

**Organizational and Environmental Factors Influencing  
Social Media among Small and Medium-Sized Enterprises  
(SMEs) in Egypt**

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**Abstract**

This study investigates the organizational and environmental drivers influencing social media adoption among Small and Medium-sized Enterprises (SMEs) in Egypt. Anchored in the Technology-Organization-Environment (TOE) framework, and supported by constructs from the Technology Acceptance Model (TAM) and Theory of Planned Behavior (TPB), the research provides a comprehensive empirical analysis of how top management support, organizational readiness, and external environmental pressures affect SMEs' adoption behaviors.

A quantitative methodology was employed, utilizing structured questionnaires administered to a sample of 375 SMEs

in Cairo. Data were analyzed using SPSS and AMOS, incorporating descriptive statistics, exploratory and confirmatory factor analysis (EFA and CFA), reliability assessments, and regression analysis. The findings indicate that organizational factors-particularly top management support-and environmental pressures such as competitive intensity and market dynamics significantly influence the likelihood of social media adoption. Conversely, the study confirms the limited role of technological factors such as perceived complexity or relative advantage in this specific context.

These findings reinforce previous studies in similar emerging markets (e.g., Alkateeb & Abdalla, 2021; Ramdani, Chevers, & Williams, 2013) and highlight the need for policy and managerial interventions tailored to institutional capacity and competitive environment. The research contributes to the refinement of the TOE model in developing country contexts and offers practical implications for digital transformation strategies among Egyptian SMEs.

### **Keywords**

Social media adoption, SMEs, Egypt, TOE framework, organizational context, environmental context

### الملخص:

تتناول هذه الدراسة الدوافع التنظيمية والبيئية التي تؤثر على اعتماد وسائل التواصل الاجتماعي بين الشركات الصغيرة والمتوسطة في مصر. وترتكز الدراسة على إطار التكنولوجيا والتنظيم والبيئة (TOE) ، وتستند إلى مفاهيم من نموذج قبول التكنولوجيا (TAM) ونظرية السلوك المخطط (TPB) ، حيث تقدم تحليلاً تجريبياً شاملاً لكيفية تأثير دعم الإدارة العليا، وجاهزية المؤسسة، والضغوط البيئية الخارجية على سلوك اعتماد هذه الوسائل من قبل الشركات.

وقد تم اعتماد منهجية كمية من خلال استبيانات منظمة تم توزيعها على عينة مكونة من ٣٧٥ شركة صغيرة ومتوسطة في القاهرة. وتم تحليل البيانات باستخدام برنامجي SPSS و AMOS، من خلال الإحصاءات الوصفية، وتحليل العوامل الاستكشافية والتأكدية (EFA) و (CFA)، واختبارات الموثوقية، وتحليل الانحدار. وتشير النتائج إلى أن العوامل التنظيمية، وخاصة دعم الإدارة العليا، إلى جانب الضغوط البيئية مثل شدة المنافسة وديناميكيات السوق، لها تأثير كبير على احتمالية اعتماد وسائل التواصل الاجتماعي. في المقابل، تؤكد الدراسة على الدور المحدود للعوامل التكنولوجية مثل التعقيد المدرك أو الميزة النسبية في هذا السياق تحديداً.

وتدعم هذه النتائج ما توصلت إليه دراسات سابقة في أسواق ناشئة مشابهة (مثل: الكتيب وعبد الله، ٢٠٢١؛ رضاني وتشيفرز وويليامز، ٢٠١٣)، كما تبرز الحاجة إلى تدخلات سياسية وإدارية تتناسب مع قدرات المؤسسات والبيئة التنافسية المحيطة. وتسهم الدراسة في تطوير نموذج TOE في سياقات الدول النامية، وتقدم دلالات عملية مهمة لاستراتيجيات التحول الرقمي بين الشركات الصغيرة والمتوسطة في مصر.

### الكلمات المفتاحية:

اعتماد وسائل التواصل الاجتماعي، الشركات الصغيرة والمتوسطة، مصر، إطار التكنولوجيا والتنظيم والبيئة (TOE) ، السياق التنظيمي، السياق البيئي.

## **Introduction**

In the digital age, Small and Medium-sized Enterprises (SMEs) in emerging economies face mounting pressure to innovate and adapt to changing technological landscapes. Social media, particularly platforms like Facebook, has emerged as a transformative tool enabling SMEs to enhance customer engagement, expand market reach, and increase competitiveness (Jones, Borgman, & Ulusoy, 2015). Despite this promise, social media adoption among SMEs remains uneven, especially in contexts marked by resource constraints and underdeveloped digital infrastructure. Egypt, with its growing SME sector and increasing internet penetration, provides a compelling case for exploring these dynamics (CAPMAS, 2021).

