

# FACTORS INFLUENCING SOCIAL MEDIA ADOPTION AMONG SMES DURING COVID-19 CRISIS

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## ABSTRACT

*Social media is considered a dominant platform for ensuring business success and survival, especially in the case of small and medium enterprises businesses (SMEs). It offers many benefits for businesses in terms of enhancing customer relations, increasing profit, reducing cost, and allowing flexibility. During the Covid-19 pandemic crisis, social media has become essential for businesses. The focus has shifted to conducting businesses' daily activities remotely. Despite its importance, this research aims to explore factors that affect social media implementation on the part of SMEs in Jordan. The Technological, Environmental, and Organizational (TOE) and the Technology Acceptance Model (TAM) has been employed. These theories provide useful insights and explanations with regard to the internal and external contexts of social media adoption. Data was collected from 250 SMEs in the city of Irbid, north Jordan. The results reveal that all factors significantly affect social media adoption on the part of SMEs. Among these factors, environmental context was the most significant predictor of social media adoption during the Covid-19 pandemic crisis; this finding could provide a good basis for SME decision-makers and practitioners regarding assessing the factors that influence social media implementation on the part of SMEs.*

**Keywords:** Social media; SMEs; TAM; TOE; Jordan.

## INTRODUCTION

The lockdown measures imposed by governments across the globe caused significant harm to SMEs during Covid-19 pandemic, to the point of their questioning their survival (Papadopoulos et al., 2020). According to a report by the OECD (2020), while the pandemic has had a severe impact on the supply and demand situation faced by every business regardless of its size, SMEs have suffered more because of their lack of resilience and flexibility in the face of large environmental shocks. Moreover, SMEs tend to be more vulnerable to external environmental tremors because of a lack of liquid and non-liquid resources compared to large firms. Like SMEs throughout the globe, SMEs in Jordan have not fared well. Consequently, according to a study by Al-ajlouni (2020), Covid-19 has put the Jordanian economy on the brink of collapse due to the high reliance of the country on SMEs. Over 52% of the work force of Jordan works in the informal economy, and 95% of private sector organizations are SMEs, contributing 40% of the country's gross domestic product (GDP). Realizing the severity of the Covid-19 threat to SMEs, the Central Bank of Jordan (CBJ) has adopted a quantitative easing policy with a 500 million Jordanian dinar stimulus package (Samarah, 2020). On the other hand, Covid-19 has also provided SMEs in Jordan

with the opportunity to explore new strategies to ensure business continuity in a time of crisis (Papadopoulos et al., 2020). To this end, digital technologies such as social media provide SMEs with a unique platform to reach out to customers. Covid-19 has been praised in the sense that businesses have been forced to harness both physical and digital channels as a survival mechanism (Itliong, 2020).

A Covid-19 response such as the implementation of social distancing has made online shopping channels become the only platform allowing organizations and customers to interact (Sugandini et al., 2020). Several online businesses such as Amazon, Target, and Wal-Mart have thrived during the pandemic (Bertoni, 2020). At the same time, SMEs have faced closure, despite government assistance, as customers have been unable to visit their stores due to the pandemic-related restrictions (Naquetta, 2020). While digital technologies are identified as the only way to respond to the quarantine restriction on the part of SMEs (Yaseen et al., 2016; Sugandini et al., 2020), its application mainly in the context of SMEs in Jordan, is still poor. According to a study by Al tawara and Gide (2017), despite the emergence of social media marketing, most SMEs in Jordan use traditional marketing methods leading to low productivity. Increased revenue, cost reduction, and the enhancement of organizational effectiveness are recognized as making the business case for the implementation of social media marketing. Social media has been recognized as enabling organizations to engage with customers in multiple ways. They are not only communicating with customers regarding new products/services, but also are able to use customer feedback to improve customer satisfaction for SMEs (Karimi & Naghibi, 2015), social media provides cost-effective ways of engaging customers as compared to expensive traditional marketing tools (Grobler, 2014). Jordan has witnessed tremendous growth in the users of social media, with a 7.4% increase between 2019 and 2020, to 5.7 million users, accounting for 56% penetration of the Jordanian population (Kemp et al., 2021). Thus, social media has a tremendous influence on Jordanians, and has become a significant promotion device for the country's SMEs.

