

HOW DOES CROSS-BORDER E-COMMERCE CHANGE AS SMALL AND MEDIUM-SIZED ENTERPRISES EXPAND INTO EMERGING MARKETS?

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Abstract

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The purpose of the study is to investigate the changes in cross-border e-commerce in international trade patterns as small and medium-sized enterprises (SMEs) expand into emerging nations. The identified problem is that SMEs face informational challenges, as well as marketing and functional barriers, to be successful in host regions. Skill gap and lack of credit for SMEs are the main issues (United Nations Economic and Social Commission for Asia and the Pacific [ESCAP], 2024). The theoretical analysis through transaction cost theory (TCT) shows that firms choose those regions that incur lower costs. The method used is a systematic literature review conducted to understand the importance of digitisation in overcoming functional and informational barriers. The findings show that SMEs adopt new business models to minimise their costs and gain a significant number of global customers through online presence rather than offline ones. This shows that firms reject traditional business models and strategies and adopt new strategies and practices to improve their cross-border e-commerce trade as they enter emerging nations. The study is relevant to understanding the importance of digitalisation, new business models, improved sustainability practices, dynamic marketing capabilities, and regulatory environment changes for SMEs to expand into emerging nations.

Keywords: Cross-border E-commerce, Small and Medium Enterprises, Decentralisation, E-marketing, Digitalisation, Technology-Organization-Environment (TOE) Framework, Direct-to-Consumer (D2C) Model, United Nations Sustainable Development Goals (UNSDGs), Dynamic Marketing Capabilities, Policy, Transaction Costs, Environment

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1. INTRODUCTION

Cross-border e-commerce has replaced the traditional trade barriers between countries and also promoted world trade by influencing consumers and merchants. This is done by participating in inter-enterprise trade (global business-to-business [B2B]) along with transactions between customers and firms (global business-to-consumer [B2C]) (Chen

et al., 2022). The United Nations (UN) has propounded the 2024 theme: micro, small, and medium-sized enterprises (MSMEs) and the UN Sustainable Development Goals (SDGs) to encourage the MSMEs to mitigate poverty and augment sustainable development practices in various regions (UN, 2024). In 2023, developing and emerging economies have shown robust growth rates. For example, emerging Asia has experienced

the highest gross domestic product (GDP), with an increase of 5.2% in 2024 and 4.8% in 2025. Latin America and Sub-Saharan Africa will grow by 1.9% and 3.8% in 2024 and 2.5% and 4.1% in 2025 (Organisation for Economic Co-operation and Development [OECD], 2024). As per the estimates given by the UN Conference on Trade and Development, recorded revenues from cross-border B2C e-commerce in 2018 led to \$404 billion, and the pandemic has further accelerated its growth (Cassia & Magno, 2022). This shows that the expansion of small and medium-sized enterprises (SMEs) through cross-border e-commerce in emerging markets changes global trade patterns.

SMEs face informational challenges, marketing, and functional barriers. In the case of informational barriers, the SMEs may lack the required resources to analyse and collect relevant information for each region. This can lead to the unintentional violation of rules in some regions. SMEs do not have the expertise to analyse information critically. Skill development has remained an obstacle to e-commerce growth in Asia (United Nations Economic and Social Commission for Asia and the Pacific [ESCAP], 2024). Additionally, the complexities of the e-commerce value chain demand high-level managerial skills, which may be absent in SMEs. Even though the capital needed for cross-border e-commerce is lower than traditional internationalisation, SMEs may not incur costs due to a lack of credit. This is because SMEs face a high rate of rejection of loans (ESCAP, 2024). SMEs even face cross-trade barriers in the form of managing complicated distribution channels and logistics, and the need for after-sales services in foreign regions.

Previous studies could not explore the changes in cross-border e-commerce in global trade patterns by SMEs as they expand into emerging markets. In this context, a study by Huang and Kumarasinghe (2024) pointed out the differences in emerging nations like China and Sri Lanka; Chinese SMEs can benefit from advanced technologies and product popularity, whereas SMEs in Sri Lanka face issues with advanced technologies and financial resources. However, this study is limited to self-reported data through qualitative research methods and internationalisation efforts of Chinese and Sri Lankan SMEs for e-commerce, which may not apply in other emerging markets. Qi et al. (2020) also reported that cross-border e-commerce has become popular for Chinese SMEs, but the information is obtained from only one intermediary. Gamage et al. (2020) in their study stated that globalisation is important for SMEs to increase integration and interconnectedness among economies. Despite its focus on globalisation trends, the study failed to analyse the changes in international trade in the globalised world by SMEs through cross-border e-commerce in emerging regions. Cassia and Magno (2022) stated that there is limited research on understanding the determinants of the success of SMEs as a foreign entry mode. This shows that previous studies fail to analyse changes in cross-border e-commerce in the international trade patterns in the globalised economy when SMEs expand in emerging regions.

