




## Article

# Examining the Factors Affecting SME Performance: The Mediating Role of Social Media Adoption

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**Abstract:** Small and medium enterprises (SMEs) have become a vibrant and dynamic sector of the world economy. Information technology plays a vital role in improving the productivity and competitiveness of SMEs. The dynamic business environment has brought fierce competition among SMEs and, therefore, requires the owners to interact with internal and external members actively. Hence, this study aims to investigate the impact of technology, organization, and environment as important factors in the performance of small and medium-sized enterprises. It also examines the mediating role of social media adoption. Items were developed to measure the various purposes of social media use in organizations, which contribute to increasing the measurement of social media usage. For the empirical investigation, this paper used a closed-ended questionnaire. Using a quantitative method, we observed 423 responses through structural equation modeling. The findings of the study indicate that technology, organization, and the environment play effective roles for SME performance. More importantly, social media adoption positively mediates the relationship between technology, organization, environment, and SME performance. The study also helps organizations realize the advantages of using social media and specifies the rationale behind an organization's investment in social media.

**Keywords:** social media; small and medium-sized enterprises performance; organization; environment



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## 1. Introduction

Small and medium-sized enterprises (SMEs) can use social media (SM) because of its ease of use, low cost, technical manageability, and its ability to connect with many potential consumers [1]. SM adoption is growing exponentially among businesses [2] and is currently considered a key strategy [3]; however, firms are utilizing several different SM platforms [4]. SM is a popular choice for SMEs [5] because it enables clear communication, and gives firms the opportunity to understand and respond—competently and proactively—to customer needs [6]. SM is also a comparatively inexpensive choice for analytics, conversion tracking, content management, automated publishing, and customer targeting [7].

Research tends to consider the use of SM from a business-to-consumer perspective. For instance, studies have investigated the effects of SM on consumer purchase decisions [8], the impact on brand awareness and purchase intention [9], customer retention, electronic word of mouth, and purchase decision involvement [10]. Despite the significant impacts and perceived value for SMEs, research is limited regarding how SMEs choose or use SM channels. Few studies have investigated the use of SM to advance business practices and their effects on an organization's performance [11]. Prior studies have investigated the

influence of SM on SMEs and its mediating role, but several areas remain unexplored, such as the use of digital platforms by SMEs [12] and the impact on SME survival [13]. This study aims to extend the previous work of technological, organizational, and environmental (TOE) characteristics. The study also aims to answer a number of research questions, including how effective SM adoption improves SME performance (and how it benefits SMEs operating in Pakistan); whether SM plays a key role in refining a firm's activities to gain business value; and what the outcomes are of SM in SME performance. We should note that few studies have focused on the effects of SM on SME performance in Pakistan [14,15].

Globally, in developing countries, SMEs constitute over 90% of businesses, representing a major portion of gross domestic product (GDP) [16]. Pakistan is no exception; it is a developing country with over 90% of businesses being SMEs, employing 80% of the labor force, and representing 40% of GDP. However, for SMEs in Pakistan, they have benefited little from globalization and technology, when compared to developed nations [17]. As the restructuring of industries and digital transformation are vital for encouraging economic growth, and providing more comprehensive globalization, it is essential to establish strategic insights into the adoption of SM by SMEs.

According to Li, et al. [18], the labor force is constantly growing, but unemployment continues to rise. Therefore, employment opportunities should be created.

In Pakistan, SMEs face difficulties in the current competitive state, characterized by increasing uncertainty and changing market demand, limited resources, and tougher competition brought about by globalization. Moreover, some firms avoid SM due to a lack of understanding the many forms it exists in, as well as how to engage with the medium. The gap among unsuccessful and successful adopters of SM is, therefore, increasing, which makes it difficult for late and non-adopters to sustain [19].

However, lack of government regulations and lack of trust in each other is common in Pakistan [20]. SM adoption and its effects on a firm's performance remains unclear in developing countries, such as Pakistan. First, empirical work on SM adoption and usage between organizations collaborating for innovation purposes is limited [21]. Second, while some scholars assert that SM facilitates innovation and entrepreneurial activities [22], others argue that empirical research on the advantages of SM is inadequate [23]. Finally, SME and industrial marketing scholars are increasingly focusing on the context and conditions under which SM affects SME performance [24,25]. Based on the limited existing literature, reports, and case studies specific to SMEs in Pakistan, this paper seeks to investigate SME adoption of SM.

Due to the importance of social media for SMEs and the benefits it brings, attention has been drawn to various areas, including information systems and management. This is evidenced by the growing number of scientific articles that are published every year. A systematic review of the SM adoption and SME literature can provide information for research in this field. While there have been previous social media review articles, these are not directly related to the mediating role of social media. Instead, these articles usually cover all, or pertain to a specific domain, such as marketing [26–28]. Although the literature shows that entrepreneurs are actively using SM, there is little systematic research that shows the state of research on SM and SMEs. Such research is essential to understanding how much research into global entrepreneurship and SM has covered, and what needs to be done to increase our knowledge. Therefore, based on previous literature, this study developed an integrated research model that explains factors affecting SME performance and the mediating role of social media adoption.

In other words, the model explains what drives SMEs to use social media and the mediating role in the relationship between technological impact, organizational impact, environmental impact, and SME performance. The review and framework are expected to help researchers and practitioners understand the current state of research and support future research in the field. Despite of direct impacts of TOE factors. This study also validates mediating role of SM adoption in the context of SMEs.

The study starts with a literature review on the impact of technology, organizational impact, environmental impact, and use of SM, and its impact on SME performance. Then, it discusses the methodology, including sampling and data collection, measures and instrument validation, and results of the quantitative research. The article concludes with research limitations and the direction of future research.

The results of this research could have significant implications for both the theory and the country's public policy and similar contexts in other Middle East countries, including neighboring China, Iran, India, and Afghanistan.

## 2. Literature Review and Hypotheses Development

Since the 2008–2009 global economic crisis, governments have increasingly valued SMEs as significant contributors to inclusive growth and sustainability in dealing with economic challenges. SME importance lies in job creation, social cohesion, poverty alleviation, economic growth, and innovation (reflected by over 40% of GDP and 70% of job creation in developing countries) [2]. SME success is crucial for the overall economic growth of countries, nationally as well as internationally.

The ability to globalize has become a competitive advantage for most SMEs as it enables them to access larger markets and allows for their sustainability [29]. To improve the globalization of SMEs and support several types of mechanisms of social interaction (collaboration, knowledge sharing, and collective action), there is a need to adopt a digital platform [30]. However, [31] confirmed that SM brings new managerial practices to firms, from innovative business models to communication and knowledge sharing and collaboration. Nonetheless, keeping the current scenario in view, it is essential to explore ways to improve SME performance [32].