According to Salamzadeh (2020), a research can constitute theoretical contributions by suggesting new concepts, testing well-established and validated theories in new contexts, and exploring new relationships among various concepts. This research aims to explore why SMEs in Jordan have not been able to respond quickly to the Covid-19 crisis digitally through the widespread utilization of social media platforms. A review of the existing literature examines the obstacles to social media implementation from a variety of perspectives that includes behavioral, technological, end-user acceptance, organizational, management, and business environment (Dahnil et al., 2014). However, there is a lack of studies into the rapid implementation of social media platforms as a survival tool, rather than just a business development during a crisis such as Covid-19. Additionally, while the existing literature does recognize that social media platforms are critical instrument for SMEs in terms of competing against large organizations (Kim et al., 2013), most such studies are conducted in the context of western organizations (Akpan et al., 2020; Sugandini et al., 2020). Hence may lead to an inability to generalize in such a way that allows us to understand the situation in the context of emerging economies such as that of Jordan. Therefore, investigation of the barriers faced by SMEs in Jordan in terms of the implementation of social media is not only timely but also will fill a gap in the literature about the implementation of information technology in the context of emerging economies (Ainin et al., 2015).

## LITERATURE REVIEW

### Social Media Platforms in a Crisis

A crisis refers to an unexpected and abrupt event that threatens to interrupt the operations of organizations, with financial and reputational consequences (Coombs, 2007). Given the impact of crises such as Covid-19, organizations need to develop strategies to improve business resilience (Reeves et al., 2020). However, current studies on crisis management focus mainly on big companies, with little attention being given to SMEs. Herbane (2013), even though SMEs have a major role to play in creating employment and economic prosperity, and are often innovating and changing (Tajpour et al., 2018), and tend to be more vulnerable to crises due to resource constraints, a weak market position. Unlike large firms, when it comes SMEs coping with a crisis, they tend to have the advantage of versatility, good learning skills, and good customer relations (Irvine & Anderson, 2006; Hong et al., 2012). From a marketing perspective, SMEs need to pay attention to means of communication to sustain their reputation among their customers (Coombs, 2007). To this end, during the Covid-19 crisis, social media has been regarded as being critical to the survival of SMEs (Akpan et al., 2020; Sugandini et al., 2020).

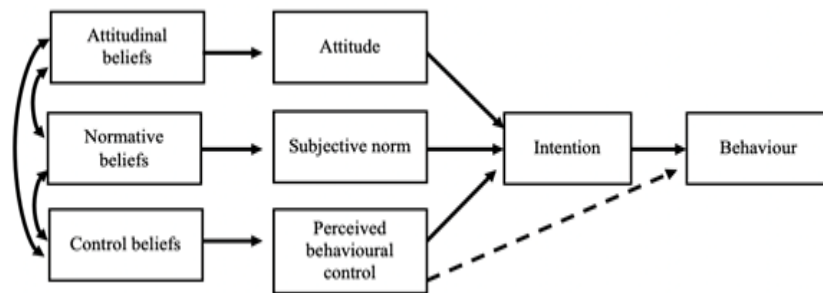
Social media is defined as a computer-mediated interactive communication medium that supports the development and dissemination of information, knowledge, and further forms of expression through social networking sites (SNSs) (Obar & Wildman, 2015). Over the years a variety of SNSs has emerged such as Twitter, Facebook, Instagram, LinkedIn, and a multitude of blogging platforms (Al-Adwan & Kokash, 2019; Tajpour et al., 2019; Wong et al., 2020). The significance of using SNS for SMEs in the current crisis stems from the resource-based view (RBV) of firms that claim that the competitive advantage for an organization comes from its rare, valuable, inimitable, and non-subsumable capabilities (Barney, 1991; Yaseen et al., 2017). The RBV of competitive advantage becomes particularly important during a crisis such as Covid-19, as it has been established that SMEs which were able to adopt SNSs during lockdown restrictions prevailed better than those which did not (Papadopoulos et al., 2020). Compared to traditional marketing communication tools such as advertising, sales promotions, public relations, and personal selling, social media or digital marketing has been shown to be more influential in terms of communication, credibility, price, and control mechanisms (Fill, 2009). This brief discussion clearly indicates that social media is one of the key and essential methods which allow SMEs to lessen the severity of the Covid-19 crisis (Indriastuti & Fuad, 2020). However, most SMEs are reluctant to adopt this approach it because of behavioral, attitudinal, organizational, legal environmental, and technological receptiveness perspectives (Meske & Stieglitz, 2013; Govinnage & Sachitra, 2019). Given the large number of factors impacting the implementation of social media by SMEs, this research intends to use a combination of two models in the form of the Technology Acceptance Model (TAM) and the Technological, Organizational and Environmental (TOE) framework to investigate the topic under consideration.