The research aims to study the cross-border e-commerce changes in the international trade patterns in the globalised economy, especially during the process in which SMEs expand into emerging markets. The objectives are to identify digitalisation, new business models, sustainability

practices, regulatory changes, and dynamic marketing capabilities among SMEs in cross-border e-commerce while entering emerging markets. It brings the research question to answer the modifications in cross-border e-commerce in the global trade patterns when SMEs enter emerging nations.

The theoretical framework applied is the transaction cost economics theory (TCT) to identify and analyse the global governance for better firm performance (Qi et al., 2020). The study is significant to understand the importance of cross-border e-commerce as SMEs expand into emerging nations. The applied methodology is the systematic literature review, where various sources are identified and analysed to be interpreted through themes. The findings and analysis will contribute to the understanding of changes in SME operations as SMEs expand into emerging nations. It can be concluded that SMEs can improve their business models and operations to be successful in emerging nations.

The structure of this paper is as follows. Section 2 reviews the relevant literature. Section 3 analyses the methodology that has been used to conduct empirical research on cross-border e-commerce change as SMEs expand into emerging markets. Section 4 presents the findings and analysis to explain the ways SMEs can expand. Section 5 gives a discussion, and Section 6 summarizes the research outcomes.

2. LITERATURE REVIEW

Transaction cost theory examines the decision to enter foreign markets. This transaction cost economy ensures that firms generally select the foreign entry mode, which incurs the least transaction costs, implying the most economically efficient form of international governance that will lead to better firm performance (Qi et al., 2020). This ensures that firms are involved in global trade in emerging regions that offer potential opportunities to change global trade patterns. Emerging regions offer potential markets to these SMEs who shift their operations to these regions rather than the developed regions, which require extra costs. Meanwhile, Cassia and Magno (2022) stated that cross-border e-commerce is conducted through the Internet, and it is the mode of foreign entry for exporters. Firms can adopt this channel where intermediaries in foreign nations are less powerful, mitigating the risks of retaliation and the risks of multichannel conflicts. Firms that use e-commerce platforms can export their products and services when they are discovered by foreign buyers. However, Janna and Hadiprajitno (2025) argued that the differentiation and cost leadership strategies reduce the threat of financial failure in emerging markets significantly. This can help firms expanding in emerging markets to reduce their transaction costs.

Cross-border e-commerce can help smaller businesses to enter foreign markets easily and quickly. The article by Tolstoy et al. (2023) stated that firms can increase demand in foreign markets by creating new ways to engage and interact with customers digitally. Cross-border e-commerce has led to the growth of the digital markets and digital trade due to new consumer behaviours, leading to supportive policies. Transactions are made through the websites of the firms or the sites of internet-

oriented intermediaries like an online platform marketplace or retailer. However, Goldman et al. (2020) argued that growth orientation only positively impacts e-retailers operating in developed e-commerce regions, whereas customer orientation negatively impacts e-retailers operating in emerging nations. Firms from rising e-commerce markets may not get opportunities in their domestic markets. This ensures that firms operate in global regions when they get limited opportunities in their domestic regions. The TCT theory is crucial in understanding the importance of digital capabilities or new business models for SMEs to act as mechanisms to reduce the specific transaction costs in expanding into emerging nations. The theory is also important to specify the sustainable practices that can be adopted by the firms to reduce costs on unsustainable substances and practices.

Cross-border e-commerce can influence firms to improve their marketing techniques through digital platforms to reduce unnecessary transaction costs. Tolstoy et al. (2023) stated that “effectual market creation” impacts the global performance of SMEs involved in cross-border e-commerce, but failed to analyse the changes in international trade patterns in the globalised economy. This shows that cross-border e-commerce is important for SMEs to gain significant entry into foreign markets, leading to changes in trade patterns. Cross-border e-commerce can enable firms to gain both strategic and financial performance. This can enable firms to gain success in foreign markets. However, Cuypers et al. (2021) argued that hierarchy is the least costly governance solution, but it requires high private fixed set-up costs while reducing incentives to maximise outputs. It can be challenging for firms to manage their operations across regions. Thompson-Bahm et al. (2025) stated that SMEs face issues like higher costs for process designs and technology upgrades. Even coordinating sustainability practices across complicated, multi-stakeholder supply chains faces challenges, like inconsistent regulations and employee resistance.

