



#### Research Article

# Understanding the Technological-Organizational-Environmental Concepts on SMEs' Performance in Emerging Market

Yudha Prakasa<sup>1,2</sup>, Nizar Fauzan<sup>2,3</sup>\*

- <sup>1</sup>Department of Business Administration, Faculty of Administrative Science, Universitas Brawijaya, Indonesia
- <sup>2</sup>Faculty of Business Administration and Accountancy, Khon Kaen University, Thailand
- <sup>3</sup>Department of Management, Faculty of Economics and Business, Universitas Islam Bandung, Indonesia

#### Abstract.

This research focuses on integrating digital platforms in small and medium-sized enterprises (SMEs), emphasizing the importance of efficient stakeholder communication for their success. Additional scholarly investigation is required to examine the correlation between SME success and social media adoption, with a focus on emerging countries. This study examines how technology-organizational-environmental (TOE) factors affect digital social communication and SME success in developing nations. Through employing the TOE framework, this study attempts to explain the determinants of social media adoption and its subsequent effect on the performance of SMEs. Data will be gathered through the utilization of a well-organized questionnaire disseminated online to a randomly selected group of participants from SMEs in Indonesia. Partial-leastsquares-structural-equation-modeling will be employed to conduct the route analysis, with the involvement of SME owners, executives, and managers. Furthermore, the study will evaluate how social media influences the connection between TOE qualities and SME performance. The findings will demonstrate a clear and favorable correlation between the TOE components, and the interaction between SME performance and social media adoption. This research will enhance the existing body of knowledge in this domain by offering valuable insights for professionals and scholars interested in

Fauzan; email: nizar.f@kkumail.com

Corresponding Author: Nizar

Published: 5 April 2024

### Publishing services provided by Knowledge E

© Prakasa, Fauzan. This article is distributed under the terms of the Creative Commons

Attribution License, which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the BICBATT 2023 Conference Committee. Keywords: digital social communication, SME, TOE

## 1. Introduction

the use of social media in SMEs.

Nowadays, in a profound impact of digital technology's exponential growth on our every-day existence is particularly noteworthy considering the Internet's ubiquitous nature. The skyrocketing number of social media users in 2023 amounted to 5.18 billion, surpassing fifty percent of the global population. Additionally, the number of Internet users reached 4.8 billion individuals [1]. This technological advancement has also contributed with regard to the expansion of the digital economy [2]. However, the studied by Low et al.

**□** OPEN ACCESS



[3] reveals that despite the prevalence of technology in various sectors such as media, retail, and finance, industries are still operating at less than 40% of their digitization potential. Through suggests that there is untapped potential in fully harnessing digital technologies, and achieving a fully realized digital economy remains a priority for nations worldwide.

Despite the fact that large companies possess the capacity to utilize digital communication platform and other internet-based techniques without necessitating additional resources SMEs can also exploit these methods due to their cost-effectiveness, user friendliness, and ability to reach a broad audience [4]. The utilization of social media by SMEs is increasing in emerging nations and is considered a noteworthy strategic approach [5]. Social networking is popular among SMEs in developing countries [6]. Firms can rapidly identify client needs using social media. Affordable analytics, conversion tracking, content management, automatic publishing, and customer targeting are available on social media. The literature on entrepreneurship and business in both developed and emerging nations highlights the importance of SMEs through using social media [7]. This however enhances SME sales performance and client interactions, hence maintaining their competitiveness. While expansive multinational businesses can employ internet-based strategies such as social media with no additional investment, SMEs can benefit from its cost-effectiveness, user-friendliness, and ability to connect with a wide range of consumers. [4]. The utilization of social media by SMEs is increasing due to its cost-effectiveness, user-friendliness, and ability to reach a large audience. While large firms can employ social media and other internet-based approaches without additional resources, SMEs can also leverage these tools to their benefit. The developing countries and is a significant strategy [5]. Social networking is popular among SMEs in developing countries [6]. Social media helps firms discover client demands and respond quickly. Social media also enables affordable analytics, conversion tracking, content management, automatic posting, and customer targeting. SME social media use is stressed in entrepreneurship and business literature in developed and emerging nations [7]. It improves client interactions and sales performance for SMEs, keeping them competitive.

A significant amount of research has been dedicated to examining the effects and usage of social media from the perspective of both companies and individuals [8]. For instance, researchers have investigated its influence on consumer purchasing decisions and its effects on brand promotion and electronic business [9]. However, the literature needs comprehensive insights into how SMEs adopt, select, or utilize social media platforms [10]. There is a lack of research on the acceptance and use of social media



and strategic planning in corporate management and how they impact organizational performance [4, 11]. In contrast, some studies have explored social media adoption's overall performance and mediating roles of SMEs [12]. Several areas remain unexplored, including usage in the SME context, this study examines the impact of social media on the survival of SMEs, the factors that precede SMEs' success, the role of social media as a mediator, and its interaction with company representation and customers. Additionally, additional study must be conducted on TOE elements that influence social media adoption and the success of SMEs in emerging nations, especially Southeast Asian (SEA) nations.

Consequently, SMEs significantly impact economies, especially in developing countries, where they comprise many businesses. These enterprises are crucial for new development products, marketing capabilities, and job creation and contribute to the overall economic development on a global scale. SMEs constitute an estimated 90% of all enterprises on a global scale. They hold a significant impact on employment, contributing to over 50% of all job opportunities. [13]. Consequently, SMEs in developing countries provide up to 40% of the national income, as measured by the Gross Domestic Product (GDP).

# 1.1. Southeast Asian (SEA) countries

International business (IB) prior to the twenty-first century focused on the study of multinational corporations headquartered in developed Western economies [14]. Changes have occurred in the IB environment and intellectual discourse over the last two decades. African, Asian, and Central American emerging markets are gaining importance in IB [15].

In addition, Vietnam, Thailand, Timor-Leste, Indonesia, Brunei, Cambodia, Laos, Malaysia, Myanmar, the Philippines, and Singapore are among the eleven Southeast Asian countries that have seen a range of political regimes and sociocultural transformations [16]. Despite variations in economic structure, development pace, and pattern, these nations adopt digital transformation to drive economic advancement. Consequently, The Internet and innovative technologies including mobile technology, virtual reality, big data, artificial intelligence, and the Internet of Things (IoT) have established connections among various stakeholders including customers, suppliers, businesses, regulators, devices, data, and processes, transcending industries and nations. We generate, market, and consume information, products, services, and experiences; as well as communication, have been profoundly altered by this revolutionary environment.