## THEORETICAL FRAME WORK

### The TAM Model

One of the most well-known theories for explaining behavioral problems pertaining to technology adoption is the TAM (Dahnil et al., 2014). Davis (1989), used the theoretical concepts of reasoned action (TRA) and the theory of expected actions to better understand people's intentions to implement technology, which led to the creation of TAM. Proposed by Ajzen (2011) it argues that performance expectancy is predicted by behaviors and subjective standards. While attitude arrests an individual's interpretation of performing a behavior, subjective norms contribute

towards an individual's perceptual expectation of the opinion of others surrounding a particular action. Additionally, a consequence of attitude and subjective norms causes underlying attitudinal and normative beliefs on the part of individuals respectively. Attitudinal beliefs are described as an evaluation of the likelihood of behavioral consequences, while normative beliefs are the outcome of assessment about what others may think about performing particular behaviours. TPB is an extension of TRA as it adds perceived behavioural control (PBC). This acts as a control and a factor which supports/inhibits the performing of a behavior as shown in Figure 1.



**FIGURE 1**

**THEORY OF PLANNED BEHAVIORS SOURCE: ADAPTED FROM**

Source: Pavlou and Fygenson, 2006

Built on the principles of the TPB and the TRA, the TAM asserts that perceived usefulness (PU) and perceived ease of use (PEOU) can be identified as two factors that determine individual acceptance of the use of technology (Gangwar et al., 2015). PU is defined as the extent to which an individual believes that the use of a specific technology would lead to performance enhancement. On the other hand, PEOU is about the degree of effort that an individual believes would be needed to use a particular system. The TAM has been used by a vast number of researchers in a variety of fields to evaluate behavioral factors that impact the adoption of technology at both individual and organizational levels (Awa et al., 2015; Razak and Latip, 2016; Ahamat et al., 2017; Al-Adwan et al., 2020). However, while the TAM has been lauded for identifying behavioral factors relating to individuals, it has been criticized as being implausible for the work environment (Ajibade, 2018). Similarly, the TAM has been criticized for not taking into account the aspects of compliance, and for emphasizing an individual's perception of technology (Ajibade, 2016). For instance, in a mature organization, information management is likely to be promoted under well-established procedures. In such a scenario, the adoption of technology becomes the need for compliance, rather than a behavioural issue. Against the backdrop of the limitations of the TAM, this paper integrates it with the TOE model.

**The TOE Model**

The TOE framework was developed by Tornatzky (1990). It is recognized as being useful for analyzing the adoption of technology by organizations at three levels - technological, organizational, and environmental. The TOE model has been used by many researchers to assess how small-medium enterprises businesses adopt technology. Alshamaila et al. (2013) used the

TOE model to evaluate the cloud computing implementation processes of SMEs in the UK. The authors' identified eleven factors which they believed play a significant role with regard to cloud computing implementation among SMEs in the UK. These were perceived usefulness, complexity, geo-restrictions, flexibility, liability, scale, top management support, prior experience, innovativeness, business, sector, reach, supplier efforts, and external computing support. Similarly, Sugandini et al. (2020). examined social media implementation by 250 SMEs in the Yogyakarta region of Indonesia to face the impact of the Covid-19 pandemic. The study concluded that SMEs impacted by the Covid-19 crisis have a high awareness of the importance of social media and a deep desire to adopt it. However, their intentions to do so is significantly influenced by factors such as perceived relative advantage, perceived complexity, perceived compatibility, employee skills, support from top management, competitive advantage, government support, and environmental uncertainty. Since the work of Sugandini et al. (2020) is closest to this study, the TOE factors used by the authors were further investigated in this study in the context of Jordanian SMEs.

### **Technological Context**

The TOE framework describing the internal and external innovations that apply to a company are referred to as the technical context (Oliveira & Fraga, 2011). This paper uses Rogers (2002) diffusion of innovation to study the technological factors impacting the implementation of social media by SMEs in Jordan.

### **Relative Advantage**

The relative advantage factor is recognized as having a fundamental influence on the implementation of new technology, and consequently it is used by various researchers (Alismaili et al., 2020; Sugandini et al., 2020). Relative advantage is defined as an individual's view at the personal level, that innovation is better than existing technologies (Rogers, 2002). Therefore, the more the SMEs perceive a relative advantage in terms of innovation, the more the probability of its adoption. The relative advantage factor has been found as a key determinant for facilitating the process of the adoption of technology (Powelson, 2011). Additionally, the perception of relative advantage is lauded for enhancing the productivity and performance of organizations that eventually leads to improved organizational performance (Alismaili et al., 2020).

### **Compatibility**

This technological factor is characterized as the degree to which adopters' beliefs, experiences, and needs are considered to be compatible with the technology under consideration (Rogers, 2002). Wang et al. (2016) concluded that reliability is an essential factor for effective technological innovation because, when technology is consistent with the organization's systems, its adoption is less likely to fail. Similarly, if SMEs perceived that the implementation of social media would fall with the organizational values then it is highly likely that they would adopt it.