Previous research shows that most articles on cross-border e-commerce concentrate on the growth of the industry rather than on how cross-border e-commerce changes the international trade patterns of SMEs in emerging nations. The research by Chen

et al. (2022) pointed out the importance of cross-border e-commerce but failed to state the influence of SMEs in cross-border e-commerce to understand the changes in global trade patterns. Chen and Batool (2022) stated that even though SMEs grow more easily across cross-border e-commerce exports, firms face the dilemma of industry development. The article by Chen and Batool (2022) contained information about the selection of logistics in cross-border e-commerce exports by Chinese SMEs while ignoring the needs of other emerging markets. This shows that there is a need to research the changes in international trade due to cross-border e-commerce by SMEs when they expand into emerging nations. The emerging markets offer opportunities for SMEs to reach foreign buyers and increase their revenues. This research mitigates the gap by understanding the cross-border e-commerce changes in international trade patterns in the globalised economy, especially when SMEs expand into emerging markets. It focuses on trading activities, digital technologies, transportation, and logistics of SMEs when they operate in emerging nations that have more diverse cultures, resources, skills, capabilities, and legal and financial requirements than developed ones.

3. RESEARCH METHODOLOGY

A systematic literature review was conducted to gather data and information from various published sources. The selected databases from which sources were taken are Google Scholar, ProQuest, Sage, and Scopus. The keywords selected for this study are international trade, cross-border e-commerce, and enterprise management to find the required sources. The exact search strings are used through Boolean search by using “cross-border e-commerce”, or “small and medium enterprises”, and “e-marketing”, or “digitalisation”, and “technology-organisation-environment (TOE) framework”, and “dynamic marketing capabilities”. The framework for selecting research was based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) in Figure 1. This figure explained the inclusion, exclusion, and selection of the articles for systematic review.

Figure 1. PRISMA framework

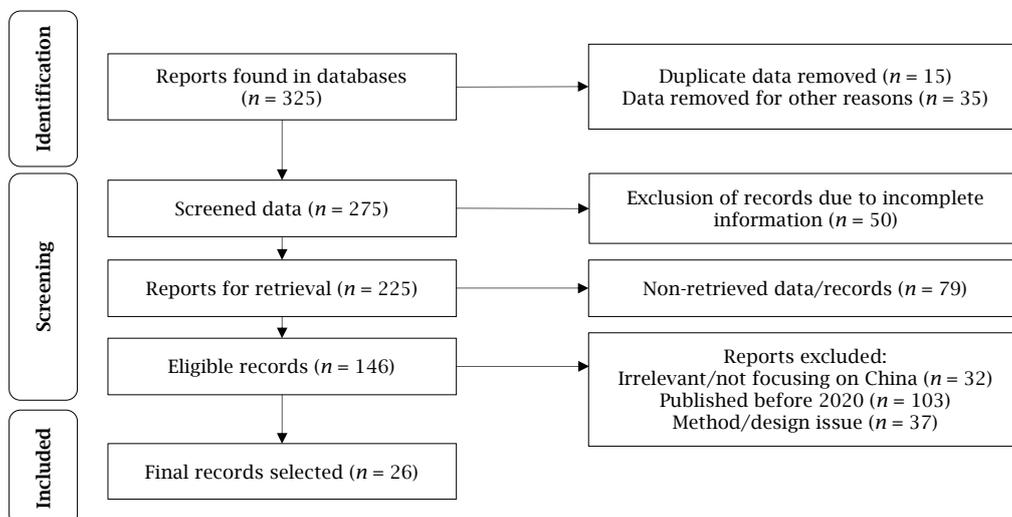


Figure 1 shows that a list of 26 sources was selected through the inclusion and exclusion criteria to enrich this research. A list of keywords like new business models, digitalisation, e-marketing, cross-border e-commerce, sustainability, and international competitiveness.

Inclusion criteria:

- recent journals from 2020;
- English language papers;
- peer-reviewed journals.

Exclusion criteria:

- older journals from 2020;
- non-English databases;
- unacademic sources, blogs, and Wikipedia.

Figure 2 shows the selected journals, based on the country where most journals are based, in China, followed by Argentina and Italy. This shows that most journals selected for this research are from China.

