



The Use of e-Commerce in SMEs Sustainability of Asian Countries: The Literature Review

Aisyah Asri Nurrahma*, Sudarmiati, Wening Patmi Rahayu

Management, Faculty Economics & Business, Universitas Negeri Malang, Indonesia

Abstract

This study aims to evaluate trends in publication and examine how SMEs use e-commerce for their sustainability in Asian countries. The systematic literature review (SLR) method was used to identify the phenomenon. After setting the inclusion and exclusion criteria, it was found that 26 articles will be analyzed using VOSviewer. The results show that 73 keywords are linked to each other, and they are categorized into three according to the mapping in VOSviewer. The themes we explored include the e-commerce adoption in SMEs that is beneficial for SMEs in Asia countries. E-commerce can become their competitive strategy, as well as reduce financial costs. Along with that, e-commerce can reach a broad audience for the product because it is easy to access. The next theme is the sustainability of SMEs through e-commerce and digitalization, which is found to have significantly impacted during and after the COVID-19 pandemic because of the shifting habit of online shopping. The last theme is SME digitalization, which uses not only e-commerce but also social media to do many things, such as communicating with the seller, offering the products, and even allowing consumers to order the product. Hence, it becomes an advantage for SMEs to adopt digitalization, especially using e-commerce and social media.

Keywords: E-Commerce, Small and Medium Enterprises, Sustainability, Asia

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***Correspondence Author:**

aisyah.asri.2404139@students.um.ac.id

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INTRODUCTION

The development of small and medium enterprises (SMEs) has been significant in many parts of the world, including in Asia. SMEs are widely known as the core of the economies because of their significant contribution to employment and also because they create economic value for the community (Sudiby, 2023). Hence, the definition of SME is different in many countries. Usually, the definition is based on the employee number or the revenue of the firm. Four indicators that are commonly used to describe SMEs are the number of enterprises, employment, domestic products, and exports (Yoshino, 2024). However, the details are different according to the country; for example, in the Republic of China, up to 1000 employees can still be called SMEs; meanwhile, in some sectors in Thailand, the maximum number of employees is 200 to be called SMEs (Asian Development Bank, 2018). Based on the Figure 1 Asia holds the biggest continent with SMEs, with an estimated approximately 200 million in 2023 (Dyvik, 2024).