### 2.1. Theoretical Support

Social media platforms are neither owned by organizations nor are they within an organization's control. Moreover, [33] argues that social media content is (usually) jointly generated by firms and their stakeholders, such as existing and potential customers. Notably, there are several factors that may help enlighten deviation in the adoption of social media by an organization; including pressure from buyers and competitors, which ultimately influence an organization's decision on whether to adopt or not. The study by Pee, L.G [33] involved qualitative interviews with managers, and suggested that pressure from key stakeholders may also influence the adoption decision. Marketing activities, facilitated and enabled by the adoption of social media, are emerging as a new way of doing business, allowing organizations to create a more intimate association with stakeholders [34]. The authors also called for the study to examine the effects of social media adoption on SMEs and to better manage the relationships. SME practitioners increasingly recognize that a business opportunity exists in effective SM adoption, to build and maintain issues of trust and commitment with key stakeholders in their networks, and to improve and maintain quality in the network associations. We argue that greater involvement of stakeholders in the process and operation of a business, concerning different type of social media, will be employed; therefore, this study employs the stakeholder theory as an instrumental lens to understand the effects of social media in SME context. In line with [35], we argue that SMEs can be more successful if they shift their focus from market to a stakeholder oriented perspective to gain better understanding of their performance.

The TOE model classifies technology, organization, and the environment as the three drivers that influence SMEs (regarding the adoption of social media and its effects on SME performance). Recently, [32] advocated that the TOE framework has solid empirical support and a strong theoretical basis, and that it has been employed to study technology adoption and innovation, including social media technology [32]. Furthermore, [36,37] proposed a conceptual framework regarding social media, and evidenced that factors in the TOE framework are sourced from diffusion of innovation (DOI) theory (Figure 1). Therefore, this study also received support from the DOI.

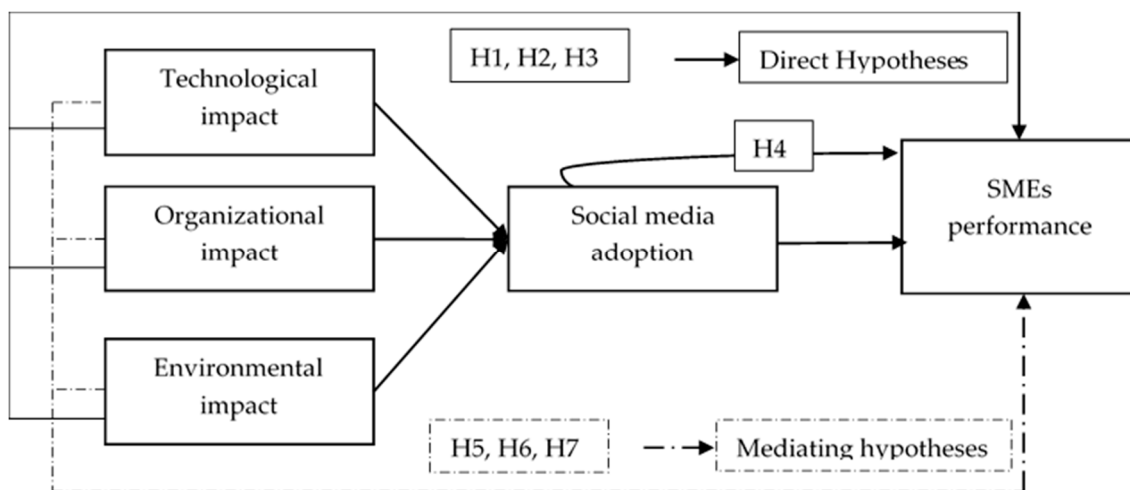


Figure 1. Conceptual model, source: authors.

## 2.2. Technological Impact

This study used technology factors (e.g., relative advantage, cost-effectiveness, compatibility, visibility, and interactivity) to measure technological impact on SME performance. Relative advantage is “the degree to which potential adopters see innovation as better than the alternative” [7] (p. 5). Moreover, [38] stated that awareness of the relative advantage of an enterprise’s SM is beneficial toward improving knowledge sharing and overall performance of an organization. Compatibility is the extent to which new technology is consistent with prior practices, technology, and current needs, accompanied by present values of SMEs [2]. Cost-effectiveness is the extent to which innovation is practicable, or more productive, relative to its cost. This dimension is considered one of the most crucial factors to assess the adoption of SM and was slightly used in existing literature, [39], under the TOE framework. Interactivity is the extent to which two or more parties can interact with each other using a communication medium. SM is a type of Web 2.0 technology that is attributed to a high degree of interactivity. SM is an innovative technology as it provides ways to increase the interaction between customers and organizations [40]. Therefore, interactivity was added as one of the dimensions of technological impact and considered one of the critical factors in the existing literature of SM [10]. Visibility is the extent to which something attracts general attention. Due to limited resources, SMEs are required to use and leverage SM for marketing activities, as it provides them with more visibility in contrast to large organizations [41].

In the 1990s, technology-driven framework, called the Massachusetts Institute of Technology (MIT) framework, was given by Michael Scott Morton [42]. The MIT framework states that strategy, structure, management process, and individuals and roles influence technology, while technology has a reverse effect on all of them. A number of studies have been conducted at individual and organizational levels to investigate the effects of technology applicability on performance measures [43–46]. Tornatzky et al. [45] analyzed data from 202 manufacturing firms to investigate the interaction between company infrastructure and performance. The authors discovered a positive interaction of technology with a firm’s performance. Ahmad et al. [47] conducted a meta-analysis of the technology model, taking into consideration the MIT framework, and constructed a conceptual model, which stated that there are four dimensions of the model technology itself, the individuals and their role, structure, organizations, and management processes. The authors argued the positive effects of the technology on a firm’s performance and suggested that the proposed model needed to be examined empirically. Maduku et al. [48] stated that technology contributes to a firm’s performance. Dutot et al. [49] advocated that technological innovations are positively related to a firm’s performance in SMEs.

Undoubtedly, there is increasing competition among organizations, despite size and type. Therefore, organizations must be able to satisfy customer expectations and demands on time. Because of these requirements, SMEs mostly need to improve delivery time, quality, and cost. As a result, organizations must continuously develop their products or services and processes. In order to achieve these improvements, they are pleased to renew both their business processes and hardware. This regenerative process could possibly occur only with the help of technological development. Global competition shortened product life cycles, and advancement in technologies compel firms to compete in a complex and dynamic environment. Technology has great importance for both the development of countries and the competitive advantages of organizations [50]. Similarly, Tajvidi, R. and Karami, A. [51] argued that technology and total quality management are fast and becoming essential features for the success of any organization. The author's study findings reveal that technology plays a significant and complementary role in improving a firm's performance. Notably, SMEs are largely deprived of resources, hence, interest in strategic technological partnering has grown amongst organizations, as it enhances company performance [52]. Porter and Millar [53] argued that several technological challenges adversely influence the sustainable business performance of SMEs. The authors analyzed a sample of SMEs operating in Thailand and found a positive relationship between technology (industry 4.0) and business performance among SMEs. Furthermore, [54] evidenced the importance of technology in SMEs, most importantly, to support the supply chain function. The authors argued that information technology is an enabling factor influencing supply chain performance in SMEs located in India. Moreover, Leibenstein [55] hypothesized that the extensiveness of technological innovation has a positive influence on a firm's performance. Datta et al. [56] studied a sample of 710 hotel employees of 21 hotels, among them, 13 were international hotels and the rest were local hotels in Seoul, Korea. They hypothesized that the use of front office, back office, and usage of guest-related technology application positively correlated with performance. The authors evidenced the positive correlations between technology and performance in the hotel industry. Similarly, Leibenstein [55] analyzed a sample of 218 Swedish export firms to investigate the association among technological organizational innovation and the performance of export firms; they hypothesized that the extensiveness of technological innovation had a positive influence on the performance of export firms.