Recently, an increasing number of government and commercial entities have recognized the crucial importance of the digital economy in Southeast Asian countries. This acknowledgment is a result of its tremendous potential and the profound effect it may exert on the economy of Southeast Asian nations and their international trade counterparts. Commencing in 2016, Economy SEA, a prominent research initiative co-founded by Google and Temasek, has been conducting monitoring of the digital economies of Vietnam, Indonesia, Malaysia, the Philippines, Singapore, and Thailand. Bain and Company became the principal research partner for this endeavor in 2019. This exhaustive study's conclusions were compiled in the most recent report, which was published in late 2022 [17]. Ha and Chuah [16] conducted comparable research to comprehend the effects and potential effects of digital transformation and the digital economy on small and medium enterprises (SMEs) in Southeast Asia. In 2022, Meta, Bain, and company released a significant report on digital customers in Southeast Asia, providing valuable insights into the changing patterns of consumer behavior for businesses to comprehend.

# 1.2. Research gap

SMEs in SEA countries face numerous challenges, such as limited funding, growth opportunities, technology utilization, and resources compared to developed nations [18]. These challenges result in market demand fluctuations, resource scarcity, and uncertainty. Some SME owners hesitate to adopt technology, particularly social media, due to needing more training and knowledge in engaging with digital platforms. However, the competitive landscape and customer behaviour shifting towards online platforms have compelled SMEs in emerging economies to embrace social media as an efficient and economical way to contact new clients and strengthen existing ones. To ensure successful social media adoption by SMEs, a supportive organizational culture that encourages technology adoption and provides employee training opportunities is essential.

Concerns arise regarding disruptive technologies, the digital divide, privacy, and security issues, as well as potential business opportunities, economic growth, enhanced public services, workforce shortages, and improved efficiency and productivity that come with the implementation of the TOE framework and digital technologies. Recent research by Ha and Chuah [16] has explored the study investigated the effects of digital adoption in Southeast Asian countries and analyzed the relationship between digital adoption, the digital economy, and the various roles of stakeholders in the process of digital transformation involves the participation of several organizations, including those



from the governmental, corporate, and civil society sectors. A few significant research questions, however, remain unanswered:

To what extent does SMEs' adoption of the TOE framework in SEA countries contribute to significant economic development?

Moreover, the current work aims to address these gaps by examining the core characteristics of the TOE framework in Southeast Asian countries, exploring the potential and challenges that arise from digital transformation and the digital economy for SMEs, and assessing the impact of the digital economy on Southeast Asian nations, with a specific focus on the development of human and physical capital.

In addition, policy suggestions will be derived from this study, emphasizing the significance of many sectors and stakeholders in the efficient management of digital transformation in Southeast Asian nations. The research on sustainability holds immense importance due to its interdisciplinary character, encompassing fields such as economics, digitalization, human resource development, governance, management, public policy, technology, privacy, and security. This study aims to provide valuable insights for the digital economy of Southeast Asia (SEA) by examining both favorable and unfavorable experiences of countries in the region. By doing so, it seeks to enable the region to maintain its competitiveness and sustainability in the face of global and economic uncertainty.

## 1.3. Objective research

The primary objective of this research is to comprehend the utilization of social media, marketing capabilities, CRM, and strategic planning in SMEs. This will be accomplished by utilizing the TOE framework and analyzing the factors inherent in the technological-organizational-environmental setting. The TOE framework consists of three fundamental constructs: technical, organizational, and environmental [19]. This scientific construct emphasizes the importance of both current and emerging technology for SMEs. On the other hand, the organizational construct considers many organizational elements, including size, type, managerial support, and other relevant characteristics. The environmental construct encompasses the external variables that exert an influence on the organization, such as industry dynamics, governmental laws, and competition.

The significance of this study is in the utilization of a composite variable to evaluate the impact of different constructs on the performance of SMEs in emerging regions, particularly Vietnam, which is an area with substantial untapped potential. We conducted a thorough examination of the literature to establish the basis for our inquiry into the



relationship between these traits and business performance. The paper provides an extensive exposition of the research methods and outcomes, culminating in a complete analysis of the findings that includes management implications, theoretical contributions, and limitations of the research.

The effect of the TOE Framework on SMEs in SEA nations is investigated in this study. In the Southeast Asian region, Internet usage and penetration have increased during the last decade. The expansion of this region makes it interesting to study the impact of TOE on SME performance in these nations. The author chose Southeast Asian nations because of their remarkably high levels of ICT penetration [20]. Conversely, the above-average GDP development in the SEA countries offers an appropriate setting for evaluating the correlation between the adoption of social media platforms by digital firms and the TOE Framework.

## 2. Literature Review

# 2.1. Theoretical and development

The recent research indicates the need for further investigation into SMEs in SEA countries and identifying factors that can enhance business performance through technology adoption [21-24]. Elaborating on the existing TOE foundation by Tornatzky et al. [25], the conceptual model of this study integrates elements acquired from prior research that has utilized the TOE framework at the SME level. Specifically, past studies have concentrated on company performance to implement the digital platform [26, 27].

In developing countries, particularly SEA countries, investigating the determinants of the TOE framework [25] and their impact on SMEs' performance is of significant importance. This study aims to comprehend the crucial aspects and resources of the TOE model to shed light on the processes that underlie innovation in this emerging economy. In order to accomplish this, the study is based on the theoretical foundations of the TOE and Diffusion Innovation (DOI) Theory [28], through Resource-Based View (RBV) Theory [29] which offer insights into the reasons, methods, and conditions governing various phenomena. This study seeks to contribute to formulating intermediate-level hypotheses by drawing upon preexisting scholarly works by addressing the four research questions, providing valuable insights for the industry. The TOE framework is pivotal in establishing the foundation for organizational innovation and adoption, guiding the invention process, and elucidating the factors influencing technology adoption and implementing innovative practices [30].



## 2.2. Theoretical ground

Various established models, such as the Unified Theory of Acceptance and Application of Technology (UTAUT) and DOI utilized to explain the adoption of innovation in businesses [31-33]. However, Tornatzky et al. [25] proposed the TOE framework, which has garnered strong support from diverse studies and offers a comprehensive understanding of the adoption of a wide range of innovations at the SME level [26, 34, 35]. The TOE framework's strength pertains in its capacity to comprehensively capture the process of innovation adoption, considering the influential technological, organizational, and environmental settings.