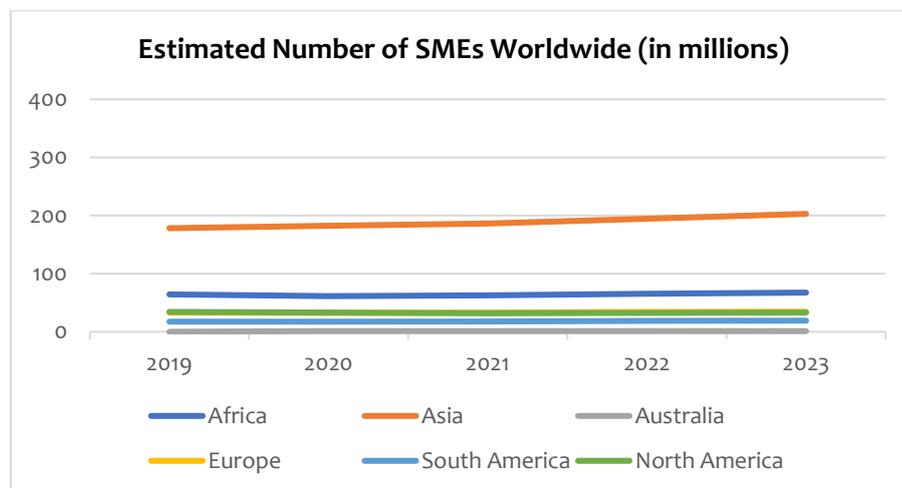


Figure 1. Estimated Number of SMEs Worldwide
Sources: Statistica, 2024

However, due to the diversity of the economics of the Asia region, SMEs exist in different stages of development according to their contribution to the region's economy (Harvie & Lee, 2002). For example, in ASEAN, based on productivity and innovation, the SMEs are grouped by Early-Stage which the business model and relationship between SMEs still need to be improved. Next is Mid-Stage in Brunei Darussalam, Indonesia, Philippines, and Vietnam, which still needs to create a clear roadmap to improve the SMEs. Last is the Advance-Stage in Malaysia, Singapore, and Thailand, which already put the SMEs for internationalization according to the ASEAN report (ERIA/OECD, 2024). Therefore, the SMEs need to focus on their sustainability to keep developing and improving their performance. As well as to keep their place in the market. According to research by Parnell (2015), approximately 50% of SMEs failed to survive for more than 5 years because of a lack of competitive strategy and poor performance. Consequently, SMEs must prioritize sustainability; many organizations have begun integrating sustainable practices into their business operations. (Jabbour, 2019). Sustainability encompasses not only environmentally friendly production but also an organization's resilience during a crisis.

One of the crises that SMEs face in 2019-2020 is the COVID-19 pandemic. During the pandemic, SMEs encountered some hardships, such as financial constraints, reliance on only a few workers, and difficulty accessing public markets (Riadi, 2022). There are some regulations from the government in the form of social restrictions, avoiding crowds, and reducing mobility that impact the consumer's behavior in shopping (Sudarmiati, 2022). An entrepreneurial spirit, necessitating engagement in sustainability practices, typically drives SMEs. However, sustainability can be supported by technology (Roxas, 2017; Hofmann, 2012). Amidst the

limitations, e-commerce emerged and became a way to link the social and economic progress between the firm and their customer for business continuity (Wicaksono et al., 2021). According to Sudiby (2023), technology, e-commerce, and social media are the indicators of success for SMEs, especially in developed and developing countries. SMEs must adapt to new technologies to meet market demands and ensure business sustainability.

E-commerce, or using the internet for selling and buying products, was developed after the COVID-19 pandemic. Hence, it can meet the basic demand of the customer because most of the potential customers already have access to the internet (Hossain, 2022). Considering that the number of customers has become tech-savvy and e-commerce adoption, especially in Southeast Asia, has increased during the pandemic (Riadi, 2022), this strategy offers benefits for SMEs. ASEAN is among the fastest-growing e-commerce markets in the world; the key factors include a high level of mobile usage, rising internet and connectivity adaptation, and the young generation that is more aware of digitalization (Majumdar, 2020; KPMG & FICCI, 2019). E-commerce has a lower entry cost than a traditional business; it also needs only a few staff; hence, with the internet and e-commerce, firms can reach customers directly (Majumdar, 2020). On the other side, customer can easily access and compare a wider variety of goods or services in e-commerce; the products can also be delivered directly to their house. It is certainly convenient and has become a popular choice for customers when shopping.

The utilization of e-commerce, social media, and generally digitalization as the SME strategy needs to be studied more. Hence, this study discusses how e-commerce can increase SMEs' sustainability in Asian countries, especially developed and developing countries. This study also talked about how SMEs successfully stand amid the COVID-19 crisis using digitalization. It will also conclude from various literature on how SMEs manage their digitalization in the countries of Asia. This study contributes to the existing knowledge on SME's sustainability from the viewpoint of digitalization. Also, providing important founds and insight for academia, practitioners, and policymakers in the future needs.

METHOD

This study used a systematic literature review (SLR) that was inspired by the work of several researchers. Some of the researchers are Tell et al. (2016) and Zamani (2022). There are six steps to take the SLR approach, including:

1. Selection of the keyword(s): The purpose of this research was to conduct a literature review about how SMEs in Asia are adopting e-commerce for their sustainability. Several keywords were searched, including "SMEs," "Small and Medium Enterprises," "e-commerce," and "Asia."
2. Specification Combination: To be more specific, using keyword combination to help focus on the targeted literature, which was SMEs or Small Medium Enterprises + e-commerce + Asia
3. Selection of database(s): Three databases, Google Scholar, Emerald, and Taylor & Francis, were chosen in this research. The author's university library offers a comprehensive selection of databases specifically tailored for social sciences research. The author found the method used to choose the database to be the same as Tell et al. (2016).
4. Setting inclusion and exclusion criteria: The inclusion criteria and exclusion criteria are explained in the table 1 below:

Table 1. Inclusion and Exclusion Criteria

Inclusion	Exclusion
Journal registered on Google Scholar, Emerald, and Taylor & Francis.	Book chapter, book, or proceeding articles.
Article focused on SMEs and e-commerce	Overlapping articles between the sources.
Publication in English	The research conducted in other than Asia.
The research conducted in Asia	Articles do not have open access.
Period 2020-2024 and have open access	Articles that do not focus on SMEs or e-commerce context
Article does not write "e-commerce" clearly, but the explanation covers e-commerce in SMEs.	Articles that come from automatic research but do not really focus on SMEs or e-commerce
The methodology is either qualitative, quantitative, or mixed method	
Article that comes from automatic search on Google Scholar, Emerald Insight and Taylor & Francis	

5. Conducting the research: The research was conducted in three databases, Google Scholar, Emerald, and Taylor & Francis, from March 2020 to March 2024.
6. Quality assessment: We scanned the title, abstract, and conclusion of all of the research. Next, the remaining articles were mapped by categories such as keywords, unit analysis, methodology, country of data collection, and use of the theory.

Then, the results of the selection and specification, after setting inclusion and exclusion criteria, this research found 17,400 articles in Google Scholar, 147 articles in Emerald Insight, and 315 articles in Taylor & Francis. Due to the researcher's intention to look for the connection between e-commerce and how SMEs utilize it for their sustainability, this research only chose the articles that explained the connection well. In the range of 2020-2024, this study chose 12 articles in Google Scholar that specifically discussed the connection of e-commerce to SME sustainability. Meanwhile, in Emerald Insight, this research chooses seven articles that discuss the connection of e-commerce in SMEs, whether it has clearly said "e-commerce" or included in digital marketing. Last, in Taylor & Francis, this research chooses seven articles.

For the analysis, this study utilizes the VOSviewer application, which allows some insights, such as the geographical distribution of the study, the most contributing journal, and the research cluster network. However, this study also conducted an in-depth reading of the paper to identify the author, the methodology, the theoretical framework, the purposes, and the organization type of SMEs.

RESULTS

According to the descriptive analysis, this research provides some results according to some categories, such as region of the studies, methodological approach, and the discipline of the studies. Therefore, the results shown on Figure 2, Figure 3, and Figure 4 below

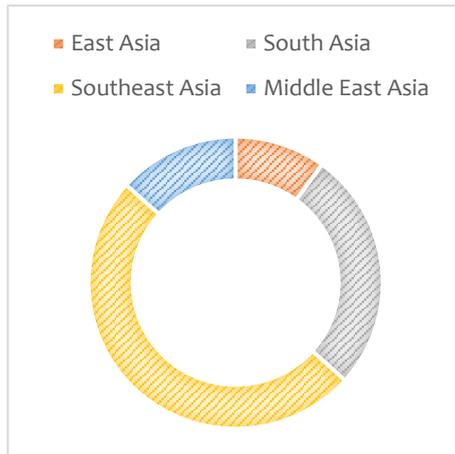


Figure 2. The Origin of the Studies

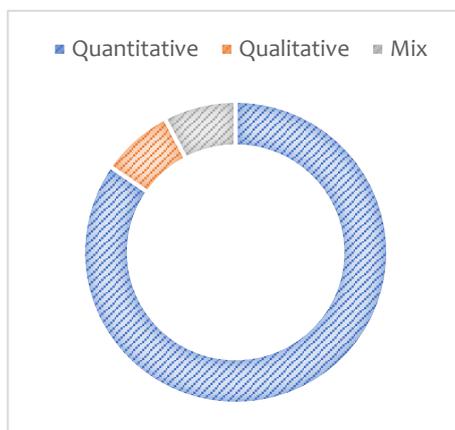


Figure 3. Methodological Approach

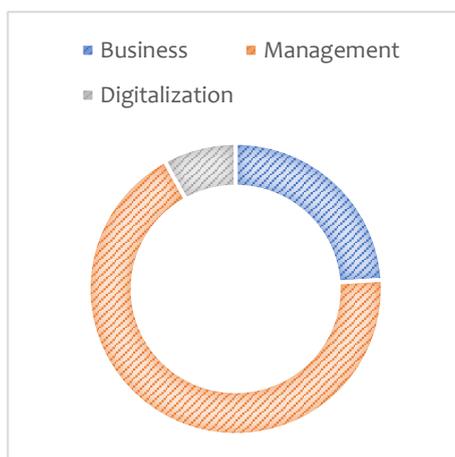


Figure 4. Discipline of the Study

Figure 1 indicated that most of the studies about e-commerce utilization in SMEs are from Southeast Asia 15 studies, and mostly come from Indonesia (n=10), Malaysia (n=2), and Thailand (n=2). South Asia also contributed eight studies, mostly comes from Pakistan (n=4). The least contribution is in Central Asia, where we could not find any studies that discussed the correlation between e-commerce and SMEs in Central Asia. According to (Zakiyeva, 2020), SMEs in Central Asia are undergoing a sharp decrease because of the shortage of components and raw materials that are not produced in the countries of the region. Therefore, most of the study is from