Therefore, we provide the following hypotheses:

**Hypothesis 1 (H1).** *The technological factor has a significant effect on SME performance.*

### 2.3. Organizational Impact

According to [57], the organizational construct includes internal characteristics of firms, such as employees, size, turnover, managerial structure, and related issues. The present paper employed top management team support and entrepreneurial orientation as a dimension to develop organizational impact. [58] argued that the survival of SMEs highly depends on their ability to exploit opportunities in the market. Due to their confined resources, top management teams (specifically chief executive officers (CEOs) and top managers) choose organizational strategies, and through these strategies, they influence the firm's performance. Similarly, [59] stated the role of human resources in the firm's performance and argued that, in the competition market, an organization's core team members (CEO and managers) make key strategic decisions that impact the future direction and overall performance of the firm. Therefore, this study argued that, because of highly centralized systems, SMEs are usually managed by owners or chief executive officers. Trainor et al. [60] studied a sample of 774 managers of Taiwanese owned businesses in China and found a positive association between the top management teams and firm performances. Barney, [61] also found a positive association between the top management team and on organization's performance.

The role of entrepreneurship is critical in society, as it contributes to the growth of a firm's performance and business. Given the changes in the competitive environment for SMEs, it is most essential to consider the importance of top managers, from the standpoint of how their entrepreneurial preference and value may influence decision-making. From the organizational viewpoint, it is defined as "the strategy-making processes that provide organizations with a basis for entrepreneurial decision and actions" (Rauch, Wiklund, Lumpkin, and Frese, 2009) [62] (p. 6). [63] studied a sample of 121 SMEs operating in India, and their findings advocated the significant positive effect of entrepreneurial orientation on SME performance. Similarly, [64] hypothesized the relationship between entrepreneurial orientation and a firm's performance. Moreover, [65] witnessed the significant effects of top management support and entrepreneurial orientation and performance of SMEs operating in Malaysia. Existing literature confirms that top management support and entrepreneurial orientation is significant in a firm's performance. Thus, this study hypothesizes the following:

**Hypothesis 2 (H2).** *The organizational factor has a significant effect on SME performance.*

#### 2.4. Environmental Impact

Environmental impacts incorporate industry structure, and environmental drivers originate from the climate outside of the organizations. Environmental impacts help with understanding the factors surrounding external environmental SME performance [66]. Determinants considered in prior studies include consumer pressure, trading partner pressure, competitive enforcement, and vendor support [32,67]. This work investigates three characteristics within environmental impact: competitive intensity, competitive pressure, and the bandwagon effect. Competitive intensity arises in conditions where competitors are abundant, and there are few opportunities for growth in the industry [68]. Ref. [69] stated that, nowadays, SMEs compete in a volatile business environment characterized by worldwide competition. Moreover, competitive intensity is an essential determinant contributing to environmental hostility. According to Pateli et al. [70], their study, based on a sample of 182 manufacturing enterprises located in China, evidenced the effects of competitive intensity on a firm's performance. Studen and Tiberius [71] analyzed a sample of 130 respondents from SMEs located in Indonesia and found a negative—but statistically significant—relationship between competitive intensity and SME performance. Moreover, competitive intensity significantly moderated the relationship between interactive innovation and service in regards to a firm's performance [72].

Competitive pressure is when competitors perceive pressure that forces the company to adopt new technologies that allow it to survive [73]. In the SME context, it is stated that the higher the number of organizations under pressure to compete, the higher their performances will be affected [74]. Geurin and Burch [75] advocated the hypothesis that competitive pressure has a significant positive relationship with strategic performance. Similarly, [74] analyzed a sample of 118 SMEs located in Yogyakarta, Indonesia, and witnessed the negative correlations between competitive pressure and SME performance. The bandwagon effect is a psychological term, also called the contagion effect, "denoted a phenomenon of public opinion impinging upon itself" [76] (p. 1). [77] argued that this effect arises when a product increases its demand due to others, when a certain technology is used in the company only because other companies use it, and not for strategic reasons. The bandwagon effect is even more significant when the climate is more volatile, e.g., the digital climate [78]. Accordingly, the study proposed the following hypothesis:

**Hypothesis 3 (H3).** *The environmental factor has a significant effect on SME performance.*

#### 2.5. Social Media Adoption and SME Performance

The organizational usage of SM (e.g., Facebook, WhatsApp, Twitter, etc.) has an impact on firms by improving customer relationships, information accessibility, and marketing [4].

SM has dramatic effects on firms in the digital world when it comes to handling customer queries, and building customer relationships. Elaborating on work by [79], we use the work of [80], who stated that SM is a group of Web 2.0-based internet applications that include blogs, forums, photo and video sharing, social networking sites, product or service reviews, online communities, etc., allowing organizations to create and share user-generated content. Hence, following [81], Becker et al. [82] argue that SMEs employ SM as an interrelated set of strategic resources to achieve superior performance.

Our second rationale for the hypothetical SM adoption–SME performance relationship is based on a resource-based view [83], in that authors consider SM adoption as a resource that enables SMEs to gain a competitive advantage. This is because online social media platforms play a key role in facilitating knowledge sharing among firms and their stakeholders [84]. Furthermore, [85] suggested that management researchers recognize the emerging vitality of SM use for organizations. They proposed that scholars focus on how SM allows organizations and researchers enlarge their investigations related to knowledge co-creation and performance [68].

Third, various studies have outlined the importance of SM adoption in improving a firm's performance [11,23,85,86]. However, the operationalization of a firm's performance has differed among many of these studies. These studies have also asserted that contextual evidence regarding SM adoption to enhance a firm's performance is needed, specifically, evidence in the developing context is limited. These studies have also generally recommended further investigation of SM adoption and a firm's performance. Regarding how SM adoption influences SME performance needs further empirical evidence; this is important because the limited evidence available has largely been based upon cross-sectional data.