This study seeks to understand the factors that influence social media adoption in Egyptian SMEs, with a specific focus on the organizational and environmental contexts as conceptualized within the Technology-Organization-Environment (TOE) framework. Organizational factors such as top management support and internal readiness are often decisive in technology implementation, while environmental factors like competitive pressure and external support shape the urgency and perceived value of adoption (Ramdani, Chevers, & Williams, 2013; AlBar & Hoque, 2019).

Building upon this theoretical foundation, the study integrates additional constructs from the Technology Acceptance Model

(TAM) and the Theory of Planned Behavior (TPB) to present a multidimensional perspective. It extends existing literature by testing these constructs empirically in a developing country context where digital transformation is still in progress. The research addresses a significant gap, as most prior studies focus on technological determinants or originate from more developed economies with different institutional conditions (Ahmad, Bakar, & Ahmad, 2019).

The objectives of this paper are to examine how organizational and environmental factors affect social media adoption among SMEs in Egypt, to empirically assess the significance of these factors using quantitative data collected from 375 SMEs in Cairo and to offer theoretical and practical recommendations for enhancing digital adoption strategies.

## **Literature Review**

### **Social Media Adoption in SMEs**

The adoption of social media by Small and Medium-sized Enterprises (SMEs) has become a focal point in digital transformation discourse, particularly in the context of developing economies. Social media tools offer SMEs a cost-effective means to enhance visibility, build customer relationships, and compete in increasingly saturated markets (AlSharji, Ahmad, & Bakar, 2018; Jones, Borgman, & Ulusoy, 2015). Unlike larger corporations with extensive budgets and in-

house digital teams, SMEs often rely on more accessible, intuitive technologies to support business operations.

Social media platforms, particularly Facebook, have thus become critical enablers of growth and innovation for these firms.

Globally, SMEs that adopt social media report improvements in marketing reach, customer service responsiveness, and engagement metrics (Nanda, 2019; Kurnia & Mahendrawathi, 2019). In Egypt, the role of social media has become increasingly relevant due to the widespread use of smartphones and internet services across both urban and semi-urban populations. CAPMAS (2021) reported significant growth in online business activity, with many SMEs leveraging social media as their primary digital presence. Facebook, in particular, dominates due to its user-friendly interface, low entry cost, and integration with tools like Messenger and WhatsApp Business (Al Ghamdi, Al Hadban, & Al Hassoun, 2014).

Social media's effectiveness for SMEs lies in its dual function as a marketing tool and a customer interaction channel. By enabling two-way communication, real-time feedback, and peer-to-peer sharing (e.g., word of mouth), platforms like Facebook allow SMEs to bypass traditional advertising constraints and build stronger relationships with their audiences (Kim & Ko, 2012; BİLGİN, 2018).

Moreover, the integration of targeting algorithms and campaign analytics lets even small businesses monitor performance and optimize digital strategies without requiring advanced expertise.

Despite these advantages, research shows that SMEs in developing contexts may still face barriers to adoption, including low digital literacy, limited resources, and infrastructural challenges (Durkin, McGowan, & McKeown, 2013). These issues are particularly pronounced in Egypt, where structural inequalities and inconsistent internet access continue to impact technology use. Consequently, understanding what drives or impedes social media adoption is vital for both researchers and policymakers seeking to support the SME sector.

In the Egyptian context, SMEs frequently operate in highly competitive and informal markets, where brand differentiation and direct communication with customers are essential for survival. Social media offers a flexible and low-cost solution to these challenges, especially given that many SMEs lack traditional e-commerce platforms or standalone websites (Kamel, 2014). For these firms, Facebook often serves not only as a marketing channel but also as the core infrastructure for conducting business, including order management, customer service, and promotional campaigns.

Moreover, during crises such as the COVID-19 pandemic, social media proved to be a vital business continuity channel. El Naggar (2021) noted that many Egyptian SMEs shifted operations online to cope with physical restrictions and changing consumer behavior. Social media became indispensable in maintaining customer relationships, communicating operational updates, and offering alternative sales channels-all of which reflect the platform's agility and relevance.

Despite growing adoption, challenges remain. SMEs often lack formal strategies for social media use, relying on ad hoc decisions rather than data-driven planning. This can lead to missed opportunities or inefficient resource allocation (FakhrEldin, Shahin, & Miniesy, 2021). Additionally, owners' individual characteristics, such as attitudes toward technology, risk aversion, and familiarity with digital platforms, continue to mediate adoption outcomes.