Moreover, the notion of Resource-Based View (RBV) is exceedingly pertinent for a multitude of reasons. It has been extensively employed in SME studies to assess sustainability and competitive advantage, emphasizing the strategic utilization of scarce and unique organizational resources [29, 36-38]. Further, the RBV theory places emphasis on internal resources and underscores their capacity to shape strategies aimed at attaining sustainability objectives [39]. If these resources are difficult to imitate or replace, the organization can develop a competitive advantage through digitalization, enhancing sustainable performance [38]. Similarly, the adaptability of the TOE framework enables the integration of many technological, organizational, and environmental elements [40]. Besides, the TOE framework efficiently considers the wider circumstances in which technology is employed in SMEs [41].

This study aims to fill the existing research gap in the performance of SMEs by examining the relationship between adoption intention and business performance in developing countries, specifically in Southeast Asian (SEA) countries. This study illuminates the intricate correlation between the adoption of innovation and the resulting business outcomes for SMEs in these specific regions. The research provides a thorough understanding of how organizational behaviors affect the performance of SMEs in dynamic developing nation environments. This is achieved by using the TOE fundamentals and insights from DOI and the RBV, while recognizing the unique difficulties and possibilities present in these environments.

## 2.3. TOE framework

Initially, the TOE foundation was proposed by Tornatzky et al. [25] explains the TOE framework is conceptualized as a triangular structure including three distinct portions, each of which symbolizes a vital context: environmental, organizational, and technical. A

checklist will reflect perceived benefits and expertise, while icons or pictures depicting technology aspects, such as a computer chip or network symbol, will populate the technological portion. The organizational section will utilize elements such as building blocks or jigsaw pieces to symbolize the characteristics of the firm, including its dimensions, framework, and assets. In the environmental portion, graphical or pie chart representations of market structure, legal scales or gavels representing government regulations, and icons denoting external support and rivals will be incorporated. By connecting these parts with arrows, the dynamic interplay between different environments in terms of technology adoption will be illustrated. The aforementioned design will proficiently convey the intricate and cohesive characteristics of the TOE framework [22].

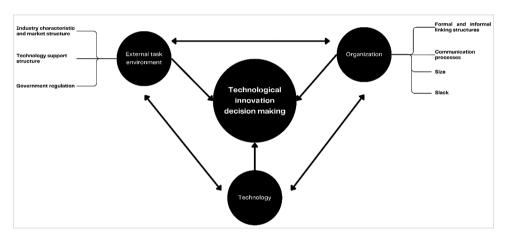


Figure 1: TOE framework by Tornatzky et al. [25].

# 2.4. Technological construct

The concept of TOE is a widely recognized model that classifies technology, organization, and environment as key elements that influence the adoption and innovation processes of SMEs [42]. This approach has been widely employed to examine many settings of technology acquisition, including the adoption of social media technology. Likewise, the TOE notion is in line with the diffusion of innovation theory, strengthening its theoretical grounding [26].

This study assessed the technological impact on SME performance by considering various technological factors. Relative advantage refers to potential adopters perceiving an innovation as superior to alternatives. Evidence demonstrates that recognizing the comparative benefits of social media can enhance the dissemination of knowledge and enhance overall organizational effectiveness [5]. Compatibility refers to how modern



technology aligns with existing practices, technology, and SMEs' current needs and values. Cost-effectiveness evaluates whether innovation is practical and more productive compared to its cost. This element is crucial in evaluating the adoption of social media; however, it has not been given sufficient attention in the current body of work. Interactivity refers to the extent to which individuals or groups can engage and communicate with each other through a specific communication channel [42]. As Web 2.0 technology, social media offers high interactivity, facilitating increased interaction between customers and organizations. Therefore, interactivity is critical in social media literature [43]. Accessibility pertains to the degree to which something garners widespread attention. With their limited resources, SMEs might utilize social media platforms for marketing purposes in order to get greater awareness compared to larger businesses [23].

Relative advantage refers to the idea that an invention provides more benefits compared to alternative possibilities. Research conducted on SMEs in Malaysia has demonstrated a clear correlation between the anticipated advantages of utilizing social media and the probability of embracing it [44]. Compatibility refers to the compatibility of innovation with the current technical infrastructure, work habits, and corporate culture [5]. Studies suggest that greater compatibility leads to higher adoption rates. Costeffectiveness measures the productivity and utility of new technology concerning its cost [42]. It is a crucial factor widely examined in existing literature, highlighting social media efficiency and low-cost advantages compared to traditional communication tools [44, 45]. Interactivity indicates the ability of companies or individuals to engage and interact through social media networks such as Facebook. The hospitality industry has seen beneficial impacts from the interconnectedness offered by social media usage [7].

# 3. Relative Advantage through Social Media

Technology's relative benefit is the degree to which prospective users perceive it as providing more excellent benefits than other options [28]. Previous research has indicated that within SMEs in developing nations, there is a favorable link between relative advantage and the adoption of technology, such as the uptake of blockchain technology in Malaysian SMEs [46], social media adoption in Indonesian SMEs [47], the integration of online business platforms in small and medium businesses in Egypt [48]. Ahmad et al. [45] found there was no substantial correlation between the perceived advantages and the utilization of social media among SMEs in the United Arab Emirates



(UAE). Based on the diverse outcomes observed, the study proposes the following hypothesis:

H1a: The effect of perceived benefit through social media is significant.

#### 3.1. Cost-Effectiveness on Social Media

In addition, cost-effectiveness is about benefits or improved results of a specific innovation compared to its expense. For SMEs, the cost of implementing technology plays a crucial role. Research has highlighted the importance of cost-effectiveness for SMEs adopting social media. For example, Al Halbusi et al. [49] found the acceptance of mobile marketing intention in Iraq SMEs is significantly influenced by the perceived cost. Despite this, Qalati et al. [4] it was noticed that the adoption cost of social customer relationship management in Pakistani SMEs had a beneficial impact. However, Skafi et al. [50] reported insignificant cost effects regarding the usage of technology in Lebanese SMEs, accordingly. Based on the inconclusive results, the study aims to suggest the following hypotheses:

H1b: The impact of cost-effectiveness through social media is substantial.