Finally, we suggest that the SM adoption–SME performance link should be investigated in a more holistic manner using a longitudinal approach. Therefore, the current study aims to provide more robust empirical evidence by using a time lag approach. In summary, we hypothesize:

**Hypothesis 4 (H4).** *SM adoption has a significant effect on SME performance.*

#### 2.6. Mediating Role of Social Media Adoption

Current advancements on the internet have changed the concept of “service failures and recovery strategies” from a dyadic customer focus to a multinational web quality. Many researchers have examined distinct motivations in order to comprehend the adaptation, use, and gratification of social media. This study focuses on the mediating role of social media adoption among SMEs. Numerous studies have shown that technology can streamline business processes and improve efficiency [53,87,88]. Some researchers have found corporate social media adoption has benefits, and a few have identified a positive link between social media adoption and company performance [36,89]. Hair et al. [90] found that the use of social media had a positive impact on customer-facing activities and, thus, on sales results. [90] noted that the adoption of social media positively influences the social capital of an organization, which in turn influences the results. Hair et al. [90] found that SM has a positive impact on SME sales. Hair et al. [91] noted that social media can have a significant impact on business, significantly influencing purchasing decisions.

Previous scholars have employed several constructs as a mediator between SM and SME performance, including communications performance Nunnally [92], trust and selling capabilities Fornell and Larcker [93], and marketing capabilities [94]. However, regarding SM's direct effects on SME performance, the present study argues that it also performs a mediating role between TOE characteristics and SME performance, in line with, for example, [95,96]. Hu et al. [97], in a customer-based review study, found a constructive mediating role of SM experience between behavioral intention and user motivation. Ref. [96] also evidenced the mediating role of SM in the context of online service failures and recovery strategy in SMEs. In addition, [98] strengthen the mediating role of SM motives between trait emotional intelligence and problematic SM use among students at a Turkish State Uni-

versity. Similarly, Olanrewaju et al. (2020) [34] suggested the mediating role of SM adoption between TOE constructs and SME performance, while [99] recommended a segmentation approach to develop a hypothesis for mediation testing. Thus:

**Hypothesis 5 (H5).** *Social media adoption positively mediates the relationship between technology and SME performance.*

**Hypothesis 6 (H6).** *Social media adoption positively mediates the relationship between the organization and SME performance.*

**Hypothesis 7 (H7).** *Social media adoption positively mediates the relationship between the environment and SME performance.*

### 3. Methodology

#### 3.1. Sampling and Data Collection

The study sample was randomly selected from SMEs listed by Pakistan's Small and Medium Enterprises Development Authority and their online existence was confirmed using well-known (and authorized) Pakistani websites: [businesslist.pk](http://businesslist.pk) and [mustakbil.com](http://mustakbil.com) [94,95]. The sample employed in this research was randomly selected from all four regions of Pakistan: Sindh, Punjab, Baluchistan, and Khyber Pakhtunkhwa. Given the fact that most private enterprises in Pakistan are SMEs, it is of no surprise that we compiled a diverse sample with a reasonable number of responses. Primary respondents targeted were owners, managers, and CEOs, as they were judged to be the most knowledgeable about their company environments and performance [96,97]. Following the proposed global industry classification standard, the targeted SMEs operated as follows: consumer discretionary, consumer staples, information technology, financials, and communication services [98].

A closed-ended questionnaire was used for data collection. The reason for collecting data in a six-month lag time was to mitigate common method bias [99]. The survey was made available online to potential respondents using Survey Monkey ([www.surveymonkey.com](http://www.surveymonkey.com)). Invitation emails were sent to all potential participants with a detailed explanation of the study and a hyperlink to the survey website. According to Manfreda, et al. [100], online surveys are a unique way to gather information from a large cohort [89]. The advantages of the online survey include a large population and, thus, greater statistical power, the ability to collect large amounts of information, and the availability of verified models [101]. In total, 650 questionnaires were distributed, resulting in 423 valid responses. This study used the partial-least-squares structural equation modeling (PLS-SEM) to test the hypothesized model [102], given its widespread application in business management and related disciplines, and it is considered the most fully developed and comprehensive system of variance [103]. A two-step approach was deployed to measure the second-order constructs, which allowed the prediction of a more parsimonious model [104].

#### 3.2. Measures

The five-point Likert scale (1 = "strongly disagree"; 5 = "strongly agree") was used to record responses. Technological factors were assessed as follows: relative advantage (seven items adapted from [6,7]); cost-effectiveness (three items from [48]); compatibility (three items adapted from [4]); interactivity (three items adapted from [4]); and visibility (three items from [61]). The organizational factors were assessed using four items [7] concerning the top management support and eight items from [61] for the assessment of entrepreneurial orientation. The environmental factors were measured by adapting nine items for three latent variables [7]. Specifically, SM adoption was assessed using 13 items (SM for marketing (four items), customer relations and services (six items), and information accessibility (three items)) adapted from [6]. SME performance was assessed using seven items [6,105].



### 3.3. Instrument Validation

In the course of creating the questionnaire, the psychometric properties of the scale elements were assessed by testing the accuracy of the face and content among the respondents and the target population of the study [96]. Respondents generally agreed that the questionnaire was clear and easy to complete, so no further modifications were made.

## 4. Results

### 4.1. Descriptive Information

Table 1 reveals that out of 423 respondents, 328 (79.42 %) were male and 95 (23.0%) were female. Most respondents 161 (38.98%) were aged between 26 and 35 years and had a master's degree 184 (44.55%). Thus, most decision-makers were young and well-educated. The majority of respondents were managers 171 (41.40%), followed by executives 145 (34.27%). Regarding company size, 231 (55.93%) had less than 50 employees (small businesses), followed by 108 (26.15%) with medium-sized companies. The sample contained firms from diverse sectors, including consumer discretionary, consumer staples, information technology, financials, and communication services, with most companies 205 (49.63%) being consumer discretionary. Regarding SM usage, 182 (44.06%) respondents admitted that SM use was minimal, reflecting a lack of interest, trust, and technical knowledge. However, the extensive use of SM as a marketing tool was revealed by other results for SM adoption ["A lot", 160 (38.74%); and "Extensive", 151 (36.56%)]. Regarding budget allocation, most respondents 385 (93.22%) allocate less than 25% to SM. Most SMEs 184 (44.55%) were operating in Sindh, and 146 (35.35%) were using Facebook.

**Table 1.** Demographical statistics of respondents and small and medium enterprises (SMEs).

Demographic Variables		Frequency	Percentage
Gender	Male	328	79.42
	Female	95	23.0
Age (years)	Less than 25	52	12.59
	26–35	161	38.98
	36–45	95	23.0
	Over 50	115	27.84
Education	Basic/secondary	19	4.6
	Undergraduate	126	20.50
	Master's	184	44.55
	Other	94	22.76
Position	Owner	107	25.90
	Executive	145	34.27
	Manager	171	41.40
No. of employees	Less than 10	84	20.33
	11–50	231	55.93
	51–250	108	26.15
<b>Demographical Statistics of SMEs</b>			
Industry sector	Consumer discretionary	205	49.63
	Financials	57	13.80
	Information technology	89	21.54
	Consumer staples	38	9.20
	Communication services	34	8.23
Firms level of utilization of social media	Minimum	182	44.06
	Basic	135	32.68
	Moderate	78	18.88
	Extensive	28	6.77

Table 1. Cont.