In sum, social media adoption among SMEs in Egypt is both an opportunity and a challenge. While the platforms offer significant benefits, successful implementation requires not only access but also organizational readiness, strategic intent, and environmental alignment-issues explored further in subsequent sections of this paper.

## **Organizational Context in TOE Framework**

Within the Technology-Organization-Environment (TOE) framework, the organizational context refers to the internal attributes of a firm that shape its capacity and readiness to adopt new technologies. These attributes include firm size, employee expertise, managerial structure, resource availability, and most critically, top management support (Ramdani, Chevers, & Williams, 2013). In the context of social media adoption among SMEs, organizational readiness is particularly vital, as these firms often operate with limited formal infrastructure and rely heavily on owner-driven decisions.

Empirical research consistently highlights top management support as a key determinant of digital technology adoption. According to AlBar and Hoque (2019) and Ahani, Rahim, and Nilashi (2017), leadership commitment plays a pivotal role in mobilizing resources, setting priorities, and fostering a culture of innovation. This is especially true for SMEs in Egypt, where decision-making is highly centralized and business owners often perform multiple managerial roles. A lack of support from top management can result in inadequate investment, poor strategy alignment, and insufficient training—all of which hinder the successful adoption of social media platforms.

Organizational readiness also encompasses the presence of digital infrastructure, skilled personnel, and established

communication systems that can support the integration of new tools like Facebook and Instagram into business operations. In Egypt, many SMEs face challenges related to staff digital literacy and budgetary constraints, which limit their ability to adopt and sustain digital initiatives (AlSharji, Ahmad, & Bakar, 2018). As a result, even if the leadership is supportive, the absence of internal capacity may delay or dilute adoption outcomes. The level of formalization in strategic planning and operations further influences how SMEs approach social media integration. For instance, SMEs that have documented marketing plans, assigned digital roles, and allocated resources for digital tools are more likely to experience successful adoption than those that implement social media in an ad hoc manner.

FakhrEldin, Shahin, and Miniesy (2021) observed that many Egyptian SMEs operate informally and depend on trial-and-error strategies, which can undermine the full potential of platforms like Facebook for customer acquisition and brand development.

In sum, the organizational context-through top management support, internal readiness, and structural alignment-serves as a critical enabler or barrier in the adoption of social media among SMEs. Recognizing and strengthening these internal capabilities is essential for translating social media usage into sustained business performance.

## **Environmental Context in TOE Framework**

The environmental context in the TOE framework refers to the external pressures, institutional infrastructure, and socio-economic conditions that influence an organization's decision to adopt new technologies. For SMEs, this includes factors such as competitive intensity, customer demand, industry trends, and the regulatory landscape (Ahani, Rahim, & Nilashi, 2017). These external conditions can act either as catalysts or constraints, depending on how firms perceive and respond to them.

Among the most influential environmental drivers is competitive pressure. SMEs often operate in fragmented or rapidly evolving markets where differentiation and customer responsiveness are critical. In such settings, social media adoption is frequently motivated by the need to remain relevant, monitor competitors, and reach customers through more direct and interactive channels (AlBar & Hoque, 2019). Ramdani, Chevers, and Williams (2013) argue that in highly competitive environments, firms are more likely to explore digital platforms as a means of maintaining or improving market share.

In Egypt, competitive pressure has emerged as a major trigger for digital adoption among SMEs, especially in sectors like retail, food services, and fashion, where customer interaction is central to business success. Social media platforms, particularly Facebook, offer SMEs visibility and promotional

reach that rival traditional advertising at a fraction of the cost. Hadia (2021) observed that Egyptian SMEs in competitive sectors tend to adopt Facebook commerce more aggressively than those in niche or low-competition markets. Another critical aspect of the environmental context is regulatory and infrastructural support. Government policies promoting digital transformation, financial incentives, and investments in internet infrastructure can significantly enhance SMEs' ability and willingness to adopt new technologies.

In Egypt, the government has introduced several SME support programs focused on digital training and funding access. However, the reach and impact of these initiatives remain uneven across regions (ILO, 2019). Many SMEs still report bureaucratic hurdles, inconsistent access to training, and low awareness of available resources.

Additionally, social and cultural factors influence digital adoption. Consumer preferences for online engagement, the increasing trust in social media platforms as legitimate commerce channels, and the growing role of digital word-of-mouth (eWOM) all contribute to shaping SME behavior (Jones, Borgman, & Ulusoy, 2015). The pandemic further intensified these trends, as face-to-face transactions declined and online engagement became a survival strategy.

Thus, the environmental context-through market forces, policy frameworks, and cultural dynamics-exerts a significant influence on whether and how Egyptian SMEs engage with social media. Understanding these external pressures is crucial for designing interventions that support sustainable digital adoption in the SME sector.