Southeast Asia, which has grown into the adoption of e-commerce and digital technologies, especially after COVID-19 (ERIA/OECD, 2024).

Most of the methodological approaches of the studies are quantitative, and in the management discipline, they are based on Figure 2 and Figure 3. Hence, the most influential articles are from Patma et al. (2021), with approximately 144 citations, followed by Octavia, et al. (2020), with 122 citations, as listed in the table 2.

Table 2. The Most Influential Articles

No.	Authors	Article	Journal	Number of Citation
1.	Patma, et al. (2021)	The Impact of Social Media Marketing for Indonesian SMEs Sustainability: Lesson from COVID-19 pandemic.	Cogent Business and Management.	144
2.	Octavia, et al. (2020)	Impact on e-Commerce Adoption on Entrepreneurial Orientation and Market Orientation in Business Performance of SMEs.	Asian Economic and Financial Review.	122
3.	Hussain, et al. (2020)	Organizational and Environmental Factors with the Mediating Role of e-Commerce and SME Performance.	Journal of Open Innovation: Technology, Market and Complexity.	105

Keyword Analysis

Based on the analysis of the VOSviewer, 93 keywords were obtained. As for the connection between keywords, 73 keywords link to each other, as shown in Figure 5.

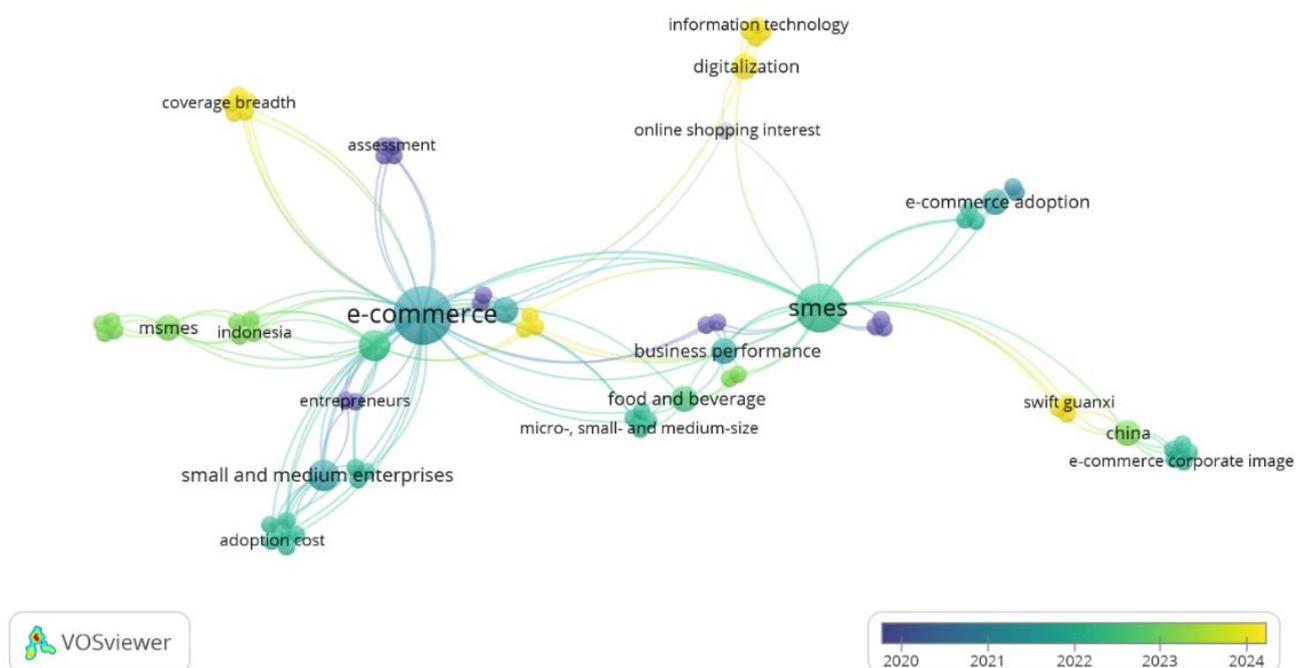


Figure 5. Keyword Analysis
Sources: Author analysis, VOSviewer.