Figure 2. Selected journals based on the country

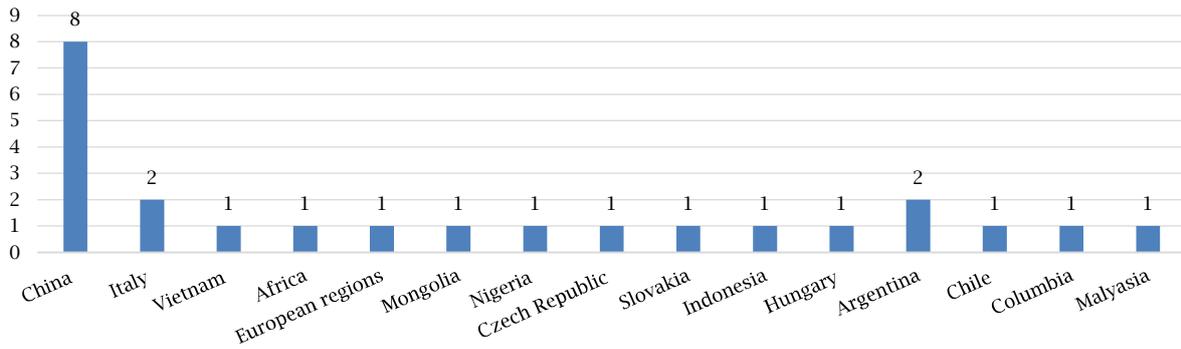
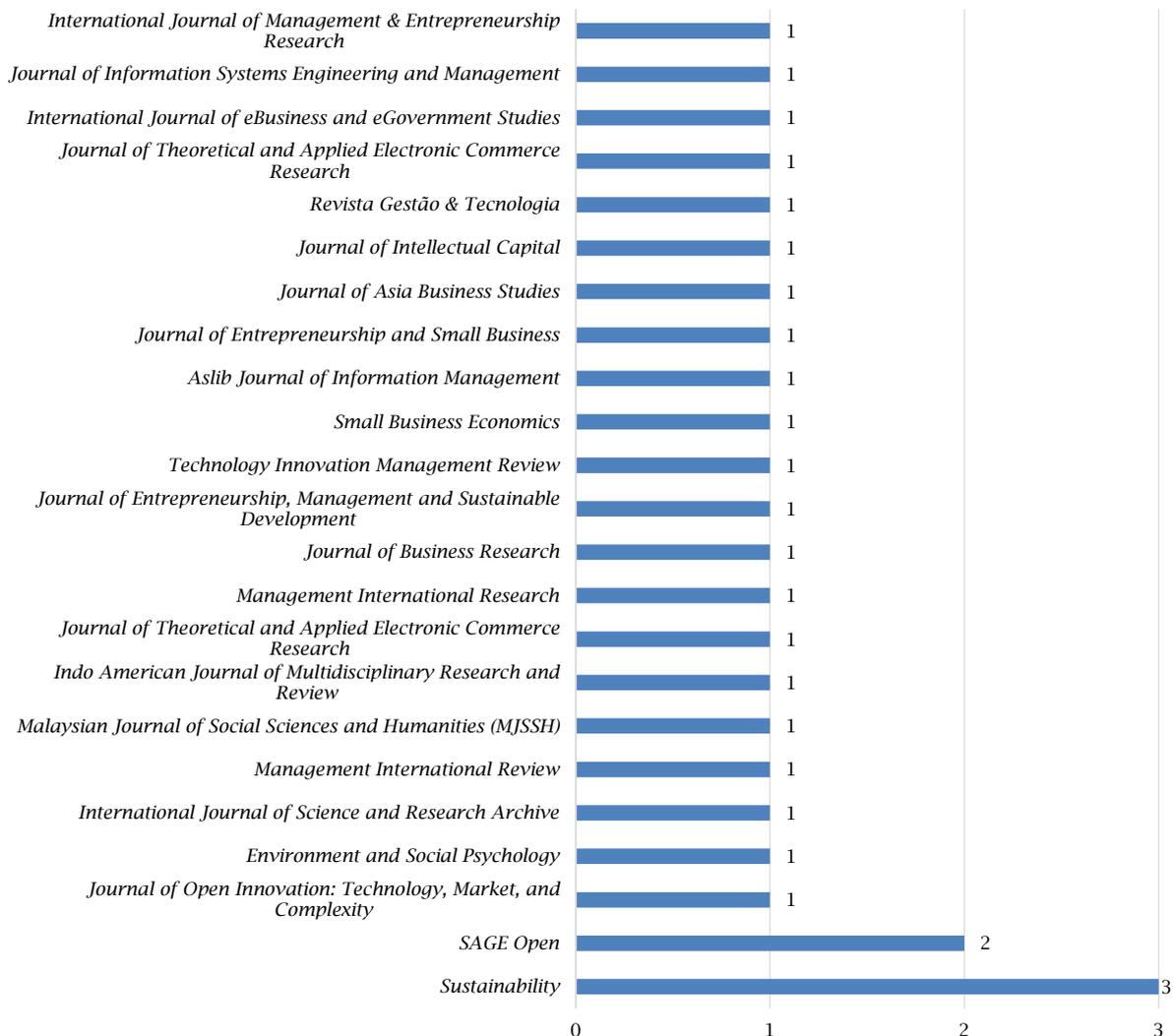