### **Gaps in the Literature**

Despite the growing body of research on social media adoption in SMEs, significant gaps remain, particularly in developing country contexts. Most existing studies focus on technological factors or are conducted in high-income economies with mature digital infrastructure (Tiwasing, 2021). In contrast, relatively few empirical investigations explore how organizational and environmental contexts influence social media adoption among SMEs in emerging markets, where institutional conditions, resource constraints, and cultural norms may yield different outcomes. In the case of Egypt, research on social media use in business is limited and often fragmented.

Earlier studies, such as those by Wafaa (2016) and Marzouk (2016), touched on aspects of digital engagement but lacked integration with theoretical models like TOE, TAM, or TPB. Moreover, these studies did not systematically investigate the influence of top management support or competitive pressure,

which are central to understanding SME behavior in resource constrained environments.

There is also a scarcity of localized, quantitative data that can validate or refine existing adoption models. Many global frameworks assume the availability of digital literacy, supportive infrastructure, and regulatory clarity, conditions that may not exist uniformly across Egyptian SMEs (Ahmad, Bakar, & Ahmad, 2019). As a result, adoption drivers identified in one region may not translate directly to another, highlighting the importance of context-specific analysis.

Additionally, most studies do not examine the interplay between internal organizational readiness and external environmental pressures, treating these variables in isolation. This leads to an incomplete understanding of how adoption decisions are made and sustained. For instance, a business may have strong internal support for social media but fail to implement it effectively due to regulatory uncertainty or insufficient customer readiness.

This paper addresses these gaps by offering an integrated, empirical analysis of organizational and environmental drivers using validated constructs and a large sample of Egyptian SMEs. The findings aim to contribute both theoretically and practically to ongoing efforts to understand and support digital adoption in emerging economies.

## **Theoretical Framework and Hypotheses**

### **TOE, TAM, TPB Overview**

To examine the drivers of social media adoption among SMEs in Egypt, this study employs an integrated theoretical framework combining the Technology-Organization-Environment (TOE) framework, the Technology Acceptance Model (TAM), and the Theory of Planned Behavior (TPB). These models have been widely used in technology adoption research and provide complementary perspectives on how innovation uptake occurs within firms.

The TOE framework, developed by Tornatzky and Fleischer (1990), explains how the technological, organizational, and environmental contexts of a firm affect its decision to adopt and implement new technologies. The model is particularly useful in organizational studies because it considers both internal readiness and external influences. In this study, the focus is on the organizational and environmental components of TOE, which are considered critical in the Egyptian SME context given the limited role played by technological factors in previous empirical results.

The TAM, introduced by Davis (1989), focuses on users' perceptions of a technology's usefulness and ease of use. It explains individual behavioral intentions to adopt technology based on these two core constructs. Although originally developed for individual-level analysis, TAM has been extended

to organizational contexts, especially in SMEs where decision-making is centralized and technology perception often reflects managerial attitudes (Venkatesh & Bala, 2008).

The TPB, formulated by Ajzen (1991), expands the theory of reasoned action by incorporating perceived behavioral control along with attitudes and subjective norms. It is particularly relevant in contexts where external factors may restrict or facilitate behavioral intention. In this study, elements from TPB complement the TOE framework by highlighting the influence of perceived control over technology and social pressures on adoption behavior.

By integrating these three frameworks, the study offers a holistic understanding of the adoption process, accounting for both firm-level characteristics and individual-level perceptions. This approach helps explain why certain SMEs adopt social media while others do not, despite operating in similar external environments.

### **Focus on Organizational and Environmental Constructs**

This study focuses on the organizational and environmental contexts within the TOE framework, as these dimensions demonstrated the most significant influence on social media adoption in the empirical results. While technological factors such as perceived complexity and relative advantage were found to be statistically insignificant in the Egyptian SME context,

organizational and environmental factors emerged as key determinants.

Within the organizational context, two constructs are emphasized: top management support and organizational readiness. Top management support refers to the extent to which leaders are committed to adopting and utilizing social media tools for business purposes. It encompasses the allocation of financial and human resources, endorsement of strategic initiatives, and fostering a culture of digital engagement (AlBar & Hoque, 2019). Organizational readiness, on the other hand, includes the availability of digital infrastructure, technical expertise among staff, and the presence of formalized digital processes (Ahani, Rahim, & Nilashi, 2017).

The environmental context includes competitive pressure and external support. Competitive pressure reflects the extent to which SMEs feel compelled to adopt social media in order to keep pace with competitors, respond to changing market conditions, and meet customer expectations (Ramdani, Chevers, & Williams, 2013). External support refers to institutional and infrastructural enablers such as government programs, training availability, and access to advisory services (ILO, 2019).