In the figure, the keyword is represented by some colors in different years. The darkest color, navy, represented the year 2020, and the research mainly still focused on assessment, e-

commerce competency, entrepreneurs, and motivation. Meanwhile, in the color blue, from mid-2020 to 2021, the focus of the study shifted to e-commerce adoption, entrepreneurship orientation, and the sustainability of the SMEs. In 2022, most of the studies discussed the COVID-19 pandemic effect, SMEs, adoption cost, diffusion of innovation, and entrepreneurial competency. Last, the yellow-ish color from 2023 until 2024, the study shifted to MSMEs, brand equity, digital platforms, information technology, coverage breadth, green innovation, digitalization, electronic commerce, and challenges.

DISCUSSION

This study uses cluster analysis to examine e-commerce utilization in SME sustainability in Asia. The cluster is categorized and obtained with VOSviewer in Figure 6. There are three category or themes that we will cover in this study, explained below:

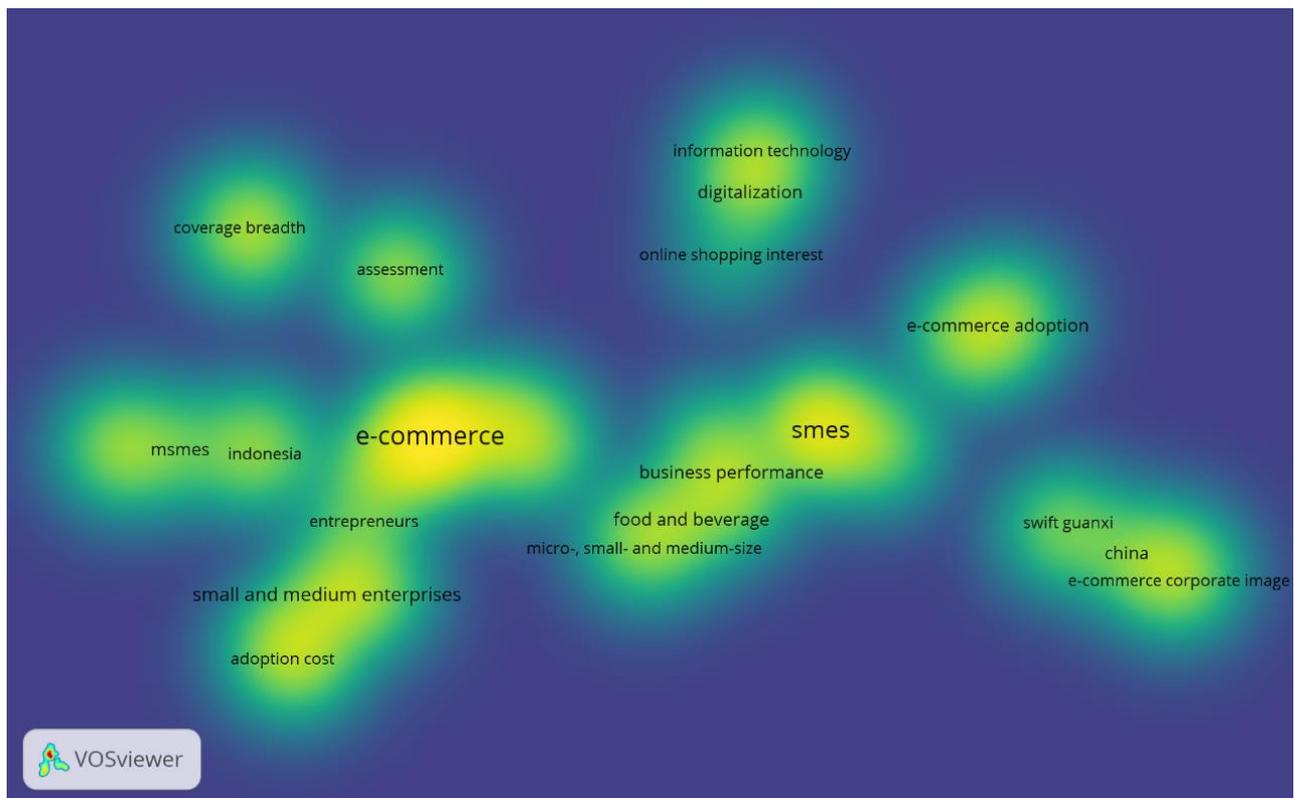


Figure 6. Keyword Cluster
Sources: Author analysis, VOSviewer.

Cluster 1: the e-commerce adoption in SMEs

E-commerce can be assigned as a new way for SMEs to improve their performance. The development of e-commerce is closely related to modern technology. However, SMEs need to enhance their traditional way of utilizing digital platforms, including e-commerce. Switching to e-commerce was found to be beneficial for SMEs because it is suggested that e-commerce can reduce costs and enhance the operational and performance of the firms (Damanpour et al., 2001; Lee et al., 2015). According to Koe et al. (2020), business transition into e-commerce can keep SMEs to stay competitive. In Pakistan, e-commerce is a strategic decision to run continuously as a competitive advantage (Hussain, 2020).

A study by Guo et al. (2024) found that e-commerce is able to improve SMEs' financing and reduce their financing constraints. Thus, the coverage of e-commerce needs to be broadened to support SMEs better financially, as its application in China is still in its early stages. Align with Octavia et al. (2020) stated that in Indonesia, e-commerce is not just a mechanism of selling and

buying goods or services through the internet but also a business transformation that can bring maximum services for the consumers in accessing products. With an internet connection, SMEs can reach a larger audience to sell their products or services, in contrast with traditional businesses, which need more resources such as a great location, a better advertisement, and many others. However, in Thailand, many food and