Demographic Variables		Frequency	Percentage
Use of SM as a marketing tool	Minimal	73	17.67
	Little	39	9.44
	A lot	160	38.74
	Extensive	151	36.56
Budget allocated	Less than 25%	385	93.22
	26–50%	24	5.81
	Over 50%	14	3.38
Location of the business	Sindh	183	44.30
	Baluchistan	56	13.55
	Punjab	131	31.71
	Khyber Pakhtunkhwa	53	12.83
Social media platform used	Facebook	146	35.35
	Twitter	22	5.32
	LinkedIn	93	22.51
	WhatsApp	118	28.57
	YouTube	19	4.60
	Other	25	6.05

#### 4.2. Model Analysis

This study employs the full collinearity approach, specifically the variance inflation factor (VIF) for detecting evidence on the common method bias (CMB). The results of the study, shown in Table 2, state that CMB is not a key concern since the computed VIFs are less than 5 [106]. This study used a two-step approach evaluation of the measurement model and the structural model [107].

Table 2. Measurement model for the first order and second order.

Construct	Loadings	Weights	<i>p</i> -Values	CA	CR	AVE	Inner VIF
Technological factors (TF)				0.914	0.936	0.745	3.293
Relative advantage	0.886	0.238	<0.001	0.94	0.95	0.73	3.102
Cost effectiveness	0.872	0.234	<0.001	0.86	0.91	0.78	2.894
Compatibility	0.880	0.236	<0.001	0.81	0.89	0.72	3.097
Interactivity	0.873	0.233	<0.001	0.87	0.92	0.79	2.897
Visibility	0.802	0.217	<0.001	0.91	0.94	0.84	2.164
Organizational factors (OF)				0.800	0.909	0.833	3.462
Top management support	0.911	0.541	<0.001	0.92	0.94	0.81	1.803
Entrepreneurial orientation	0.915	0.554	<0.001	0.89	0.91	0.68	1.803
Environmental factors (EF)				0.797	0.881	0.712	2.126
Competitive industry	0.836	0.385	<0.001	0.88	0.92	0.79	1.681
Competitive pressure	0.847	0.405	<0.001	0.82	0.89	0.74	1.687
Bandwagon effect	0.848	0.395	<0.001	0.87	0.92	0.79	1.735
Social Media adoption (SM)				0.871	0.921	0.795	1.000
Information accessibility	0.868	0.369	<0.001	0.91	0.95	0.85	2.641
Social media marketing	0.877	0.363	<0.001	0.92	0.95	0.82	2.575
Customer relationship	0.929	0.389	<0.001	0.88	0.91	0.62	3.536
SME performance (P)	1.000	1.000	<0.001	1.000	1.000	1.000	

##### 4.2.1. Evaluation of the Measurement Model

Before moving towards the analysis, this study used the Kaiser–Meyer–Olkin (KMO) test, recommended to measure the sampling adequacy and to ensure the suitability of

data. The KMO test result is 0.959, which is greater than an acceptable threshold of 0.50 and, hence, considered substantial for explanatory factor analysis. Moreover, Bartlett's test results reflect that the level of significance is at 0.000 and, thus, is considered good, as it is below the 0.05 significance level.

We included reflective-formative constructs for SM adoption. Hence, the model was evaluated using the first and second-order constructs. According to [108], a proposition to measure the model is required to assess the individual item reliability, internal consistency, content validity, convergent validity, and discriminant validity.

This study employs SEM to test the hypothesized model. At first, data were analyzed by assessing the central tendency and dispersion, followed by measuring validity and reliability (refer to Table 2). The reliability of the scales was measured using Cronbach's alpha (CA). According to [109], the CA values should exceed 0.7. After that, the principal component analysis on each item was conducted. Afterwards, convergent validity was projected. Internal consistency reliability requires composite reliability (CR) to be  $\geq 0.7$ . Regarding convergent validity, [110] recommended that the average variance extracted (AVE) should be  $\geq 0.5$  (Table 2). Table 2 and the appendix (i.e., Appendix A) demonstrate the item loadings, weights, p-values, CA, CR, AVE, and inner VIF, to assess the reliabilities, internal consistency, convergent validity, and common method bias.

Discriminant validity (see Tables 3 and 4) demonstrates that the square of average variance extracted (AVE) for each variable must exceed the inter-correlation of the variables [93].

**Table 3.** Discriminant validity for the first-order model.

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Bandwagon effect (BE)	<b>0.89</b>												
Compatibility (C)	0.45	<b>0.85</b>											
Competitive industry (CI)	0.57	0.47	<b>0.9</b>										
Competitive pressure (CP)	0.58	0.52	0.56	<b>0.86</b>									
Cost effectiveness (CE)	0.46	0.73	0.4	0.5	<b>0.88</b>								
Customer relationship (CR)	0.51	0.61	0.44	0.6	0.62	<b>0.79</b>							
Entrepreneurial orientation (EO)	0.52	0.74	0.53	0.59	0.69	0.69	<b>0.82</b>						
Information accessibility (IA)	0.48	0.6	0.5	0.59	0.59	0.72	0.67	<b>0.92</b>					
Interactivity (I)	0.44	0.67	0.5	0.52	0.71	0.6	0.67	0.62	<b>0.89</b>				
Relative advantage (RA)	0.46	0.78	0.44	0.52	0.74	0.64	0.78	0.65	0.68	<b>0.86</b>			
Social media for marketing (SMM)	0.47	0.59	0.4	0.55	0.6	0.75	0.63	0.6	0.56	0.59	<b>0.9</b>		
Top management support (TMS)	0.5	0.54	0.44	0.57	0.53	0.66	0.67	0.6	0.52	0.54	0.58	<b>0.9</b>	
Visibility (V)	0.43	0.6	0.56	0.48	0.57	0.6	0.66	0.6	0.71	0.61	0.58	0.47	<b>0.92</b>

Note: Values on the diagonal (bold) are the square root of the AVE, while the off-diagonals are correlations.

**Table 4.** Discriminant validity for second-order.

Variables	EF	OF	P	SM	TF
EF	<b>0.844</b>				
OF	0.683	<b>0.913</b>			
P	0.520	0.498	<b>1.000</b>		
SM	0.673	0.787	0.545	<b>0.892</b>	
TF	0.655	0.781	0.499	0.784	<b>0.863</b>

Note: Values on the diagonal (bold) are square root of the AVE, while the off-diagonals are correlations.