These constructs are particularly relevant in the Egyptian context, where SMEs often function in environments marked by rapid change, limited regulatory clarity, and uneven access to digital resources. By focusing on these organizational and environmental factors, the study seeks to offer a contextually grounded understanding of what drives or hinders social media adoption in this segment.

The identification and testing of these constructs are based on prior literature and were operationalized using validated survey items adapted to the local context. The next section outlines the specific hypotheses developed to examine the influence of these factors on social media adoption among Egyptian SMEs.

### **Hypotheses Development**

Grounded in the Technology-Organization-Environment (TOE) framework, this study proposes two core hypotheses to examine how internal and external contexts influence the adoption of social media among SMEs in Egypt. The focus is on the organizational and environmental dimensions of the TOE model, given their relevance to the Egyptian business environment and the empirical emphasis of this research.

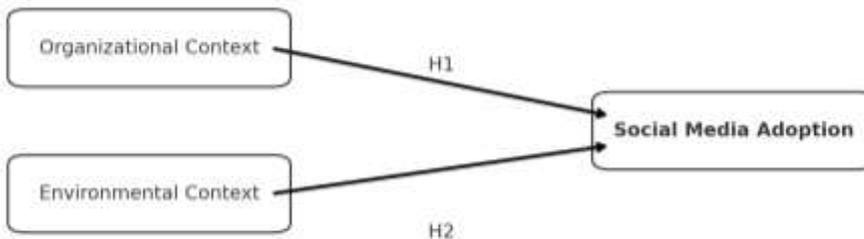
**H1: Organizational context has a significant impact on SMEs' adoption of social media.**

This hypothesis reflects the influence of internal factors such as top management support, digital readiness, and the availability of resources that enable or constrain social media integration.

**H2: Environmental context has a significant impact on SMEs' adoption of social media.**

This hypothesis considers the external factors that shape adoption decisions, including competitive market pressures, customer expectations, and institutional support from the regulatory or policy environment.

**Figure 1 presents the conceptual framework guiding this study**



## **Methodology**

### **Research Design**

This study adopts a quantitative research design to investigate the relationship between organizational and environmental factors and social media adoption among SMEs in Egypt. The decision to

employ a quantitative approach is grounded in the study's objective to measure and statistically evaluate the influence of these factors using structured, theory-based constructs. A survey-based methodology was selected as it allows for systematic data collection from a large sample of SMEs, enabling generalizability of results within the selected context.

The research framework guiding this study is based on the Technology-Organization-Environment (TOE) model, integrated with complementary constructs from the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB). These theoretical models provide a robust foundation for examining technology adoption in organizational settings, especially in emerging markets where both internal and external variables exert strong influence on innovation behavior.

This design aligns with previous studies that utilized structured questionnaires to test hypotheses related to social media and ICT adoption (e.g., AlBar & Hoque, 2019; Ahani, Rahim, & Nilashi, 2017). The survey instrument was developed based on validated scales from prior literature and adapted to the Egyptian context through expert feedback. The next sections outline the sampling procedures, data collection process, measurement instruments, and statistical techniques used for analysis.

## **Sampling and Data Collection**

The target population for this study consisted of small and medium-sized enterprises (SMEs) operating within the Greater Cairo region of Egypt. SMEs were selected based on their size, defined according to the Central Agency for Public Mobilization and Statistics (CAPMAS, 2021), and their active use or consideration of social media platforms for business operations. Cairo was chosen as the primary research site due to its high concentration of SMEs and relatively advanced digital infrastructure compared to other regions.

A non-probability purposive sampling technique was used to select participating firms that met predefined inclusion criteria: being classified as an SME, engaged in commercial activities, and having at least one active social media account or digital marketing function. This approach was suitable for targeting respondents with relevant experience and knowledge of social media use in business contexts.

Data was collected through a structured questionnaire distributed electronically and in person. The data collection process spanned two months, during which a total of 375 valid responses were obtained. Respondents included SME owners, marketing managers, and senior decision-makers involved in technology or digital strategy. The response rate was considered

satisfactory given the scope of the study and the challenges associated with field-based data collection.

Ethical considerations were observed throughout the research process. Participation was voluntary, and respondents were assured of confidentiality and the academic purpose of the study. The collected data were anonymized and used solely for research analysis.

### **Measurement Instruments**

The measurement instruments used in this study were designed based on established scales from prior research and adapted for the Egyptian SME context. All items were measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Each construct relevant to the TOE framework was assessed through multiple indicators that captured perceptions and behaviors regarding social media use.