beverage SMEs utilize e-commerce, but there are two factors affecting e-commerce (Amornkitvikai, 2022). The internal factors influencing e-commerce utilization include tools such as smartphones, which are more widely used than laptops by many SMEs due to their ease of use and the fact that nearly everyone owns a phone. The external factors include platforms such as marketplaces (Shopee, Lazada), social media (Facebook, Instagram, X, WhatsApp), and food delivery platforms (Grabfood, Lalamove, Foodpanda); it is important to use the right platform and target consumers.

Even though e-commerce has been a part of the business for approximately two decades, in the development, not all areas of the world and not all layers of society are embroiled (Alzahrani, 2019). According to (Wongkhamdi, 2020), in e-commerce competence in Thailand SMEs, there is a framework that eases entrepreneur to strategize their business, discussed in the table 3 below:

Table 3. The Dimension of e-Commerce Adoption

Dimension	Explain
1	Information Processing, including proficiency in their own product information, specification, Figure, and product differentiation that is stored on the phone or laptop, which is easy to access.
2	Communication between seller, buyer, and all participants. The SMEs need to know the most effective tools.
3	Content Creation, including videos or Figures that can increase the customer's desire to buy the products
4	Safety: All SMEs must be careful when setting privacy, password, and customer's identity.
5	Problem-solving: In e-commerce adoption, products or services are sent directly to consumers; hence, there may be a problem with the carriers or the technology, so the SMEs need to prepare a solution.
6	4P's
7	Legal rules, laws, and regulations
8	Language competency

Source: Wongkhamdi, 2020

However, the challenges in developing e-commerce for SMEs cannot be avoided. In Saudi Arabia, there are some technological challenges in e-commerce, considering the education level becomes a barrier to understanding the e-commerce technology; on the other side, there is a lack of IT experts, and it's not easy to reach more customers via e-commerce (Fakieh, 2024). It is aligned with Koe et al. (2020), who stated that training and development courses for the young are important in adopting e-commerce in Malaysia. Koe (2020) also stated that government implication needs to loosen a bit to give a free space for entrepreneurs' innovation and creativity. However, Hakaki (2022) stated that government support is needed in the form of law enforcement for Iranian SMEs, especially in developing countries where the e-commerce infrastructure is in the hands of government regulation.