### **Complexity**

Gallivan (2001), linked complexity to both the use of technology and its implementation. To this end, Chong and Olesen (2017), found that the complexity of technology negatively impacts

its adoption on the part of SMEs.169 Similarly, Religia et al. (2021), found that the complexity of technology impacts the adoption of e-commerce in organizations. Therefore, SMEs with confidence and experience in the use of technology would likely adopt technology (Yaseen et al., 2017; Sugandini et al., 2020). associated the perception of the complexity of using technology as a likely predictor of the implementation of e-commerce. Likewise Ahmad et al. (2018), while examining social media implementation and its influence on the performance of SMEs in the UAE, found a positive noteworthy association between complexity and social media implementation intention.

## **Organizational Context**

One aspect of the TOE model relates to the organizational characteristics that impact the adoption of technology (Bhattacharya & Wamba, 2018). Businesses need to ensure that their inner organizational processes are appropriate in order to facilitate the adoption of technology (Wang et al., 2016). Previous research has identified employee expertise, perception of cost, and top management support as key predictors for the usage of social media by small -medium enterprises (SMEs) to promote their products and services (Sugandini et al., 2020).

## **Employee Expertise**

The adoption of new technology would be unsuccessful if the organization involved does not possess the necessary skills (Chiu et al., 2017; Yaseen et al., 2019). Rowe and Abdelatty (2012), found that a lack of knowledge with regard to information technology is one of the key barriers to the adoption of technology on the part of SMEs. Several previous studies have discovered the importance of employee experience with regard to the effective application of technology (Ahmad et al., 2018; Sugandini et al., 2020).

## **Perception of Cost**

Scarcity of resources on the part of SMEs, and the high cost of technology are identified as barriers to the adoption of technology (Sugandini et al., 2020). The lack of finances to fund technology adoption puts SMEs at a disadvantage relative to larger firms. Financial constraints have been found to be one of the vital factors inhibiting the implementation of Web 3.0 technology on the part of SMEs, particularly in emerging nations (Potluri & Vajjhala, 2018).

## **Top Management Support**

This factor is about the degree of support that the highest levels of management provide with regard to the adoption of technology for business purposes (Grover & Goslar, 1993). The criticality of top management provision for the successful implementation of technology has been ascertained by various researchers (Low et al., 2011; Abed, 2020; Alrousan et al., 2020; Salamzadeh & Arbatani, 2020). The significance of top management for influencing the adoption of technology lies with the fact that hierarchy has the power to control attitudes, principles, and opinions at both the individual and the organizational levels (Low et al., 2011). In addition, Matikiti et al. (2018) support this view by claiming that top management provision is crucial for the adoption of social media marketing, because senior managers are the ones who influence subordinates through providing vision, resources, and cognitive support. Therefore, it is

anticipated that SMEs with higher levels of top management support will be more likely to implement social media.

### **Environmental Context**

Rogers (2002), argues that the business environment is one of the vital factors that can either encourage or hinder the process of technology adoption. Here, the environmental context is considered as relating to external factors whose support is necessary for the survival and growth of a business. According to Sugandini et al. (2020), the forces from suppliers, a firm's associates, and competitors play a significant part in forcing SMEs to implement e-commerce platforms. However, firms cannot adopt technology if they do not possess the infrastructure and have access to government support. A study by Karim et al. (2017) revealed that the implementation of digital marketing amongst SMEs in Jordan possess potential benefits for SMEs. However, there exists a lack of network infrastructure and government support for the benefits to materialize.

### **Government Support**

Drawing on Zhu (2009) work, government policies are crucial with regard to SMEs promoting e-commerce. The government's e-commerce strategy should be designed to protect consumers and organizations against the threat of cybercrimes (Faqir, 2014). A study by Lutfi (2020), found that environmental uncertainty is one of the key elements impacting the implementation of technology on the part of SMEs in Jordan. Aljowaidi et al. (2015) also supported this view, as they argued that a lack of government policy oversight with regard to the implementation of e-commerce, hinders its implementation by SMEs. Therefore, the government can support the implementation of technology amongst SMEs by creating developing and enabling environments such as tax incentives, finance for infrastructure, and regulatory oversight (Sugandini et al., 2020).

### **Environmental Uncertainty**

Uncertainty in the business environment can harm the adoption of technology (Scupola, 2003). Environmental uncertainties tend to be out of the control of organizations and presents challenges due to the fast-changing environment. This very study is about environmental changes such as the Covid-19 pandemic that have caused SMEs in Jordan to adopt social media marketing tools as a means of survival (Itliong, 2020). However, SMEs may face other uncertainties relating to their immediate environment, such as lack of infrastructure and blurred operating standards all of which causes hindrance with regard to the adoption of technology.