Organizational context was measured using three items reflecting top management support and engagement. Environmental context was operationalized through three items emphasizing competitive advantage and performance benefits linked to social media. The table below summarizes the constructs, items, and example indicators. Construct	Code / Item	Indicator (Example)

Organizational Context	OC1	Top management in my organization is interested in adopting social media
Organizational Context	OC2	Top management in my organization considers social media adoption important
Organizational Context	OC3	Top management in my organization has shown support for social media adoption
Environmental Context	EC1	Social media use allows stronger competitive advantage
Environmental Context	EC2	Social media would increase ability to outperform competition
Environmental Context	EC3	Social media would allow generation of higher profits

**Table 1. Constructs and sample measurement items used in the study.**

### **Analysis Techniques**

Data analysis was conducted using a combination of descriptive and inferential statistical techniques. The Statistical Package for the Social Sciences (SPSS) was used for initial data screening, descriptive analysis, and reliability testing, while AMOS software was employed to perform confirmatory factor analysis (CFA) and structural equation modeling (SEM).

The analysis began with data cleaning, where missing responses and outliers were addressed. Descriptive statistics such as means and standard deviations were calculated to provide an overview of the sample characteristics and item-level responses. Next, reliability analysis was conducted using Cronbach's alpha

to assess the internal consistency of the constructs. Values above 0.70 were considered acceptable.

Exploratory factor analysis (EFA) was used initially to examine the underlying factor structure and to confirm the dimensionality of the constructs. Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity were applied to test sampling adequacy and factorability of the data.

Confirmatory factor analysis (CFA) was then conducted using AMOS to validate the measurement model. Model fit was evaluated using multiple indices including Chi-square ( $\chi^2$ ), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). Convergent and discriminant validity were assessed using standardized factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR).

Finally, regression analysis was used to test the hypothesized relationships between organizational and environmental contexts and social media adoption. This allowed the study to evaluate the strength and significance of each predictor variable in line with the proposed conceptual framework.

## Results

Descriptive statistics were computed for all study variables to examine the central tendencies and dispersion in responses. The following table summarizes the descriptive results for the organizational and environmental context constructs, which are the focus of this paper.

Construct	Item Code	Mean	Std. Deviation	Skewness
Organizational Context	OC1	3.9920	1.1126	-0.804
Organizational Context	OC2	3.9813	1.0857	-0.921
Organizational Context	OC3	3.9227	1.1571	-1.035
Environmental Context	EC1	4.3440	0.9571	-1.692
Environmental Context	EC2	4.3493	0.8915	-1.269
Environmental Context	EC3	4.2480	0.9506	-1.227

**Table 2. Descriptive statistics of measurement items for organizational and environmental context.**

Confirmatory factor analysis (CFA) was performed to assess the reliability and validity of the measurement model. Model fit was evaluated using multiple indices, including the chi-square statistic ( $\chi^2$ ), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Root Mean Square Error of Approximation (RMSEA). The model demonstrated a good fit with the following values:  $\chi^2/df = 2.863$ , CFI = 0.939, TLI = 0.926, RMSEA =

0.071. These values are within the acceptable thresholds suggested in the literature.

To ensure construct reliability, Cronbach's alpha ( $\alpha$ ), Composite Reliability (CR), and Average Variance Extracted (AVE) were calculated. All constructs showed Cronbach's alpha and CR values above 0.7, indicating good internal consistency. AVE values exceeded the 0.5 benchmark, demonstrating acceptable convergent validity.

Construct	Cronbach's $\alpha$	Composite Reliability (CR)	Average Variance Extracted (AVE)
Organizational Context	0.891	0.927	0.755
Environmental Context	0.812	0.880	0.710

**Table 3. Reliability and convergent validity of organizational and environmental constructs.**

To test the proposed hypotheses, multiple regression analysis was conducted with social media adoption as the dependent variable and organizational and environmental contexts as the independent variables. The analysis revealed that both predictors had a statistically significant and positive impact on social media adoption among SMEs in Egypt.

The organizational context showed a significant positive relationship with social media adoption (H1 supported), indicating that greater top management support and

organizational readiness are associated with higher adoption levels. Similarly, the environmental context was also positively associated with adoption (H2 supported), suggesting that competitive pressure and institutional support encourage SMEs to engage with social media platforms. Table 4 summarizes the results of the regression analysis.

Independent Variable	Standardized Coefficient ( $\beta$ )	t-value	Significance (p-value)
Organizational Context	0.206	4.353	< 0.001
Environmental Context	0.268	5.760	< 0.001

**Table 4. Regression results for organizational and environmental context predictors of social media adoption.**

## **Discussion**

The results of this study provide important insights into the factors influencing social media adoption among SMEs in Egypt. The significant impact of both organizational and environmental contexts supports the central premise of the Technology-Organization-Environment (TOE) framework that internal capabilities and external pressures jointly shape technological adoption behavior.

