagon effect	0.887	0.930	0.816
Compatibility	0.920	0.940	0.759
Competitive Pressure	0.865	0.918	0.789
Competitive intensity	0.560	0.817	0.692
Complexity	0.914	0.935	0.743
Customer relationship	0.921	0.944	0.809
Environmental factor	0.904	0.924	0.605
Information accessibility	0.868	0.919	0.791
Organizational factor	0.914	0.940	0.797
Relative advantage	0.919	0.937	0.715
SMEs Performance	0.798	0.866	0.627
Social Media Adoption	0.890	0.913	0.519
Social media for marketing	0.898	0.929	0.765
Technological factor	0.949	0.956	0.505
Trialability	0.890	0.924	0.752
Visibility	0.898	0.928	0.764

Table 1 displays the results of the Cronbach’s alpha, composite reliability and Average Variance Extracted (AVE). All related constructs related to the study met the required values of the composite reliability which greater than 0.7. Also, AVE met the required values which is expected to be larger than 0.5. The result indicates a satisfactory standard for convergent validity (Henseler, Ringle, & Sinkovics, 2009). Therefore, the composite reliability results indicated values greater than 0.7, indicating that the measurement scale used in this study had high internal consistency. With such results, these further illustrate that the instrument employed in this study has met the acceptable standards of validity and reliability analyses.

Table 2 shows the results of discriminant validity analyses based on Fornell-Lacker criterion. Also, all related constructs indicate values of AVE square root in a diagonal manner which were greater than the squared correlation with other constructs. These indicate that discriminant validity was successfully established (Henseler *et al.*, 2009).

Table 2: Discriminant Validity based on Fornell-Lacker criterion

	EBE	TC	ECP	ECI	TCX	SCR	SIA	TRA	SMEP	SMM	TT	TV
EBE	<b>0.903</b>											
TC	0.701	<b>0.871</b>										
ECP	0.670	0.709	<b>0.888</b>									
ECI	0.634	0.757	0.678	<b>0.832</b>								
TCX	0.537	0.827	0.698	0.742	<b>0.862</b>							
SCR	0.668	0.521	0.536	0.511	0.502	<b>0.900</b>						
SIA	0.205	0.012	0.089	0.017	-0.001	0.236	<b>0.889</b>					

TRA	0.456	0.773	0.596	0.763	0.736	0.339	-0.118	<b>0.845</b>				
SMEP	0.162	-0.023	0.008	-0.004	-0.052	0.226	0.581	-0.126	<b>0.792</b>			
SMM	0.605	0.532	0.594	0.503	0.576	0.784	0.083	0.402	0.124	<b>0.875</b>		
TT	0.421	0.717	0.568	0.611	0.771	0.561	-0.118	0.702	-0.090	0.636	<b>0.867</b>	
TV	0.036	0.156	-0.017	0.037	0.035	0.080	-0.171	0.112	-0.149	0.066	0.079	<b>0.874</b>

After assessing the measurement model, and therefore, all the recommended criteria for measurement model validity were satisfied accordingly. Thus, accomplishing the first step of the PLS-SEM analysis evaluation process is successfully completed. The second step of the analysis with is the structural model assessments.