### **Competitive Pressure**

The adoption of e-commerce is largely driven by competitive pressure (Awa et al., 2015). Drawing on Porter and Millar (1985), it can be suggested that competitive rivalry in an industry tends to alter the landscape of the industry, and that technology can play the role of game-changer, and often results in the restructuring of an industry. For instance, the emergence of touch phones completely changed the 238 landscapes of the mobile phone industry across the globe, leading to the elimination of market leaders such as Nokia (Surowiecki, 2017). According to Mckinesy and

Company (2020), Covid-19 has forced firms to implement technology as organizations are investing in technology to achieve a competitive advantage.

## THE CONCEPTUAL FRAMEWORK

Based on TOE-TAM theories, this paper proposes a conceptual framework to explore the factors that impact the implementation of social media on the part of SMEs in Jordan as a crisis management tool as revealed as below (Figure 2). Using the conceptual framework illustrated in this study proposes to test the following hypotheses:

*H1: The perception of perceived usefulness influences intentions to adopt social media*

*H2: The perception of perceived ease of use influences intentions to adopt social media.*

*H3: The technological context influences the adoption of social media.*

*H4: The technological context influences the adoption of social media.*

*H5: The technological context influences the adoption of social media.*

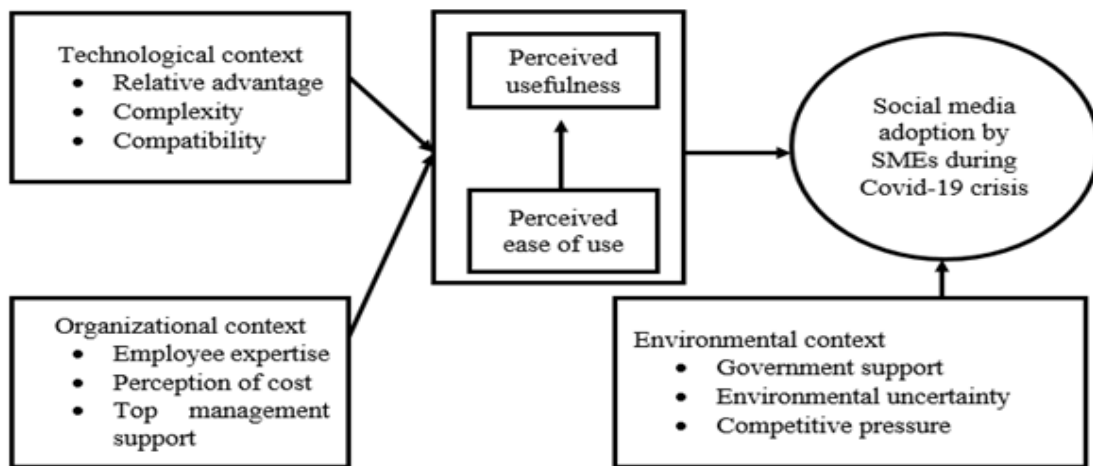


FIGURE 2

## THE CONCEPTUAL FRAMEWORK

### RESEARCH METHODOLOGY

This study uses a quantitative methodology to test the research hypotheses set out above. To this end, a survey questionnaire was used, targeting 250 SMEs in the northern Jordanian city of Irbid which was severely hit by Covid-19 (Al-Khalidi, 2021). Hair et al. (2019), claims that the targeted number of respondents should be in line with the appropriateness of the framework. According to Loehlin and Beaujean (2016), the minimum sample size will lead to a reduction of biasness in a study is 200. SMEs were selected grounded on the influence of Covid-19 on business performance, such as in terms of the decline in sales volume or profit. Data was collected from



retailers in Irbid, Jordan. Due to the Covid-19 restrictions still prevailing in the country, the survey was conducted using Google Form. To this end, the author developed and posted a questionnaire in corporation five-rated Likert-style questions on Google Form to measure all the questions, with the exception of the questions seeking information about the demographic characteristics of the investigated SMEs and the respondents. The questionnaire form was comprised of two main sections. The first section enquiring about the parameters of the SMEs being investigated (i.e. size, number of years since establishment). A link to the survey was sent to the targeted SMEs, asking them to respond to the survey. The second part consisted of questions regarding the various constructs of the research model, data was analyzed using the structural equation model (SEM). The independent variables in this analysis are perceived as usefulness, perceived ease of use, technological factors, organizational factors, and environmental factors. The technological indicators include relative advantage, complexity, and compatibility. In addition, employee experience, expense perception, and top management support are examples of organizational indicators. Finally, the indicators relating to the environmental aspect include government support, environmental uncertainty, and competitive pressure. SEM is conducted using the AMOS model which is a form of SPSS software designed especially for the SEM investigation (Table 1).