The confirmation of H1 reinforces previous research findings that top management support and internal readiness are

key enablers of digital innovation in SMEs (AlBar & Hoque, 2019; Ahani, Rahim, & Nilashi, 2017). In the Egyptian context, this support is particularly critical, as many SMEs are owner-managed with limited technical personnel. Organizational readiness, including the presence of skilled staff and digital infrastructure, creates the operational foundation required for implementing platforms like Facebook for marketing and customer engagement.

The confirmation of H2 highlights the pivotal role of external factors in motivating SMEs to adopt social media. Competitive pressure and industry trends compel firms to keep up with peers, respond to shifting customer expectations, and capitalize on digital market opportunities. This finding aligns with earlier studies showing that SMEs in competitive sectors are more likely to invest in social media tools to maintain visibility and retain customers (Ramdani, Chevers, & Williams, 2013).

The results also validate the integrated theoretical framework that combines TOE with constructs from TAM and TPB. While the technological context and individual attitudes were not found significant in this study, organizational and environmental factors clearly played a dominant role. This suggests that in markets where digital tools are becoming increasingly common, institutional and strategic readiness may outweigh concerns about complexity or relative advantage.

These findings have important implications for both theory and practice. Theoretically, they refine the TOE framework by emphasizing the variable impact of its components based on context. Practically, they point to the need for targeted managerial and policy interventions to support digital transformation in the SME sector.

### **Conclusion and Recommendations**

This study aimed to examine the influence of organizational and environmental contexts on social media adoption among small and medium-sized enterprises (SMEs) in Egypt. Drawing on the Technology-Organization-Environment (TOE) framework, and integrating elements from the Technology Acceptance Model (TAM) and the Theory of Planned Behavior (TPB), the research employed a quantitative approach using structured questionnaires administered to 375 SMEs in the Greater Cairo region. The findings provide robust empirical support for the hypothesis that organizational and environmental factors significantly influence the likelihood of social media adoption.

Specifically, the regression analysis confirmed that organizational context, particularly top management support and internal digital readiness, plays a key role in facilitating adoption. Similarly, environmental context, including competitive pressure and institutional support was found to be a strong predictor of adoption behavior. These results suggest that SMEs are motivated

to adopt social media not merely by the features or perceived benefits of the technology itself, but by the internal commitment of leadership and the external need to remain competitive in dynamic markets. These insights validate the relevance of TOE in explaining firm-level adoption behavior in emerging markets like Egypt, while also refining our understanding of how context shapes technology-related decisions.

From a theoretical perspective, this study contributes to literature by empirically testing an integrated framework that combines TOE, TAM, and TPB in a developing country setting. The findings reinforce the idea that organizational and environmental factors may have a more significant impact than technological ones in contexts where digital platforms like Facebook are already widely accessible. By focusing on Egypt's SME sector, this study adds to the relatively sparse body of region-specific digital adoption research and highlights the need to contextualize theoretical models based on institutional and cultural conditions.

Practically, the study provides guidance for SME owners, digital strategists, and policymakers. Managers should prioritize building internal digital capabilities and securing leadership support to foster successful adoption. Policymakers should enhance institutional support mechanisms, such as digital training programs and financial incentives, to help SMEs

overcome adoption barriers. Sectoral associations can also play a role in disseminating best practices and success stories, fostering a supportive ecosystem for digital transformation.

This study is not without limitations. It focused on SMEs located in Cairo, which may limit the generalizability of findings to other regions with different infrastructure and market conditions. Moreover, the use of a cross-sectional survey design restricts the ability to observe changes over time or assess causality. Future research should consider expanding the geographic scope, including longitudinal designs, and incorporating qualitative methods to gain deeper insights into the motivations, perceptions, and challenges associated with social media adoption. Exploring sector-specific adoption trends and examining the evolving role of emerging platforms beyond Facebook may also yield valuable future directions for research.