Last, customer trust is significant in adopting e-commerce for SMEs. Considering that customers will purchase products or services only by looking at the Figures or videos rather than in person. According to Hakaki (2022), customer trust becomes a causal factor in e-commerce

adoption. It is recommended that SMEs focus on each action in the digital platform (social media or e-commerce) because it will influence customer trust. Aligned with Al-Tit (2020), that found customer trust significantly influences customer loyalty in SMEs.

In Asia, e-commerce adoption in SMEs is beneficial and has become a competitive advantage. However, in the process, there are some challenges, such as technological aspects, lack of IT experts, and government involvement, which are necessary, but freedom in innovation is also needed. Furthermore, e-commerce also brings advantages because it can reach a bigger audience, but SMEs also need to build strong consumer trust to increase their performance. The SMEs need to choose the right platforms and tools for enhancing e-commerce that are suitable for both the firms and the target market.

Cluster 2: SMEs sustainability through e-commerce and digitalization

Besides e-commerce becoming a competitive advantage, e-commerce is also considered a factor in SMEs' sustainability. Therefore, sustainability has been discussed extensively during and after the COVID-19 pandemic. Even though the COVID-19 pandemic did not have the same effect in every country, such as in South Asia, many SMEs started their business when the pandemic hit; they sell products for surviving the pandemic, including sanitizers, face masks, vitamins, and medicine (Hossain, 2022). Meanwhile, in Southeast Asia, the pandemic brings a challenging environment, even more severe than the economic crisis in 1998, in which SMEs are more adaptable than large firms (Juergensen et al., 2020). Therefore, digitalization become a strategy for surviving the pandemic crisis.

According to Zaheer (2024), after COVID-19, customers tend to purchase more things online. Hence, e-commerce gained significant growth. The increase is due to many restrictions and policies regarding staying at home and reducing face-to-face interaction, including in selling and buying. However, the digital market can open new access and opportunities as well as reduce operational costs (Kurniawan, 2023). Because of digitalization, many SMEs can reach bigger markets; instead of just promoting in one place, the digital market allows SMEs to meet potential consumers from everywhere around the world. Hence, accessing larger consumer can help SMEs to maintain their sustainability. SMEs must work harder to maintain a lasting Figure, enabling them to meet consumer needs and create memorable customer experiences. (Liu et al., 2022).

Lestari et al. (2024) stated that post-pandemic COVID-19, technology adoption become a moderator in business resilience. Hence, other than government support, one of the factors that become a coping mechanism in the restriction policy is reconfigure their resources to adopt technology. However, in Indonesia, SMEs need to allocate more financial resources for technology adoption, such as hardware, training, and IT professionals, so there needs to be more adjustments here and there (Warnecke, 2016). Meanwhile, Malaysia found that digital adoption in SMEs lags behind larger firms because of a lack of resources and expertise (Wong & Kee, 2022). In South Asia, most of the SMEs already implemented digitalization from e-commerce adoption. However, they still lack innovation (Hossain, 2022). Small and medium-sized enterprises (SMEs) must expand their innovative efforts to ensure sustainability, particularly in the face of ongoing crises and challenges. By fostering creativity and embracing innovation, SMEs can enhance their resilience and navigate difficult circumstances more effectively.

Cluster 3: SMEs digitalization (e-commerce, social media, online platforms)

Digitalization in SMEs is considered challenging because, in practice, there are many parties involved. Hossain et al. (2024) found that the human capital of SMEs is essential in inducing digitalization. Human capital encompasses skilled IT professionals and employees who are eager to adapt to the transition toward e-commerce. Align with the SMEs in Vietnam that found great

leadership can direct the business into digitalization, the switch from experience-decision-making to data-driven decision-making can ease the adoption of digital in the firms (Walsh, J. et al., 2023). Therefore, the practice of digitalization in SMEs involves determining how well the SMEs' actors are able to adapt to the new strategies. Walsh et al. (2023) state that it is crucial to establish efficient communication so that all SME personnel understand the vision for digitalization.

However, in the Middle East, especially Yemen, found that women entrepreneur chooses social media for their digitalization (Alhakimi et al., 2023). Social media offers a variety of valuable opportunities for businesses, including the ability to facilitate orders and reservations, engage in effective communication with customers, and implement targeted marketing strategies. In contemporary society, a significant number of individuals dedicate their time to social media platforms. These platforms provide opportunities to engage with visual content, such as Figures and videos of various products, while also allowing users to access detailed specifications of those products. Some social media even allow the consumer to buy and communicate with the seller.