<b>Demographic</b>	<b>Category</b>	<b>Frequency</b>	<b>Percentage</b>
Respondents	CEOs/owners	175	70%
	IT managers	75	30%
Work experience (years)	1 – 3	122	49%
	4 – 6	76	30%
	7 – 9	34	14%
	>9	18	7%
Age of firm (years)	<1	26	10%
	2 – 5	112	45%
	6 – 10	92	37%
	>10	20	8%
Company scope	Local	118	47%
	National	94	38%
	International	38	15%

### **Validity and Reliability**

In this stage, the Validity and Reliability of the research model 's constructs are examined. Specifically, construct validity is evaluated by utilizing discriminant validity and convergent validity. Hair et al. (2019), claims that convergent validity is present when: 1) AVE (average variance explained) is higher than 0.5, 2) item loadings higher than 0.708. As Table 2 shows, the aforementioned conditions are met and as a result, the convergent validity is verified. Further, it is recommended that the value of composite reliability and Cronbach's Alpha within each construct should be larger than 0.7. The results in Table 2 demonstrate that this condition is attained and thus it can be concluded that all constructs have adequate and reliably internal consistency.

**TABLE 2**  
**RELIABILITY AND VALIDITY**

Context	Construct	Item	Loading	$\alpha$	CR	AVE				
	'Perceived usefulness'	PU1	0.8	0.84	0.87	0.75				
		PU2	0.77							
		PU3	0.8							
		PU4	0.71							
		PU5	0.73							
	'Perceived ease of use'	PEOU1	0.85	0.77	0.8	0.72				
		PEOU2	0.77							
		PEOU3	0.79							
Organizational context (OC)	'Perceived cost'	COS1	0.7	0.86	0.88	0.74				
		COS2	0.76							
		COS3	0.75							
	'Employee expertise'	EXP1	0.77							
		EXP2	0.74							
		EXP3	0.76							
	'Top management support'	MAN1	0.75							
		MAN2	0.7							
		MAN3	0.72							
Environmental context (EC)	'Government support'	GOV1	0.79	0.81	0.83	0.78				
		GOV2	0.8							
		GOV3	0.85							
	'Environmental uncertainty'	ENV1	0.76							
		ENV2	0.85							
		ENV3	0.87							
	'Competitive pressure'	COP1	0.74							
		COP2	0.77							
		COP3	0.79							
	Technological context (TC)	'Complexity'	COMX1				0.81	0.79	0.81	0.73
			COMX2				0.78			
			COM3				0.85			
			COM4				0.77			
		'Relative advantage'	ADV1				0.82			
			ADV2				0.86			
ADV3			0.9							
ADV4			0.82							
ADV5			0.86							
'Compatibility'		COM1	0.82							
		COM2	0.8							
		COM3	0.77							
'Social-media adoption (SMA)'		SMA1	0.8	0.85	0.88	0.76				
		SMA2	0.76							
		SMA3	0.8							
		SMA4	0.7							
		SMA5	0.73							

The criterion of Fornell and Larcker (1981) is used for discriminant validity measuring. To verify the existence of discriminant validity, and it is important that “the squared root of the AVE value for each construct must be higher than the construct’s correlations with other constructs”. Table 3 below illustrated that this condition is satisfied.

TABLE 3 DISCRIMINANT VALIDITY						
	TC	OC	EC	PEOU	PU	SMA
TC	<b>0.85*</b>					
OC	0.69	<b>0.85</b>				
EC	0.8	0.7	<b>0.88</b>			
PEOU	0.78	0.8	0.8	<b>0.85</b>		
PU	0.8	0.82	0.79	0.8	<b>0.87</b>	
SMA	0.74	0.8	0.77	0.76	0.82	<b>0.88</b>

\*square root of AVE \*\* correlation

### Structural Model

Before proceeding to the structural model evaluation, the model fit indices are assessed. Specifically, three main indices are assessed, namely: SRMR “Standardized Root Mean Square Residual”, NFI “Normed Fit Index”, and rms\_Theta “Root mean square\_ Theata”. The assessment indicates the value of SRMR = 0.72 (acceptable value <0.8), NFI=0.91 (acceptable value >0.9), and rms\_Theta=0.117 (acceptable value <0.12) are within the acceptable values (Henseler et al., 2016). Figure 3 shows path coefficients (research hypotheses) of the structural model. Both TC, PU, and OC 50.8 percent of the variation in PU is explained. Furthermore, TC and OC justify 40.2 percent of the variation in PEOU. PU, PEOU, and EC explain 63.4% of the variance in SMA.