## 3.2. Compatibility toward Social Media

Compatibility is an invention fits through an organization's technology, work, and culture [4, 42]. Organizations may reach their target audiences and distribute product information by integrating social media with their goals, policies, and values. Studies have demonstrated that compatibility increases SME innovation adoption, including social media adoption [48, 51]. However, these studies [5, 50] discovered no substantial influence of compatibility on Indian and Lebanese SMEs' innovation uptake. These results suggest the following hypothesis:

H1c: Compatibility significantly impacts social media adoption.

## 3.3. Interactivity and Social Media

Interactivity is crucial in adopting interactive technologies [4]. It refers, within the realm of social media, to the capacity for interaction and reciprocal communication with prospective clients. The integration of social networking platforms (e.g., Facebook, TikTok, Instagram) into online business websites facilitates more interactive connection between organizations and their customers, given the widespread adoption of these



platforms [27]. Moreover, the integration of social networking functionalities enhances the trustworthiness of websites. The importance of interaction in the adoption of social media is recognized, but it has not been thoroughly examined in the technical environment using the TOE paradigm [52]. The study seeks to analyze the influence of interactivity on the adoption of social media platforms, particularly from the perspective of SMEs.

H1d: The influence of interaction through social media is substantial.

# 3.4. Organizational Construct

The organizational construct pertains to the internal attributes of a corporation, encompassing factors such as its inherent type and scale, the composition of its workforce, the personnel count, the level of process centralization or formalization, and managerial considerations [25]. As previously stated, in a fiercely competitive environment, critical strategic decisions that affect the firm's future operations and overall performance are made by its core members by Lo and Fu [53]. Despite the benefits of information technology, firms must evaluate their skills and resources to effectively implement social media [26].

# 3.5. Top Management

Support for top management consists of resources accessible to managers in accordance with the organization's strategic perspective [54]. Through implies of guidelines and regulations, entry By utilizing information resources and actively communicating with other administrators, it is possible to establish it. Regarding the adoption of new ideas or technologies, Olanrewaju et al. [7] have observed a progressive increase in the use of top management support. Managerial support is essential for establishing a conducive environment and allocating the necessary resources for innovation adoption [4, 47, 48, 51]. However, Tajudeen et al. [55] revealed that the effect on Malaysian SMEs was negligible. The present study posits the subsequent hypothesis:

H2a: The impact of encouragement the top management on adoption of social media is substantial.



## 3.6. Entrepreneurial Orientation

Initially, entrepreneurial orientation has been widely associated with adopting advanced technologies to enhance organizational capacities and achieve a superior position in the market compared to rivals [56]. SMEs with a potent entrepreneurial orientation focus on developing their core competencies and identifying opportunities for sustained business growth [11]. In today's globalized and technologically advanced business landscape, SMEs face various market dynamics, business model changes, and digitalization challenges. In the interim, social media has been identified as a substantial determinant of business expansion and long-term viability, both in academic discussions and practical managerial contexts [19, 23, 27, 57, 58]. Entrepreneurship scholars have increasingly recognized social media's importance for SMEs. Social media platforms provide significant benefits to SMEs, including access to real-time market intelligence, through bridging resource disparities, minimizing ambiguity, facilitating networking, supporting social media customer relationship management (CRM), promoting collaborative product and service development, and improving overall marketing capabilities [59, 60]. SME adoption of social media is more probable when they own a robust entrepreneurial orientation (EO), as they are cognizant of its potential advantages.

Recent research has established a noteworthy beneficial correlation between the usage of social media and EO [11, 61, 62]. Organizations that possess a strong emotional orientation are inherently inclined to utilize social media platforms for the following reasons: to engage in online interactions with prospective clients, to communicate with existing clients, to acquire competitive intelligence, and to remain updated on market trends [62]. Initiative-taking and forward-thinking businesses, for instance, employ social media platforms such as TikTok and Instagram to disseminate information regarding forthcoming products and services and assess customer responses. When considering the pursuit of novel company prospects, an entrepreneurial attitude and a propensity for undertaking calculated risks are especially advantageous under circumstances such as the post-COVID-19 era [33]. The media platforms connect people and reveal societal trends. The COVID-19 pandemic has highlighted social media marketing. This study presents the following hypothesis based on the above factors:

H2b: Considerable influence is exerted by an entrepreneurial mindset through adoption of social media.



#### 3.7. Environmental Construct

In addition to the firm's location, industry structure, regulatory environment, and globalization, the environmental context includes internal and external factors [25]. The aforementioned components aid in comprehending the aspects that impact the usage of mobile marketing devices [63]. When contemplating the use of mobile marketing devices, an analysis of internal environmental factors impacts the organization's capacity to attain a strategic advantage [64]. Emphasize the importance of endorsement from higher-level executives in determining the effectiveness of information and communication technology (ICT). Concurrently, external expertise, such as that of IT vendors, influences the adoption of the new ICT by aiding in the training of SME personnel on its use.

Previous research on technology adoption underscores the importance of examining the business environment of SMEs to get insight into their inclination to embrace information and computer technologies [65, 66]. There is an argument that the adoption of new technologies by enterprises can be accelerated by the external environment in which they operate, as firms react to changes in the external landscape [34]. Although there is limited study on the precise environmental elements that influence the adoption process, several significant factors have been identified as having an impact. The following section will cover these characteristics in relation to the utilization of social media by SMEs.

## 3.8. Competitive Industry

Thong and Yap [64] stated that the competitive nature of an industry refers to the level of competition an organization encounters within that industry. Levenburg et al. [67], the industry in which a company operates can significantly impact its adoption of new technologies. To sustain a competitive edge, organizations must embrace emerging technology. For success and to gain a competitive edge, this is particularly true for SMEs operating in global industries [34]. Moreover, providing financial aid might motivate businesses to use social media marketing strategies, especially in fiercely competitive areas. Even if resources are available, social media marketing may not be given priority in non-competitive areas. In businesses characterized by a lack of competition, such as monopolies, corporations exhibit a reduced inclination to embrace changes, such as the adoption of social media marketing strategies [68].



Moreover, businesses embracing change may obtain a competitive advantage over their rivals. SMEs operate within an increasingly the situation of corporate instability characterized by rapid digitization and globalization. In such a context, competitive intensity is crucial to environmental hostility. However, a study analyzing 182 SMEs in China [69] revealed that competitive intensity had minimal effects on business performance. Drawing from these observations, the research put out the subsequent hypothesis:

H3a: The influence of competitive industries through adoption of social media is substantial.