On the other hand, in Indonesia, especially in e-commerce, Shopee is able to show informative advertisements for potential customers through videos or photos. Meanwhile, Shopee also shows a section for customer reviews that is vulnerable and able to influence purchase decisions (Arief, 2023). Positive reviews from consumers enhance the credibility and trustworthiness of the brand. Small and medium-sized enterprises (SMEs) need to maintain a vigilant awareness of potential vulnerabilities that may affect product quality.

Shandy et al. (2023) found that social media can increase brand equity. Thus, SMEs should actively engage information about their products on social media. Customers are often captivated by the engaging content provided by SMEs on social media, particularly on platforms that emphasize aesthetics. Thus, digitalization here can become a marketing strategy that helps SMEs. This study declares that an increasing number of small and medium-sized enterprises (SMEs) are adopting digital marketing strategies, marking it as a significant emerging trend in the industry. SMEs can actually take advantage of social media to ignore the barriers, such as distance and cost, for a larger product space (Patma et al., 2021). By using digitalization, SMEs can display their products easily on the online platform; it does not need to provide an "actual place" where consumers can go and choose the products. As for the distance, many delivery service options can help SMEs reach consumers.

However, Apriani et al. (2024) recommend that besides the function of the platform, SMEs need to pay attention to the psychological and emotional aspects of the consumers, such as trust and enjoyment. The experience that consumers get when online shopping must be maintained; the consumer needs to feel easy and effective in choosing, comparing, and finally purchasing the product. A strong connection between SMEs and the customer has also been found to increase sales in Bangladesh's SMEs (Hossain et al., 2024). The findings are consistent with other research that highlights the importance of fostering consumer trust as a fundamental component in building customer loyalty. In a digital environment, consumers cannot physically see products or services; they rely primarily on photos and videos. Therefore, reviews from other consumers, along with detailed information provided by SMEs, can help alleviate any concerns consumers may have.

CONCLUSION

Conclusion

This study indicates that the adoption of e-commerce offers significant advantages for small and medium-sized enterprises (SMEs) in Asian countries. By integrating e-commerce into their operations, these businesses can enhance their competitive strategies while also achieving

a reduction in financial costs. Along with that, e-commerce can reach a broad audience for the product because it is easier to access, so SMEs need to take advantage of that. Hence, in its implementation, SMEs need to pay attention to finding the right strategies for conducting e-commerce. Some of the dimensions that are essential for SMEs in adopting e-commerce include proficiency in handling digitalization, the same vision and mission for the SME actor, and great problem-solving in a digital way. On the other side, the communication between seller and buyer has to be maintained well to build consumer's trust in the e-commerce transaction. E-commerce has also become a strategy to keep SMEs sustainable, especially after the COVID-19 pandemic crisis. During the pandemic, consumers shifted their buying activities to the e-commerce platform, so the habit is still growing even if the pandemic is over. However, to keep SMEs sustainable, they need to develop their innovativeness and creativity in using e-commerce. Digitalization in SMEs utilizes not only e-commerce but also social media for various purposes, such as communicating with sellers, promoting products, and allowing consumers to place orders. Hence, it becomes an advantage for SMEs to adopt digitalization, especially using e-commerce and social media.

Limitations

In this study, the data was primarily sourced from reputable academic platforms, including Google Scholar, Emerald, and Taylor & Francis. For future research, we recommend utilizing data from a variety of sources. Additionally, this study focused solely on limited data from Asia; therefore, future research should explore other continents. This could yield different implications and results, enhancing our understanding of e-commerce adoption in small and medium-sized enterprises (SMEs).

Research Implications

This research aims to equip small and medium-sized enterprises (SMEs) with effective strategies to thrive in today's rapidly evolving business landscape. It delves into the crucial role of digitalization in ensuring the long-term sustainability of SMEs, highlighting the transformative potential of adopting modern technologies. Furthermore, the study emphasizes how e-commerce platforms and social media have emerged as essential tools, enabling SMEs to enhance their competitive strategies. By leveraging these digital resources, SMEs can better navigate challenges and capitalize on new opportunities, ultimately positioning themselves for growth and success in a competitive market.

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