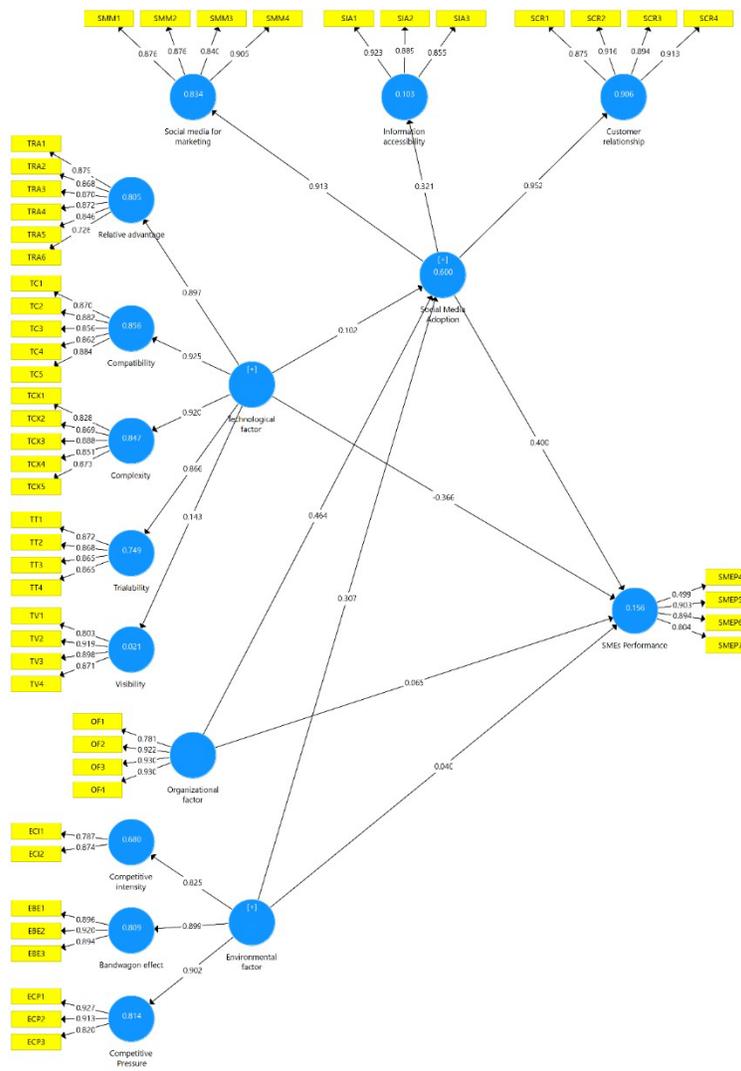


Figure 1: Measurement model analysis

Table 3: Significance test for the structural model path coefficient, t-statistics and p-values

Direct relationship	Std $\beta$	t-statistics	p-values	Decision
Environmental factor -> SMEs Performance	0.040	0.517	0.606	Not supported
Environmental factor -> Social Media Adoption	0.307	5.615	0.000	Supported
Organizational factor -> SMEs Performance	0.065	0.877	0.381	Not supported
Organizational factor -> Social Media Adoption	0.464	10.105	0.000	Supported
Social Media Adoption -> SMEs Performance	0.400	4.145	0.000	Supported
Technological factor -> SMEs Performance	-0.366	5.988	0.000	Supported
Technological factor -> Social Media Adoption	0.102	2.320	0.021	Supported

Therefore, based on the significance test for the structural model path coefficient, t-statistics and p-values the nature of the hypothesis answered. As showed from the Table 3, technological, organizational and environmental factors had significant and positive impact on the social media adoption. However, only technological factor had significant and positive influence on SMEs performance. While organizational and environmental factors had negative impact on SMEs performance.

Table 4: Mediating effect of Social Media Adoption

Mediating role	Std $\beta$	t-statistics	p-values	Decision
Environmental factor -> Social Media Adoption -> SMEs Performance	0.123	3.125	0.002	Supported
Organizational factor -> Social Media Adoption -> SMEs Performance	0.186	3.527	0.000	Supported
Technological factor -> Social Media Adoption -> SMEs Performance	0.041	2.147	0.032	Supported

Interestingly, through social media adoption all the three TOE characteristic had significant and positive impact on SMEs performance. As from the Table 4 social media adoption mediates the relationship between technological, organizational and environmental factor and SMEs performance.