## 3.9. Competitive Pressure

In addition, competitive pressure is the influence that rival businesses or markets have on an organization, as that company perceives it. The argument posits that within the realm of SMEs, the anticipation for technology adoption escalates in direct proportion to the number of rival organizations [43]. Nevertheless, technical improvements, globalization, and the rapid dissemination of breakthrough technology can exert an impact on competitive pressure. Khayer et al. [70] suggests that companies are more inclined to strive for remarkable innovation and progress when a multitude of businesses compete inside a certain industry.

Furthermore, Soewarno and Tjahjadi [71] identified a positive correlation between performance and competitor pressure. According to the same study of 167 CEOs or executives of Malaysian SMEs, Sin et al. [72] found there exists a direct relationship between the implementation of e-commerce and the level of competition. This statement remains valid within the realm of social media as well. This study demonstrates that the adoption of social media (SM) and the performance of SMEs are influenced by competitive pressure.

Moreover, it is suggested that the performance of companies is impacted by the number of market competitors they encounter in the setting of SMEs [73]. Geurin and Burch [74] suggested the idea that the presence of competition has a beneficial impact on the adoption of social media. Given the available evidence, the study team has developed the following hypothesis:

H3b: The effect of competitive pressure through adoption of social media is substantial.



## 3.10. Bandwagon Effect

The bandwagon effect, also known as the contagion effect, is a psychological phenomenon in which organizations or individuals adopt certain practices. For instance, adopting cutting-edge technology, simply because they observe their competitors or peers doing so, without any strategic motivation behind the adoption [75]. SMEs within a particular sector or industry the adoption of a certain technology places further pressure on other firms[76], often driven by the fear of falling behind non-adopters [77]. The bandwagon effect is particularly pronounced in volatile environments like the digital climate [27]. Therefore, the influence of the bandwagon effect becomes even more substantial in such contexts.

H3c: Significant impact could bandwagon have correlation through social media.

## 3.11. Social Media Adoption

In the wake of the worldwide financial crisis that occurred between 2008 and 2009, governments worldwide, irrespective of their degree of progress, have recognized the critical importance of SMEs in fostering economic growth and ensuring sustained viability [23]. In emerging economies, SMEs make significant contributions to both GDP and employment. They achieve this through their efforts in innovation, poverty reduction, job creation, economic growth, and social integration [78]. Therefore, the success of SMEs holds paramount importance for both developed and developing nations.

However, emerging countries require aid investing in innovation, infrastructure, and resource allocation, behind the EU and other wealthy nations [79]. Previous research has explored SMEs' use of social media, but verifying these findings in emerging economies is vital. Emerging economy SMEs differ from those due to government and organizational causes. Compared to larger firms, SMEs in developing nations confront distinct challenges including limited information system management, financial resources, knowledge management competence, and resource availability. Ecological changes, government restrictions, globalization, consumer needs, competition, and shorter are some issues for emerging economy SMEs.

Organizations utilize social media platforms for many purposes like as communication, assistance to customers, public relations, marketing, problem-solving, branding, visibility, shareholder engagement, and advertising are all key components of business operations. [4]. Domma and Errico [80] and Solomon et al. [81] have identified that organizations and their partners experience enhanced communication, cooperation,

and social engagement through the use of social media, which has a beneficial effect on the overall success of a company. Scant research has shown that the use of social media platforms improves the performance of SMEs. For instance, Domma and Errico [80] and Hu et al. [12] found that SMEs have benefited from enhanced customer service, facilitated information exchange, and increased brand visibility as a result of social media. Additionally, it has decreased expenses related to advertising and improved client engagement.

Similarly, Tajudeen et al. [55] stated that a notable the recent research identified the influence of social media usage on SMEs, particularly in terms of marketing efforts and consumer engagement. Recently, Qalati et al. [23] provided empirical study shows that the utilization of social media has a substantial influence on SMEs, especially in the context of developing nations' SME environments. This impact is mostly observed in terms of improved interactivity, reputation, relationships, visibility, and customer service. However, Ahmad et al. [45] asserted that there is no significant The impact of social media usage on SMEs was assessed. This study demonstrates that the subsequent hypothesis suggests that these conflicting data could be objectively analyzed.

H4: The performance of SME is significantly impacted by social media use. Furthermore, Figure 2 illustrates the conceptual framework.

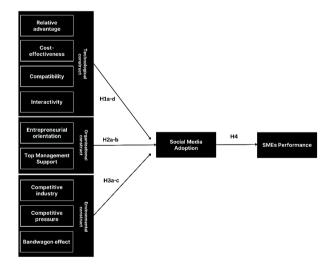


Figure 2: A conceptual structure. Source: Work of the author.

# References

[1] Statista. Number of internet and social media users worldwide as of april 2023 [Internet]. New York: Statista Inc.; 2023 [cited 2023 Jul 12]. Available from:



- https://www.statista.com/statistics/617136/digital-population-worldwide/
- [2] Sturgeon TJ. Upgrading strategies for the digital economy. Global Strategy Journal. 2021;11(1):34-57. https://doi.org/10.1002/gsj.1364
- [3] Low MP, Seah CS, Cham T-H, Teoh SH. Digitalization adoption for digital economy: An examination of Malaysian small medium-sized enterprises through the technology—organization—environment framework. Business Process Management Journal. 2022;28(7):1473-1494. https://doi.org/10.1108/BPMJ-06-2022-0282
- [4] Qalati SA, Ostic D, Shuibin G, Mingyue F. A mediated-moderated model for social media adoption and small and medium-sized enterprise performance in emerging countries. Managerial and Decision Economics. 2022;43(3):846-861. https://doi.org/10.1002/mde.3422
- [5] Chatterjee S, Kar AK. Why do small and medium enterprises use social media marketing and what is the impact: Empirical insights from India. International Journal of Information Management. 2020;53:102103. https://doi.org/10.1016/j.ijinfomgt.2020.102103
- [6] AlQershi N, Mokhtar SSM, Abas ZB. Innovative CRM and performance of SMEs: The moderating role of relational capital. Journal of Open Innovation: Technology, Market, and Complexity. 2020;6(4). https://doi.org/10.3390/joitmc6040155
- [7] Olanrewaju A-ST, Hossain MA, Whiteside N, Mercieca P. Social media and entrepreneurship research: A literature review. International Journal of Information Management. 2020;50:90-110. https://doi.org/10.1016/j.ijinfomgt.2019.05.011
- [8] Sohn JW, Kim JK. **Factors** that influence purchase intentions in social commerce. Technology in Society. 2020;63:101365. https://doi.org/10.1016/j.techsoc.2020.101365
- [9] Pamuksuz U, Yun JT, Humphreys A. A brand-new look at you: Predicting brand personality in social media networks with machine learning. Journal of Interactive Marketing. 2021;56:55-69. https://doi.org/10.1016/j.intmar.2021.05.001
- [10] Melović B, Jocović M, Dabić M, Vulić TB, Dudic B. The impact of digital transformation and digital marketing on the brand promotion, positioning and electronic business in Montenegro. Technology in Society. 2020;63:101425. https://doi.org/10.1016/j.techsoc.2020.101425
- [11] Susanto P, Hoque ME, Shah NU, Candra AH, Hashim NMHN, Abdullah NL. Entrepreneurial orientation and performance of SMEs: The roles of marketing capabilities and social media usage. Journal of Entrepreneurship in Emerging Economies. 2023;15(2):379-403. https://doi.org/10.1108/JEEE-03-2021-0090