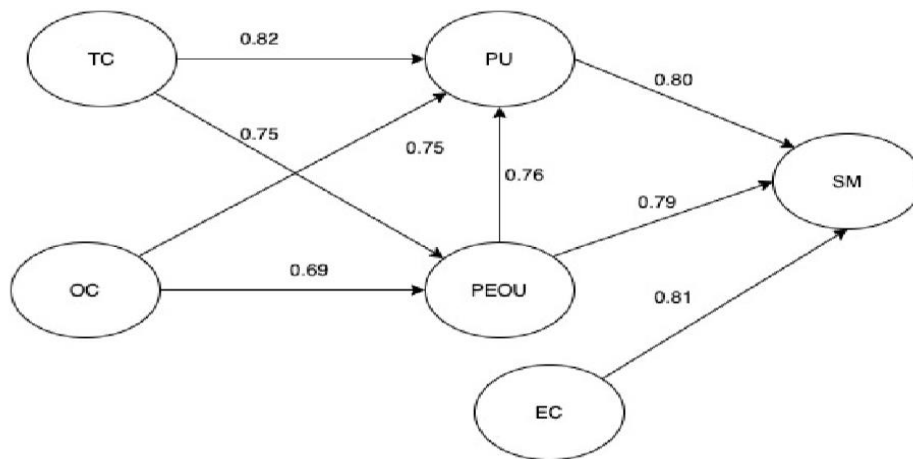


FIGURE 3

### THE PATH COEFFICIENT FOR ALL HYPOTHESIS IN THE STUDY

The path analysis in the Table 4 below indicates that all of hypotheses are supported and accepted. TC is found to have significant positive influence on PEOU ( $\beta = (0.75)$ ,  $t\text{-value} = (5.03)$ ,  $\text{sig} < 0.001$ ) also PU ( $\beta = (0.812)$ ,  $t\text{-value} = (3.23)$ ,  $\text{sig} < 0.001$ ). Further, OC has significant positive

influence on PEOU ( $\beta = (0.69)$ ,  $t\text{-value} = (4.08)$ ,  $\text{sig} < 0.01$ ) and PU ( $\beta = (0.75)$ ,  $t\text{-value} = (5.69)$ ,  $\text{sig} < 0.001$ ). EC has positive significant effect on SMA ( $\beta = (0.81)$ ,  $t\text{-value} = (4.42)$ ,  $\text{sig} < 0.001$ ). The PEOU positively influence PU ( $\beta = (0.76)$ ,  $t\text{-value} = (3.82)$ ,  $\text{sig} < 0.001$ ). Finally, the PEOU ( $\beta = (0.79)$ ,  $t\text{-value} = (4.9)$ ,  $\text{sig} < 0.001$ ) and PE ( $\beta = (0.8)$ ,  $t\text{-value} = (3.58)$ ,  $\text{sig} < 0.001$ ) have positive influences on SMA.

	Constructs	Route	Constructs	$\beta$	(t-value)	Result
<b>H1</b>	TC	→	PEOU	0.75	5.03***	Supported
<b>H2</b>	TC	→	PU	0.82	3.23***	Supported
<b>H3</b>	OC	→	PEOU	0.69	4.08**	Supported
<b>H4</b>	OC	→	PU	0.75	5.69***	Supported
<b>H5</b>	EC	→	SMA	0.81	4.42***	Supported
<b>H6</b>	PEOU	→	PU	0.76	3.82***	Supported
<b>H7</b>	PEOU	→	SMA	0.79	4.90***	Supported
<b>H8</b>	PU	→	SMA	0.80	3.58***	Supported

(\*\*p < 0.05; \*\*p < 0.01; \*\*\*p < 0.001)

## DISCUSSION

This research is considered one of the most recent studies in the context of technology implementation during the COVID-19 crisis. It examined the internal and external factors that affect SMEs when adopting social media in developing countries, and more specifically in Jordan. While most businesses currently working remotely using different technologies and platforms, social media has become vital to increase business feasibility and enhance customer relations online. The findings of this research revealed that social media implementation during the COVID crisis is directly affected through three factors namely environmental context, Perceived ease of use, and Perceived usefulness.

The findings of this research indicate for the technological context is relevant to explaining and how it affects the implementation of social media by way of the PEOU and PU as mediators. However, the technological contexts consisting of complexity, compatibility and relative advantage factors that had the highest positive factor loading on perceived usefulness ( $\beta = (0.812)$ ,  $t\text{-value} = (3.23)$ ,  $\text{sig} < 0.001$ ) than perceive use of use ( $\beta = (0.75)$ ,  $t\text{-value} = (5.03)$ ,  $\text{sig} < 0.001$ ). This could be interpreted as SMEs believe that adopting social media has many benefits and would enhance the performance of their online businesses. Previous research such as that of Tripopsakul (2018) and Salamzadeh and Tajpour (2021), conducted in the same area, has confirmed this finding. However, a study conducted by Ahmad et al. (2018) confirmed that the complexity factor and relative advantage factor are not significant concerning the implementation of social media.