## **References**

- Ahani, A., Rahim, N. Z. A., & Nilashi, M. (2017). *Forecasting social media adoption among SMEs: An integrated SEM-neural network method*. *Computers in Human Behavior*, 75, 560–578.
- Ahmad, S. Z., Bakar, A. R. A., & Ahmad, N. (2019). *Organizational characteristics, strategic orientation, and organizational innovation in SMEs*. *Journal of Small Business and Enterprise Development*, 26(4), 517–542.
- AlBar, A. M., & Hoque, M. R. (2019). *Factors affecting the adoption of information and communication technology in small and medium*

- enterprises: A perspective from rural Saudi Arabia.* Information Technology for Development, 25(4), 715–738.
- Al Ghamdi, H., Al Hadban, N., & Al Hassoun, T. (2014, July 4). *The effectiveness of Facebook as a marketing tool.* International Journal of Management & Information Technology, 10(2).
- Alkateeb, M. A., & Abdalla, R. A. (2021). *Social media adoption and its impact on SMEs performance: A case study of Palestine.* Journal of Studies of Applied Economics, 39(7).
- AlSharji, A., Ahmad, S. Z., & Bakar, A. R. A. (2018). *Understanding social media adoption in SMEs: Empirical evidence from the United Arab Emirates.* Journal of Entrepreneurship in Emerging Economies, 10(2), 302–328.
- Bilgin, Y. (2018). *The effect of social media marketing activities on brand awareness, brand image and brand loyalty.* Business and Management Studies: An International Journal, 6(1).
- CAPMAS. (2021). *Annual statistical report on SMEs.* Central Agency for Public Mobilization and Statistics. <https://www.capmas.gov.eg/>
- Daniel, J. (2016). *Sampling essentials: Practical guidelines for making sampling choices.* SAGE Publications.
- Davis, F. D. (1989). *Perceived usefulness, perceived ease of use, and user acceptance of information technology.* MIS Quarterly, 13(3), 319–340.
- Durkin, M., McGowan, P., & McKeown, N. (2013). *Exploring social media adoption in small to medium-sized enterprises in Ireland.* Journal of Small Business and Enterprise Development, 20(4), 716–734. <https://doi.org/10.1108/JSBED-08-2012-0094>
- El Said, H., Al Said, M., & Zaki, C. (2014). *Trade facilitation, transport cost, and the price impact in Egypt.* Review of Middle East Economics and Finance, 10(2), 149–176.

- FakhrEldin, H., Shahin, M., & Miniesy, R. (2021). *The impact of social media adoption on financial & non-financial growth of MSMEs: An empirical comparison of Facebook and Instagram in Egypt*. 2020 BAEPS Conference Proceedings.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2006). *Multivariate Data Analysis* (6th ed.). Pearson Prentice Hall.
- International Labour Organization. (2019). *Promoting decent work for women and men in Egypt through SME development*. ILO Regional Office for Arab States. <https://www.ilo.org/global/publications/lang-en/index.htm>
- Jones, N., Borgman, R., & Ulusoy, E. (2015, November 16). *Impact of social media on small businesses*. Journal of Small Business and Enterprise Development.
- Kamel, S. H. (2014). *The value of social media in Egypt's uprising and beyond*. Electronic Journal of Information Systems in Developing Countries, 60(5).
- Kim, A. J., & Ko, E. (2012). *Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand*. Journal of Business Research, 65(10), 1480–1486. <https://doi.org/10.1016/j.jbusres.2011.10.014>
- Kurnia, S., & Mahendrawathi, E. R. (2019). *Impact of social media adoption on SME performance: Evidence from Indonesia*. Procedia Computer Science, 161, 976–983. <https://doi.org/10.1016/j.procs.2019.11.219>
- Lin, H. F. (2014). *Understanding the determinants of electronic supply chain management system adoption: Using the technology-organization-environment framework*. Technological Forecasting and Social Change, 86, 80–92.

- Nanda, P. (2019). *The impact of digital marketing and social media on SMEs in emerging markets*. International Journal of Marketing and Business Communication, 8(2), 45–56.
- Ong, E. T., & Puteh, M. (2017). *SPSS and AMOS applications for research*. University Publication Centre.
- Prada Ramallal, M., Diaz, M., & Martinez, R. (2018). *Secondary data use in social science research: Methodological approaches and challenges*. Social Science Research Journal, 42, 55–74.
- Queirós, A., Faria, D., & Almeida, F. (2017). *Strengths and limitations of qualitative and quantitative research methods*. European Journal of Education Studies, 3(9), 369–387.
- Ramdani, B., Chevers, D., & Williams, D. A. (2013). *SMEs' adoption of enterprise applications: A technology-organization-environment model*. Journal of Small Business and Enterprise Development, 20(4), 735–753.
- Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington Books.
- Tiwasing, P. (2021, June 14). *Social media business networks and SME performance: A rural–urban comparative analysis*. Growth and Change, 52(3).
- Venkatesh, V., & Bala, H. (2008). *Technology acceptance model 3 and a research agenda on interventions*. Decision Sciences, 39(2), 273–315. <https://doi.org/10.1111/j.1540-5915.2008.00192.x>
- Wamba, S. F., & Carter, L. (2016). *Social media tools adoption and use by SMEs: An empirical study*. Journal of Organizational and End User Computing, 28(4), 1–24.