- [12] Hu L, Olivieri M, Rialti R. Dynamically adapting to the new normal: Unpacking smes' adoption of social media during Covid-19 outbreaks. Journal of Business & Industrial Marketing. 2023;38(8):1675-1688. https://doi.org/10.1108/JBIM-01-2022-0052
- [13] Bank W. Small and medium enterprises (SMEs) finance [Internet]. Washington DC: World Bank; 2023 [cited 2023 Jul 12]. Available from: https://www.worldbank.org/en/topic/smefinance
- [14] Amoah YS-A, Tiew FNH, Yap CS. Internationalisation strategies of emerging market firms: Evidence from Sarawak, Malaysia. Review of International Business and Strategy. 2022;32(4):655-676. https://doi.org/10.1108/RIBS-07-2021-0099
- [15] Liang Y, Giroud A, Rygh A. Emerging multinationals' strategic asset-seeking M&As: A systematic review. International Journal of Emerging Markets. 2021;16(7):1348-1372. https://doi.org/10.1108/IJOEM-12-2019-1059
- [16] Ha H, Chuah CKP. Digital economy in Southeast Asia: Challenges, opportunities and future development. Southeast Asia: A Multidisciplinary Journal. 2023;23(1):19-35. https://doi.org/10.1108/SEAMJ-02-2023-0023
- [17] Company MaBa. Southeast Asia's digital consumers: A new stage of evolution [Internet]. Boston: Bain & Company; 2022 [cited 2023 Jul 13]. Available from: https://www.bain.com/globalassets/noindex/2022/meta\_bain\_syncsea\_2022.pdf
- [18] Alraja MN, Khan SF, Khashab B, Aldaas R. Does facebook commerce enhance SMEs performance? A structural equation analysis of Omani SMEs. SAGE Open. 2020;10(1):215824401990018. https://doi.org/10.1177/2158244019900186
- [19] Qalati SA, Ostic D, Sulaiman MABA, Gopang AA, Khan A. Social media and SMEs' performance in developing countries: Effects of technological-organizational-environmental factors on the adoption of social media. SAGE Open. 2022;12(2):215824402210945. https://doi.org/10.1177/21582440221094594
- [20] IDC. Southeast Asian companies to generate more than 15% of their revenue from digital products and services by 2023, idc predicts huge growth opportunity for cloud businesses [Internet]. Needham, MA: IDC; 2022 [cited 2023 Aug 3]. Available from: https://www.idc.com/getdoc.jsp?containerId=prAP49619722.
- [21] Cranmer EE, Urquhart C, Dieck MCT, Jung T. Developing augmented reality business models for SMEs in tourism. Information & Management. 2021;58(8):103551. https://doi.org/10.1016/j.im.2021.103551
- [22] Mahakittikun T, Suntrayuth S, Bhatiasevi V. The impact of technological-organizational-environmental (TOE) factors on firm performance: Merchant's perspective of mobile payment from Thailand's retail and service firms. Journal of Asia Business Studies. 2021;15(2):359-383. https://doi.org/10.1108/JABS-01-2020-0012



- [23] Qalati SA, Yuan LW, Khan MAS, Anwar F. A mediated model on the adoption of social media and SMEs' performance in developing countries. Technology in Society. 2021;64:101513. https://doi.org/10.1016/j.techsoc.2020.101513
- [24] Tarsakoo P, Charoensukmongkol P. Dimensions of social media marketing capabilities and their contribution to business performance of firms in Thailand. Journal of Asia Business Studies. 2019;14(4):441-461. https://doi.org/10.1108/JABS-07-2018-0204
- [25] Tornatzky LG, Fleischer M, Chakrabarti AK. The processes of technological innovation. Maryland: Lexington Books; 1990. 328 p.
- [26] Abed SS. Social commerce adoption using TOE framework: An empirical investigation of Saudi Arabian SMEs. International Journal of Information Management. 2020;53:102118. https://doi.org/10.1016/j.ijinfomgt.2020.102118
- [27] Pateli A, Mylonas N, Spyrou A. Organizational adoption of social media in the hospitality industry: An integrated approach based on DIT and TOE frameworks. Sustainability. 2020;12(17):7132. https://doi.org/10.3390/su12177132
- [28] Rogers TEBEM. Diffusion of innovations theory and work-site AIDS programs. Journal of Health Communication. 1998;3(1):17-28. https://doi.org/10.1080/108107398127481
- [29] Barney JB. Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. Journal of Management. 2001;27(6):643-650. https://doi.org/10.1177/014920630102700602
- [30] Bag S, Rahman MS, Gupta S, Wood LC. Understanding and predicting the determinants of blockchain technology adoption and SMEs' performance. The International Journal of Logistics Management. 2022. https://doi.org/10.1108/IJLM-01-2022-0017
- [31] Chatterjee S, Nguyen B, Ghosh SK, Bhattacharjee KK, Chaudhuri S. Adoption of artificial intelligence integrated CRM system: An empirical study of Indian organizations. The Bottom Line. 2020;33(4):359-375. https://doi.org/10.1108/BL-08-2020-0057
- [32] Hashimy L, Jain G, Grifell-Tatjé E. Determinants of blockchain adoption as decentralized business model by Spanish firms – An innovation theory perspective. Industrial Management & Data Systems. 2023;123(1):204-228. https://doi.org/10.1108/IMDS-01-2022-0030
- [33] Nguyen TH, Le XC, Vu THL. An extended technology-organization-environment (TOE) framework for online retailing utilization in digital transformation: Empirical evidence from Vietnam. Journal of Open Innovation: Technology, Market, and Complexity. 2022;8(4):200. https://doi.org/10.3390/joitmc8040200