The organizational context also had a positive impact on the implementation of social media by way of the PEOU and PU as mediators. As a result of the COVID-19 pandemic, businesses were forced to shut down to avoid social gatherings. This has raised many challenges for businesses especially SMEs in terms of sales drop and growth. In line with Salamzadeh et al. (2019), the results indicate that adopting social media can reduce the organization cost by using free social media platforms. Furthermore, the results above revealed that getting top management support when it comes to understanding the benefits of social media adoption via investing and allocating an appropriate budget will help SMEs to adopt social media successfully. Previous

research such as that of Qalati et al (2021); Nofal et al. (2021); Sikandar (2020) conducted in the same area, have confirmed this finding.

In terms of independent variables having a significant impact on social media implementation, during the Covid-19 crisis Environmental factors, perceived usefulness, and perceived ease of use all had a major impact, respectively. This research delivers empirical evidence that environmental contexts have the strongest significant effect on social media implementation during covid-19 crisis ( $\beta = (0.81)$ ,  $t\text{-value} = (4.42)$ ,  $\text{sig} < 0.001$ ). Environmental factors such as competitive advantage, government support, and uncertainty factor all play a significant role in social media implementation. Therefore, social media implementation can overcome challenges by increasing the competitive advantage, increasing the customer base, and increasing sales (Salamzadeh, 2020). This finding is consistent with previous research results, which used the TOE model to investigate factors affecting SME social media implementation (Effendi et al., 2020). It is important to mention that such finding is partially inconsistent with Salamzadeh and Tajpour (2021) who identify legal issues as a major concern. Moghadamzadeh et al. (2020) point out that social media platforms have significant influences on the co-creation processes among customers, enterprises, and the various stakeholders. These processes consider customers “as a vital resource for enterprises to grow and compete in the volatile, uncertain, complex, and ambiguous world”. It is becoming clear that customers’ engagement take place in all the activities of the business firms (i.e. the development of new service/product, marketing) and therefore could increase the profitability of these business firms.

The perceived usefulness was the second factor and had a direct impact on the social media implementation. This aspect is assessed by the technological context ( $\beta = (0.812)$ ) and followed by the organizational context  $\beta = (0.75)$ . The finding revealed the acknowledgment of benefits that social media provides for SMEs is key towards its adoption. The nature of social media platforms along with the highest management support will positively influence perceptions of usefulness factors towards successful implementation of social media. This outcome is consistent with previous research results conducted in a similar area, such as that of (Basit et al., 2020, Sugandini et al., 2020).

The final factor directly affects social media adoption during the covid-19 crisis is the perceived ease of use factor. Also, this factor is determined by technological context ( $\beta = (0.75)$ ) then by organizational context ( $\beta = (0.69)$ ). The results revealed that sufficient knowledge and skills are essential to implement social media in SMEs. However, previous research results such as that of (Biucky & Harandi, 2017; Akgül, 2018; Ahmed et al., 2018; Matikiti et al., 2018; Nofal et al., 2020) conducted in the same area, and verified with this finding. In contrast, Gavino et al. (2019) discovered that perceived ease of use has little impact on social media implementation.

## RESEARCH IMPLICATIONS AND CONTRIBUTION

The results of this study makes a significant contribution to knowledge by providing empirical evidence of the factors affecting social media implementation, not only from a technological perspective, but also by including environmental and organizational contexts through a validated measurement model that combines TOE and TAM theories. The empirical findings of this research deepen our understanding of SME decision-makers when assessing different factors associated with social media adoption. Finally, the findings offer a useful insight to practitioners by acknowledging the significant factors that encourage or prevent SMEs from adopting social media.

## LIMITATION AND RECOMMENDATIONS FOR FUTURE RESEARCH

This study is mainly used quantitative method, conducted using an online survey for gathering data. Thus, recommendations for future research include the need for qualitative data. Interviewing of the SMEs would provide in-depth data that will give a better understanding of the study findings and it could give a greater insight into the effect of social media adoption on SMEs. The study used a part of TAM, TOE and omitted some constructs which would have been adapted to understand the adoption of social media. Future works should be considered the inclusion of these significant factors to expand the view about social media adoption success model. Future study is also hoped to measure the influence of other factors, especially the factors that influence SMEs satisfaction toward using social media for better understanding the quality antecedents of satisfaction.

## CONCLUSION

This research has studied the effect of TEO and TAM factors on social media implementation on the part of SMEs in Jordan. These factors were identified from previous research and were employed in our study of social media implementation. The results reveal that all the identified factors had a significant effect on social media implementation. While, environmental contexts have the strongest significant effect on social media implementation during covid-19 crisis. This research suggests that SMEs are more likely to implement social media than has been the case in the past, as businesses have changed their focus to operating remotely, and have started to utilize an increasing number of platforms to obtain more customers.

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