#### 4.2.2. Evaluation of the Structural Model

According to [110], the structural model should be used to assess the linear regression effects of the dependent variables on one another. A PLS assessment of the model used path co-efficient,  $p$ -value, and variance explained (coefficient of determination,  $R^2$ ) [107]. This paper used PLS bootstrapping with 5000 bootstraps and 423 cases for demonstration of results related to paths and their significance level. Table 5 presents comprehensive evaluations from the structural model. Based on criterion ( $t$ -value  $\geq 1.96$  and  $p$ -value  $< 0.05$ ), the results reveal that TOE factors were significant in inducing the adoption of SM operating in Pakistan, explaining 69.3% of the variance. Figure 1 also illustrates the path coefficients, their level of significance, and coefficient of determination ( $R^2$ ). According to [111],  $R^2$  values of 0.60, 0.33, and 0.19 are, respectively, substantial, moderate, and weak. In the present study, the  $R^2$  value of 0.693 indicates that 69.3% of the variation in SM adoption occurred because of TOE impacts, while 35.7% of the variation in SME performance occurred because of SM adoption (Table 5). Moreover, this study employs the cross-validated redundancy measure ( $Q^2$ ) to evaluate the model. [97], suggesting that  $q^2 > 0$  shows that the model has predictive relevance. Values of 0.02, 0.15, and 0.35, respectively, indicate that an exogenous construct has a small, medium, or considerable predictive relevance for a specific endogenous construct. The current study's model has considerable predictive relevance for SM adoption and medium predictive relevance for SME performance (Table 5).

**Table 5.** Path coefficient and hypotheses testing.

Hypothesis	Relationship	Path Coefficient	SD	$t$ -Value	Decision
H1	Technological factors $\rightarrow$ SME performance	0.41	0.06	6.85	Supported
H2	Organizational factors $\rightarrow$ SME performance	0.20	0.06	3.26	Supported
H3	Environmental factors $\rightarrow$ SME performance	0.247	0.07	3.71	Supported
H4	SM adoption $\rightarrow$ SME performance	0.282	0.08	3.39	Supported
<b>Mediating Effect</b>					
H5	Technological factors $\rightarrow$ SM adoption $\rightarrow$ SME performance	0.06	0.03	2.83	Supported
H6	Organizational factors $\rightarrow$ SM adoption $\rightarrow$ SME performance	0.11	0.04	2.86	Supported
H7	Environmental factors $\rightarrow$ SM adoption $\rightarrow$ SME performance	0.056	0.02	2.44	Supported

According to [106], there are five types of mediation (i.e., complementary, competitive, indirect only, direct only, and no-effect non-mediation). The authors stated that if the mediated effect ( $a \times b$ ) and direct effect  $c$  both exist and point in the same direction, it is called complementary mediation. Therefore, based on [106] mediation typologies, this study evidenced the complementary mediation of social media adoption. There is no global measure of goodness of fit in SAMRTPLS-SEM [106]. Therefore, standardized root means square residual (SRMR) was used to assess the goodness of fit. SRMR is an absolute

measure of fit: a value of zero indicates perfect fit, and a value less than 0.08 is considered a good fit [98]. Table 6 demonstrates the study's adequate goodness of fit.

**Table 6.** Structural model.

Variables	Cross Validated Redundancy (Q <sup>2</sup> )			Coefficient of Determination (R <sup>2</sup> )	
	SSO	SSE	Q <sup>2</sup> (= 1–SSE/SSO)	R <sup>2</sup>	Adj. R <sup>2</sup>
Construct					
SM adoption	423.00	141.86	0.664	0.693	0.691
SME performance	423.00	285.68	0.325	0.357	0.340

Overall model fit: standardized root means square residual (SRMR) = 0.048, d\_ULS = 0.035, d\_G = 0.014, Chi-square = 29.597, NFI = 0.979.

## 5. Discussion

SM adoption in SMEs seems quite unpredictable. Many different technologies are adopted and employed by SMEs, which could also be investigated regarding how they support enterprise efficiencies. Researchers can also explore the relationship between SM adoption and innovation in SMEs. Because it is a continuously changing process, where customer preferences are changing with time, this relation will allow researchers to explore how much SMEs are adaptive to change. With changing technologies, the number of social media platforms is also increasing, and customers are also switching—it is a potential area for researchers to explore what platforms are more results-oriented in terms of SMEs. Hence, this study is one of the few that the authors are aware of that carries out a comprehensive quantitative study of the factors affecting SME performance, while keeping the focus on the mediating role of social media, in Asia, and exclusively in Pakistan. This study describes the influence of SM adoption on SME performance in Pakistan. The outcomes of the study are interesting, given that SM is a customer-focused technology.

The results of the present study indicate that technology has a positive and significant impact on SME performance, which is supported by Kulathunga et al. [98]. These results are in agreement with D'Attoma and Ieva [99]. Accordingly, sustainable growth and profitability require technological innovation and vigilant control. Innovations, through new products and technologies, have a huge impact on the development of organizations. SMEs provide strong employment and economic growth, especially because of innovative activity, which becomes the main force explaining the competitive advantage and performance of enterprises [19]. Moreover, the results of this study suggest that the adoption of technology in SMEs is outsourced by top management, requiring staff to use it in tactical or marketing activities. The authors speculate that the relative youth and high level of education of respondents may mean that they are personal users of the technology, resulting in their interest in using it for business purposes.

There was also a significant relationship between an organization and SME performance. Findings show that organizations have a positive impact on SME performance; this is supported by previous studies. Sawaeen and Ali. [101] argued that there is little evidence regarding the investigation of the association between managerial and organizational capacities on the outcomes. However, there are several studies advocating the significance of socioeconomic, demographic, and organizational characteristics in influencing performance. The authors proved the relationship between organizational factors and perceptions of community sustainability performance. Similarly, Hahsmi et al. [102] evidenced the direct and indirect link between organizational factors and performance management systems in firms operating in Vietnamese. Furthermore, top management support (especially CEO leadership) and other organizational factors have a significant influence on product innovation performance in firms operating in Thailand [103].

Our results specify that environment has a positive and significant impact on SME performance, these findings of the study is in line with Ali, et al. [104]. Factors considered in previous studies include industry structure, suppliers, and regulatory systems. Meanwhile, the importance of the environment for SMEs has also been reported by Asad, et al. [105] and

Adel, et al. [106], where they conclude that sustainability initiatives challenge industries to go beyond the obvious to redesign their products and processes with the environment in mind. Throughout the years, the approach to sustainable development has gained momentum, thanks to the research efforts of Non-Governmental Organizations NGOs, universities, consulting firms, and the industry itself. Many companies saw an opportunity to diversify with increasing environmental awareness. Some companies have used strategic approaches in their environmental practices to create competitive advantages. It was recognized that environmental policy must be based on the economic foundations of business. The strategic approach has mitigated the growing risks associated with environmental performance—risks from government and competition activities, public outrage, and employee problems [105–107].

Similarly, this study found a significant mediating role of SM adoption between technological impact and SME performance, organizational impact and SME performance, and environmental impact and SME performance. These results are consistent with [108–111].