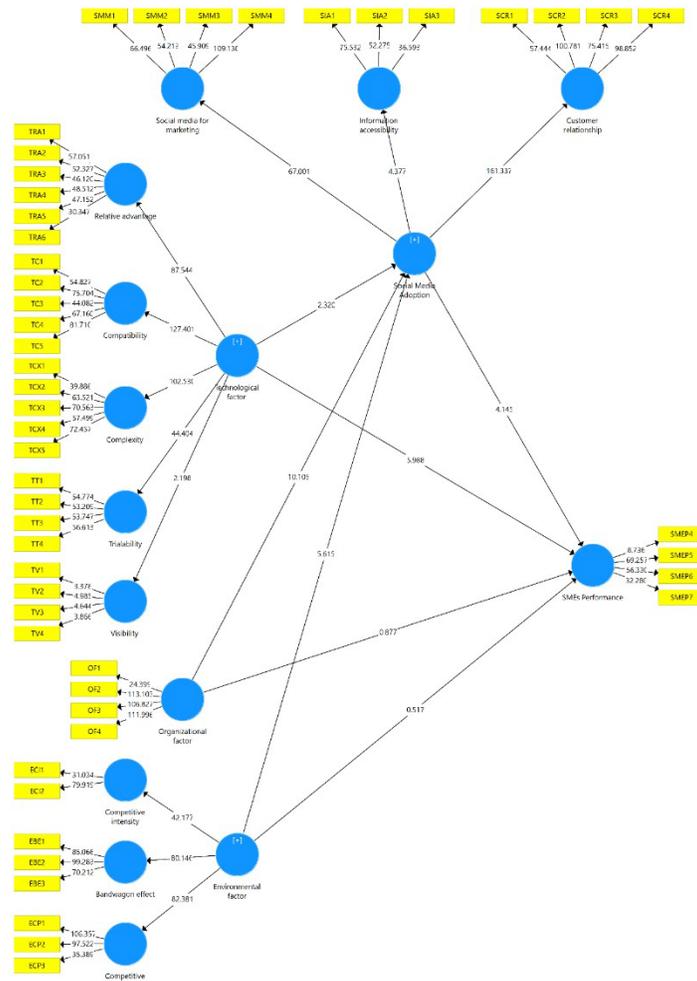


Figure 2: Structural model of the study (Final model)

#### 4. Discussion of the Finding

The study revealed that the technological factor has a significant effect on social media adoption in SMEs. Also, this finding is consistent with those of Eze *et al* (2020) used technology affordability and technology affordability to measure technological factor based on the TOE framework. The finding revealed that SMEs are willing to try social media marketing applications if it is less expensive, adaptable to the business's existing arrangement, and were little or no training is involved. The finding reveals that cost-benefit analysis in line with the growth of the business, customer's satisfaction about the applications, employee efficiency and the level of productivity of the app influence the adoption decision. The finding confirmed that these factors play a massive part for SMEs to make decisions on whether to adopt social media marketing technology or not (Eze *et al.*, (2020). In addition, the results revealed that organizational and environmental factors did not affect the SMEs performance in the UAE as displayed. Although several studies support the significance of organizational characteristics in influencing outcomes, as mentioned in the literature review (e.g., Nguyen *et al* (2015) and (Higón, 2012; Eze *et al.*, 2020). The current study has been unable to demonstrate that organizational factors influence SMEs performance based on the data collected from SMEs in the UAE

## 5. Conclusion and Recommendations

Therefore, this study has confirmed empirically that social media adoption significantly mediates the relationship between technological, organizational and environmental factors and SMEs performance. Also, the results revealed that technological factor directly affects the SMEs performance; unlike organizational and environmental factors showed a negative effect on SMEs performance.

Thus, there is a need for future research to investigate whether the model could be used for a comparative study between another business sector. A model could be developed to better represent the moderating effects of organizational factors on the relationship between social media adoption and business performance in a more general form, rather than focusing on the SMEs alone. In addition, the present study only focused on the UAE context. Thus, future research might focus on at least two countries from the middle east; it would be more interesting to compare the results. This will help understand more about social media adoption and SMEs outcomes as official reports and empirical studies have agreed that SMEs contribute significantly to nations' GDP. Thus, a cross-sectional study will help to understand and identify the common issues. In other words, international research in other geographical settings, for instance, within the Asian countries and Africa, will contribute to the greater generalization of the findings. Context is essential in validating research model and findings; such a study could give academicians and industry practitioners a stronger basis for applying the model for contemporary or emerging challenges. Therefore, based on the results of this work, the researcher that this study would not solely contribute to academic sectors; however, it can also help policymaker have a good understanding of them to overcome the SMEs challenges.

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