- [34] Ali Abbasi G, Abdul Rahim NF, Wu H, Iranmanesh M, Keong BNC. Determinants of SME's social media marketing adoption: Competitive industry as a moderator. SAGE Open. 2022;12(1):215824402110672. https://doi.org/10.1177/21582440211067220
- [35] Maroufkhani P, Iranmanesh M, Ghobakhloo M. Determinants of big data analytics adoption in small and medium-sized enterprises (SMEs). Industrial Management & Data Systems. 2023;123(1):278-301. https://doi.org/10.1108/IMDS-11-2021-0695
- [36] Alraja MN, Imran R, Khashab BM, Shah M. Technological innovation, sustainable green practices and SMEs sustainable performance in times of crisis (Covid-19 pandemic). Information Systems Frontiers. 2022;24(4):1081-1105. https://doi.org/10.1007/s10796-022-10250-z
- [37] Chatterjee S, Chaudhuri R, Vrontis D, Thrassou A. Revisiting the resource-based view (RBV) theory: From cross-functional capabilities perspective in post COVID-19 period. Journal of Strategic Marketing. 2023:1-16. https://doi.org/10.1080/0965254X.2023.2182447
- [38] Chaudhuri A, Subramanian N, Dora M. Circular economy and digital capabilities of SMEs for providing value to customers: Combined resource-based view and ambidexterity perspective. Journal of Business Research. 2022;142:32-44. https://doi.org/10.1016/j.jbusres.2021.12.039
- [39] Agyapong A, Essuman D, Yeboah LAK. Performance implications of strategic planning and marketing capability in micro and small businesses in an emerging African economy: A contingent resource-based view. Journal of Small Business & Entrepreneurship. 2021;33(1):29-48. https://doi.org/10.1080/08276331.2018.1507415
- [40] Chege SM, Wang D. Information technology innovation and its impact on job creation by SMEs in developing countries: An analysis of the literature review. Technology Analysis & Strategic Management. 2020;32(3):256-271. https://doi.org/10.1080/09537325.2019.1651263
- [41] Chege SM, Wang D, Suntu SL. Impact of information technology innovation on firm performance in Kenya. Information Technology for Development. 2020;26(2):316-345. https://doi.org/10.1080/02681102.2019.1573717
- [42] Ali Qalati S, Li W, Ahmed N, Ali Mirani M, Khan A. Examining the factors affecting SME performance: The mediating role of social media adoption. Sustainability. 2020;13(1):75. https://doi.org/10.3390/su13010075
- [43] Maroufkhani P, Tseng M-L, Iranmanesh M, Ismail WKW, Khalid H. Big data analytics adoption: Determinants and performances among small to medium-sized enterprises. International Journal of Information Management. 2020;54:102190. https://doi.org/10.1016/j.ijinfomgt.2020.102190



- [44] Ainin S, Parveen F, Moghavvemi S, Jaafar NI, Mohd Shuib NL. Factors influencing the use of social media by SMEs and its performance outcomes. Industrial Management & Data Systems. 2015;115(3):570-588. https://doi.org/10.1108/IMDS-07-2014-0205
- [45] Ahmad SZ, Abu Bakar AR, Ahmad N. Social media adoption and its impact on firm performance: The case of the UAE. International Journal of Entrepreneurial Behavior & Research. 2019;25(1):84-111. https://doi.org/10.1108/IJEBR-08-2017-0299
- [46] Wong L-W, Leong L-Y, Hew J-J, Tan GW-H, Ooi K-B. Time to seize the digital evolution: Adoption of blockchain in operations and supply chain management among malaysian SMEs. International Journal of Information Management. 2020;52:101997. https://doi.org/10.1016/j.ijinfomgt.2019.08.005
- [47] Effendi MI, Sugandini D, Istanto Y. Social media adoption in SMEs impacted by COVID-19: The TOE model. The Journal of Asian Finance, Economics and Business. 2020;7(11):915-925. https://doi.org/10.13106/JAFEB.2020.VOL7.NO11.915
- [48] Hamad H, Elbeltagi I, El-Gohary H. An empirical investigation of business-to-business e-commerce adoption and its impact on SMEs competitive advantage: The case of Egyptian manufacturing SMEs. Strategic Change. 2018;27(3):209-229. https://doi.org/10.1002/jsc.2196
- [49] Al Halbusi H, Alhaidan H, Abdelfattah F, Ramayah T, Cheah J-H. Exploring social media adoption in small and medium enterprises in Iraq: Pivotal role of social media network capability and customer involvement. Technology Analysis & Strategic Management. 2022;1-18. https://doi.org/10.1080/09537325.2022.2125374
- [50] Skafi M, Yunis MM, Zekri A. Factors influencing SMEs' adoption of cloud computing services in Lebanon: An empirical analysis using TOE and contextual theory. IEEE Access. 2020;8:79169-79181. https://doi.org/10.1109/ACCESS.2020.2987331
- [51] Eze SC, Chinedu-Eze VCA, Awa HO. Key success factors (KSFS) underlying the adoption of social media marketing technology. SAGE Open. 2021;11(2):215824402110066. https://doi.org/10.1177/21582440211006695
- [52] Sharma S, Singh G, Aiyub AS. Use of social networking sites by SMEs to engage with their customers: A developing country perspective. Journal of Internet Commerce. 2020;19(1):62-81. https://doi.org/10.1080/15332861.2019.1695180
- [53] Lo F-Y, Fu P-H. The interaction of chief executive officer and top management team on organization performance. Journal of Business Research. 2016;69(6):2182-2186. https://doi.org/10.1016/j.jbusres.2015.12.027
- [54] Elbanna A, Newman M. The bright side and the dark side of top management support in digital transformation —A hermeneutical reading. Technological Forecasting and Social Change. 2022;175:121411. https://doi.org/10.1016/j.techfore.2021.121411