Findings from these studies reveal that the primary reasons for SM adoption are the expected benefits. Regarding the individual characteristics of the technological impact, a positive link between relative advantage and SM adoption was found consistent with [4], who argue that comparative advantage is a significant factor in SM adoption in Malaysian SMEs. Since SMEs have hand-to-mouth resources, SM adoption provides lower-cost options than traditional forms of media [2]. This shows that SM dramatically affects SME performance in terms of improved customer services, their relationships and engagement, increased loyalty and retention, increased visibility, brand reputation, cost efficiency, and reaching a vast number of customers. These results are consistent with previous research [1,11]. The results of the present study suggest that top management is keen on SM adoption and that employees are required to use SM adoption extensively as a marketing tool. This paper suggests that, as young, well-educated owners, executives, and managers in Pakistan are already using SM, they prefer to adopt SM as a marketing tool. Regarding the entrepreneurial orientation and SM-adoption relationship, entrepreneurial orientation had a significant relationship with SM adoption. Possibly due to fear of losing ground to competitors, SMEs in emerging countries, such as Pakistan, are acting entrepreneurially regarding SM adoption.

Apart from that, Cao, Ajjan, Hong and Le [85] argue that environmental factors and SM adoption demonstrate that environmental impact has a significant influence on SM adoption in SMEs. Competitive intensity has an insignificant influence on SM adoption, unlike in prior studies [111]. Competitive pressure also has a significant effect on SM adoption. This implies that SMEs are forced, by competitive pressure, to develop a positive intention towards SM adoption, this finding is consistent with [40]. This study also found that the bandwagon effect has a significant influence on SM adoption. It implies that most SMEs adopt such an innovative technology simply because others were adopting it, i.e., most SMEs adopted it to reduce fears of being left behind by market fluctuations.

According to the results, there was, however, a positive association between social media adoption and SME performance. The result concerning relative advantage was consistent with previous studies [7], which argued that SM adoption compatibility is an essential consideration for SMEs. In the modern digital world, most youngsters and new firms have access to the internet and can use SM tools, such as WhatsApp, Facebook, Twitter, etc. Hence, SM is highly compatible with the current infrastructure. The interactivity of SM adoption is considered a vital factor, offering an interactive platform that enables SMEs to have two-way communication with customers and business partners, which encourages enterprises to adopt it [107].

The present study indicates (and classifies) the impact of technology, organization, and the environment on SMEs, and the important role of a mediator in using social media to reduce marketing and customer service costs, improve customer relationships, and improve information availability. Therefore, future research may examine the impact of

social media use based on the categorization of the impact factors identified in this study, and extend the results to different contexts.

## 6. Contribution

### 6.1. Theoretical Contribution

This study examined various factors to investigate their relationship with social media use. Earlier studies, using the TOE framework, most often used general technological factors to test technology adoption. This study used social media as a mediator to investigate its relationship with organizational, technological, environmental, and SME performance. Similarly, in an organizational context, earlier studies have used descriptive measures, such as firm size and scope, centralization, formalization, management structure complexity, human resource quality, and the amount of unused internal resources. This study examined the organizational, technological, and environmental impact on SME performance, rather than take descriptive measures. In addition to commonly used factors, an intermediary role for social media has been added to the TOE framework to improve it and make it more suitable for use in the study of social media technologies and future new technologies that are highly collaborative and interactive. SM adoption in SMEs seems quite unpredictable. Many different technologies are adopted and employed by SMEs, which could also be investigated regarding how they support enterprise efficiencies, e.g., cloud computing, e-commerce, enterprise systems, etc. Researchers can also explore the relationship between SM adoption and innovation in SMEs.

This paper makes several contributions to the existing literature in the adoption of SM and SMEs in developing countries. The findings relate to developing countries, especially Pakistan, where little literature is available.

This paper extends the current theory by adding to the TOE model and connecting it to drivers from the DOI theory, then utilizing it to investigate the expanding phenomenon of SM usage by SMEs. This paper provides modest support to the literature by offering empirical aids from an SM viewpoint, with good explanatory power.

Prior work has either explored the variables individually or in different dimensions [4,32,34] or called for a further empirical investigation regarding theory building and validation. This paper, however, provides a relevant and parsimonious method (based on the TOE framework) for examining this research phenomenon. Recently, scholars have examined the predecessors and outcomes of numerous information technology systems [1,2,7]. However, from the SM perspective, there is a lack of studies examining SME–SM adoption and its usage in an “integrated model” [34]. This present study, therefore, employed an integrative framework to investigate the predecessors of SM adoption, its extent, and effects on SME performance.

Few investigations have focused on SM adoption in SMEs [2,11,32,49] and investigated hypotheses similar to those in our study. Recently, scholars have examined the predecessors and outcomes of numerous information technology-based systems. However, from the SM perspective, there is a need to examine SM adoption and its usage in the context of SMEs operating in emerging countries.

### 6.2. Practical Contributions

Against the backdrop of continuous debate on the advantages and disadvantages of SM adoption by SMEs in developing countries, this paper offers a comprehensive view of important aspects, allowing owners, executives, and managers (decision-makers) to understand the actual significance of SM. This work facilitates their understanding of how the effective administration of SM adoption can improve SME performance in several aspects. For example, findings reveal that SM adoption has significant effects on SMEs in terms of cost reduction related to marketing activities. In addition, the active employment of SM improves customer relationships and loyalty because the active presence of SMEs on SM will improve customer service. Moreover, the adoption of SM improves brand visibility and allows a significant number of customers to be reached because SM presence

makes it easy for customers to reach out the SMEs. It also enhances customer access to information because SM has made it easy for customers to share information and their feedback with each other, and SMEs can share their messages and positive images. In other aspects, SM also helps SMEs find potential business for future alliances because of the presence of other SMEs on SM.

As this study reveals, the positive relationship between SM adoption and SME performance and managers can encourage SMEs to adopt SM, because findings suggest that the adoption of social media will help SMEs to increase their performance, reduce marketing costs, reach out to more potential customers, and find more potential partners for future growth through SM. TOE factors help firms to adopt SM easily because these factors provide a favorable environment to adopt SM easily and quickly without any resistance.

The most widely utilized SM applications are social networking services. Before deciding which application(s) to adopt as part of their strategic plans, decision-makers must work closely with the most popular SM tools in their country, i.e., Facebook in Pakistan, WhatsApp in India, and WeChat in China.

SME owners/managers in developing countries are seeking to improve marketing practices via SM adoption, which provide multiple tools to improve firm performance, as proved in this study. However, owners/managers may not optimally maximize their SM presence if their goal does not encompass exploiting SM for marketing purposes. The most common media types used by firms are Facebook and WhatsApp; both were considered cost-effective. The speed, ease of use, interactive nature, and ability to reach large customers make SM essential for SMEs in developing countries, such as Pakistan. Engaging existing and prospective customers, creating and sharing content, and monitoring competitors' activities via SM are possible benefits for organizations that embrace SM marketing activities.