- [55] Tajudeen FP, Jaafar NI, Ainin S. Understanding the impact of social media usage among organizations. Information & Management. 2018;55(3):308-321. https://doi.org/10.1016/j.im.2017.08.004
- [56] Chandra Y, Styles C, Wilkinson I. The recognition of first time international entrepreneurial opportunities: Evidence from firms in knowledge-based industries. International Marketing Review. 2009;26(1):30-61. https://doi.org/10.1108/02651330910933195
- [57] Bialkova S, Te Paske S. Campaign participation, spreading electronic word of mouth, purchase: How to optimise corporate social responsibility, CSR, effectiveness via social media? European Journal of Management and Business Economics. 2020;30(1):108-126. https://doi.org/10.1108/EJMBE-08-2020-0244
- [58] Cao G, Weerawardena J. Strategic use of social media in marketing and financial performance: The B2B SME context. Industrial Marketing Management. 2023;111:41-54. https://doi.org/10.1016/j.indmarman.2023.03.007
- [59] Dar IA, Mishra M. Dimensional impact of social capital on financial performance of SMEs. The Journal of Entrepreneurship. 2020;29(1):38-52. https://doi.org/10.1177/0971355719893499
- [60] Sopha BM, Jie F, Himadhani M. Analysis of the uncertainty sources and SMEs' performance. Journal of Small Business & Entrepreneurship. 2021;33(1):1-27. https://doi.org/10.1080/08276331.2020.1764737
- [61] Fan M, Qalati SA, Khan MAS, Shah SMM, Ramzan M, Khan RS. Effects of entrepreneurial orientation on social media adoption and SME performance: The moderating role of innovation capabilities. Plos One. 2021;16(4):e0247320. https://doi.org/10.1371/journal.pone.0247320
- [62] Sahaym A, Datta AA, Brooks S. Crowdfunding success through social media: Going beyond entrepreneurial orientation in the context of small and medium-sized enterprises. Journal of Business Research. 2021;125:483-494. https://doi.org/10.1016/j.jbusres.2019.09.026
- [63] Andries P, Debackere K. Adaptation in new technology-based ventures: Insights at the company level. International Journal of Management Reviews. 2006;8(2):91-112. https://doi.org/10.1111/j.1468-2370.2006.00122.x
- [64] Thong JYL, Yap CS. Ceo characteristics, organizational characteristics and information technology adoption in small businesses. Omega. 1995;23(4):429-442. https://doi.org/10.1016/0305-0483(95)00017-I
- [65] Alshamaila Y, Papagiannidis S, Li F. Cloud computing adoption by SMEs in the North East of England: A multi-perspective framework. Journal of Enterprise Information



- Management. 2013;26(3):250-275. https://doi.org/10.1108/17410391311325225
- [66] Ur Rahman R, Ali Shah SM, El-Gohary H et al. Social media adoption and financial sustainability: Learned lessons from developing countries. Sustainability. 2020;12(24):10616. https://doi.org/10.3390/su122410616
- [67] Levenburg N, Magal S, Kosalge P. An exploratory investigation of organizational factors and e-business motivations among SMFOEs in the US. Electronic Markets. 2006;16(1):70-84. https://doi.org/10.1080/10196780500491402
- [68] Khan KU, Xuehe Z, Atlas F, Khan F. The impact of dominant logic and competitive intensity on SMEs performance: A case from China. Journal of Innovation & Knowledge. 2019;4(1):1-11. https://doi.org/10.1016/j.jik.2018.10.001
- [69] Yang H, Yang J. The effects of transformational leadership, competitive intensity and technological innovation on performance. Technology Analysis & Strategic Management. 2019;31(3):292-305. https://doi.org/10.1080/09537325.2018.1498475
- [70] Khayer A, Talukder MS, Bao Y, Hossain MN. Cloud computing adoption and its impact on smes' performance for cloud supported operations: A dual-stage analytical approach. Technology in Society. 2020;60:101225. https://doi.org/10.1016/j.techsoc.2019.101225
- [71] Soewarno N, Tjahjadi B. Mediating effect of strategy on competitive pressure, stakeholder pressure and strategic performance management (SPM): Evidence from heis in Indonesia. Benchmarking: An International Journal. 2020;27(6):1743-1764. https://doi.org/10.1108/BIJ-06-2019-0292
- [72] Sin KY, Osman A, Salahuddin SN, Abdullah S, Lim YJ, Sim CL. Relative advantage and competitive pressure towards implementation of e-commerce: Overview of small and medium enterprises (SMEs). Procedia Economics and Finance. 2016;35:434-443. https://doi.org/10.1016/S2212-5671(16)00054-X
- [73] Tella A, Ukwoma SC, Kayode Al. A two models modification for determining cloud computing adoption for web-based services in academic libraries in Nigeria. The Journal of Academic Librarianship. 2020;46(6):102255. https://doi.org/10.1016/j.acalib.2020.102255
- [74] Geurin AN, Burch LM. User-generated branding via social media: An examination of six running brands. Sport Management Review. 2017;20(3):273-284. https://doi.org/10.1016/j.smr.2016.09.001
- [75] Seo S-W, Kim H-C, Zhu Z-Y, Lee J-T. What makes hotel chefs in Korea interact with sns community at work? Modeling the interplay between social capital and job satisfaction by the level of customer orientation. International Journal of Environmental Research and Public Health. 2020;17(19):7129. https://doi.org/10.3390/ijerph17197129



- [76] Dias Canedo E, Morais Do Vale AP, Patrão RL et al. Information and communication technology (ICT) governance processes: A case study. Information. 2020;11(10):462. https://doi.org/10.3390/info11100462
- [77] Lutfi A. Investigating the moderating role of environmental uncertainty between institutional pressures and ERP adoption in jordanian SMEs. Journal of Open Innovation: Technology, Market, and Complexity. 2020;6(3):91. https://doi.org/10.3390/joitmc6030091
- [78] Chege SM, Wang D. The influence of technology innovation on SME performance through environmental sustainability practices in Kenya. Technology in Society. 2020;60:101210. https://doi.org/10.1016/j.techsoc.2019.101210
- [79] Erdin C, Ozkaya G. Contribution of small and medium enterprises to economic development and quality of life in Turkey. Heliyon. 2020;6(2):e03215. https://doi.org/10.1016/j.heliyon.2020.e03215
- [80] Domma F, Errico L. The impact of social media adoption on innovative SMEs' performance. International Review of Applied Economics. 2023;37(3):324-356. https://doi.org/10.1080/02692171.2023.2205108
- [81] Solomon OH, Allen T, Wangombe W. Analysing the factors that influence social media adoption among SMEs in developing countries. Journal of International Entrepreneurship. 2023. https://doi.org/10.1007/s10843-023-00330-9