Some studies have proposed that organizations use SM simply because others in the industry do. This results in a waste of resources, with SM adoption possibly not generating the desired outcome. This study proposes that SMEs should have a clear understanding of how SM can help managers increase their performance and image in the market. More importantly, this study highlights the reasons why SM should be adopted and how it can be successfully applied.

## 7. Limitations and Future Research

This study, like any research, has certain limitations, which highlight avenues for future research. From a broader perspective, there may be other predecessors and influential factors. Consequently, the involvement of only limited factors and associated elements (e.g., competitive intensity, competitive pressure, and the bandwagon effect in environment factors) may be considered a limitation. In addition, the sample size and reach may be considered a limitation. Moreover, the model was tested in SMEs in a single country through a field survey.

The outcomes represent a snapshot at a particular time, but the effects of SM are volatile over time. Most firms involved were businesses (profit-based), financials, and IT firms. The present work did not explore the association between SM adoption and a firm's strategic viewpoint. It would be interesting, therefore, to investigate the effects of strategies and leadership on SM adoption in SMEs. Forthcoming work could also investigate product-based and service-based SMEs separately, as well as large firms in developing countries. Finally, the mediating role of SM adoption should be explored.

## 8. Conclusions

This study investigated the impact of technology, organization, and environment as important factors in the performance of small and medium-sized enterprises. It also examined the mediating role of social media adoption in developing countries, specifically Pakistan. The findings suggest that SM has a significant effect on SME performance.



Despite this substantial impact, budget allocation remains less than 25%. Furthermore, 37% of SMEs studied only used SM minimally for marketing.

This paper suggests that SM allows SMEs operating in developing countries to connect effectively with customers, business partners, and other stakeholders, on a more personal level, because SM facilitates direct mentions and immediate replies. Most importantly, this work highlights how SM adoption allows SMEs to build brand awareness and loyalty, improve customer relationships, and provide several benefits, including cost-effectiveness, relative advantage, visibility, and interactivity, so that they can adjust with limited resources. Ultimately, the proposed constructs provide a more detailed understanding of SM adoption for decision-makers in SMEs.

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## Appendix A

**Table A1.** Item Loadings.

Constructs	Item Code	Items	Loadings
Relative advantage	RA1	“SM provides new opportunities”	0.75
	RA2	“SM allows us to accomplish specific tasks more quickly”	0.77
	RA3	“SM allows us to enhance our productivity”	0.81
	RA4	“SM allows us to learn more about our competitors”	0.78
	RA5	“SM allows for better advertising and marketing”	0.81
	RA6	“SM enhances the company’s image”	0.82
	RA7	“SM allows us to accomplish specific tasks more quickly”	0.81
Cost effectiveness	CE1	“We use SM to cut down cost on marketing communications”	0.77
	CE2	“SM platform saves costs relating to time and effort in marketing, branding and customer service”	0.74
	CE3	“SM is more cost effective to us than traditional media”	0.76

Table A1. Cont.

Constructs	Item Code	Items	Loadings
Compatibility	C1	"Social Media use is compatible with the company's IT infrastructure"	0.74
	C2	"SM use is consistent with the company's beliefs and values"	0.73
	C3	"SM is compatible with our business processes and operations"	0.74
Interactivity	I1	"SM offers interactive communication with customers"	0.77
	I2	"SM offers interactive mechanisms for value co-creation with our audience"	0.76
	I3	"SM enable to engage customers via mentions and replies with controlled message contents"	0.73
Visibility	V1	"SM allows us to promote our newest products"	0.72
	V2	"SM allows us to increase the visibility of the company"	0.74
	V3	"SM allow us to create brand visibility"	0.71
<b>Organizational Construct</b>			
Top management support	TMS1	"Top management in my organization is interested in adopting social media"	0.77
	TMS2	"TM in my organization considers social media adoption important"	0.77
	TMS3	"TM in my organization has shown support for social media adoption"	0.77
	TMS4	"TM emphasis on R&D, technological leadership, and innovations"	0.76
Entrepreneurial orientation (EO)	EO1	"Innovations are appreciated above everything else"	0.76
	EO2	"We emphasize R&D, technological leadership, and innovativeness instead of trusting only those products and services, which we have traditionally found to be good"	0.79
	EO3	"We emphasize risk-taking"	0.82
	EO4	"In our company, many people want to take a risk"	0.79
	EO5	"Within the last five years, we have brought several new products or services to the market"	0.79
	EO6	"We intend to get into markets before our competition"	0.77
	EO7	"We are typically ahead of competitors in presenting new products or procedures"	0.78
	EO8	"In our company, people want to be first in the markets"	0.8

Table A1. Cont.

Constructs	Item Code	Items	Loadings
<b>Environmental Construct</b>			
<b>Competitive intensity</b>	CI1	"It is easy for our customers to switch to another company for similar services/products without much difficulty"	0.74
	CI2	"Our customers are able to easily access to several existing products/services in the market which are different from ours but perform the same functions"	0.76
	CI3	"It is easy for our customers to switch to another company for similar services/products without much difficulty"	0.77
<b>Competitive pressure</b>	CP1	"SM would allow the firm stronger competitive advantage"	0.71
	CP2	"SM would increase firm ability to outperform competition"	0.73
	CP3	"SM would allow the firm to generate higher profits"	0.75
<b>Bandwagon effect</b>	BE1	"SM is a popular application; therefore our firm would like to use it as well"	0.72
	BE2	"We follow others in adopting social media"	0.77
	BE3	"We choose to adopt social media because many other firms are already using it"	0.78
<b>SM Adoption</b>			
<b>Social media for marketing</b>	SMM1	"It helps to conduct marketing research"	0.78
	SMM2	"It help to get referrals (word of mouth via likes, shares and followers in Facebook)"	0.77
	SMM3	"It help to advertise and promote product/services"	0.79
	SMM4	"It provides aids to deliver customer services"	0.77
<b>Customer relationship</b>	CR1	<i>"It helps to</i> develop customer relations"	0.72
	CR2	"Communicate with customers"	0.73
	CR3	"Conduct customer service activities"	0.72
	CR4	"Receive customer feedback on existing product/services"	0.77
	CR5	"Receive customer feedback on new/future product/services"	0.73
	CR6	"Reach new customers"	0.7

Table A1. Cont.

Constructs	Item Code	Items	Loadings
Information accessibility	IA1	“It helps to search for general information”	0.79
	IA2	“Search for competitor information”	0.81
	IA3	“Search for customer information”	0.84
SME performance	P1	“Improved the customer relationship”	0.82
	P2	“Improved service quality”	0.87
	P3	“Increased customer engagement”	0.87
	P4	“Increased company/brand visibility and reputation”	0.85
	P5	“Increased customer loyalty and retention”	0.87
	P6	“Enhanced customer service”	0.85
	P7	“Increased awareness and market Share”	0.84

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