Figure 3. Selected journals



4. FINDINGS AND ANALYSIS

After analysing and reviewing 26 articles, five themes were formed. These themes are Theme 1: Digitalisation in cross-border e-commerce as SMEs expand into emerging nations, Theme 2: New business models in cross-border e-commerce as SMEs expand into emerging nations, Theme 3: Improved sustainability practices in cross-border e-commerce as SMEs expand into emerging nations, Theme 4: Dynamic marketing capabilities in cross-border e-commerce as SMEs expand into emerging nations, and Theme 5: Changes in regulatory environment in cross-border e-commerce as SMEs expand into emerging nations (see Table A.1 in Appendix).

4.1. Theme 1: Digitalisation in cross-border e-commerce as SMEs expand into emerging nations

Digitalisation is the first change that SMEs encounter while expanding into emerging regions during cross-border e-commerce. Dalocchio et al. (2024) stated that e-marketing tools, such as data tracking for SMEs and social media, positively influence SMEs for their online export performance. This is because internet speed and catalogues are important for SMEs to influence foreign buyers for cross-border e-commerce. Olalekan et al. (2024) also pointed out that cross-border payments have become popular in Africa. Cross-border payments have improved accessibility to innovation and foreign markets. The article further stated the innovation diffusion theory by cross-border payment firms to improve economic growth and productivity. This shows that SMEs can utilise technology innovation to ensure cross-border e-commerce and attract global customers. On the other hand, Eduardsen et al. (2023) argued that cross-border e-commerce firms face technical complexities due to a lack of technical skills and perceived advantages. Technical difficulties can also stress the cross-border e-commerce activities of SMEs. Maintaining and developing marketing actions for exports through online tools that need continuous support. For example, websites of outdated companies, neglected blogs, and unanswered queries in digital media by individuals lead to a poor image of the company (Eduardsen et al., 2023). Technical difficulties can lead to interoperability issues. This implies that technical difficulties and skills can prevent SMEs from cross-border e-commerce in emerging nations.

Cross-border e-commerce can be ensured by SMEs through digitalisation. Jingjing and Idris (2024) stated that emerging nations like China are gradually shifting to more digital businesses from traditional businesses, so the TOE framework ensures technological competence, the environmental context implies government support and competitive pressures, and the organisational context involves support from the management. Abdulkarem and Hou (2022) supported the TOE framework in enabling SMEs to adopt cross-border e-commerce in China. The environment positively influences SMEs to use technology in cross-border e-commerce and improve organisational productivity. The technology dimension ensures perceived benefits, compatibility, and security; the organisational dimension ensures

government support, customer pressure, and competitive pressure; and the environmental dimension ensures organisational readiness, organisational innovativeness, and e-commerce knowledge to influence SMEs for cross-border e-commerce (Nguyen et al., 2024). Meanwhile, Elia et al. (2021) argued that SMEs suffer from resource constraints, but this cannot prevent the firms from engaging in digital export. The paper focuses on the "resource-based view" to understand the importance of technology resources as a mechanism to gain a competitive advantage in e-commerce, to enhance digital export more than firms with traditional e-commerce managers. This implies that overall digital capabilities can improve cross-border e-commerce.

4.2. Theme 2: New business models in cross-border e-commerce as SMEs expand into emerging nations

Small and medium-sized enterprises engaging in e-commerce businesses adopt new business models while expanding into emerging nations. Yao et al. (2024) stated that the COVID-19 pandemic in 2020 changed the growth of e-commerce with the rapid increase of digital transformation. Technology has flattened and decentralised organisational structures, promoting cooperation and competition among teams and enhancing competitiveness. Decentralised structures imply that the organisational activities are distributed among employees rather than centralised. The lower and middle levels of managers take part in decision-making practices, thus promoting cooperation and collaboration. SMEs can take human capital ownership while enriching their management teams, developing new collaboration models, and shifting organisational structures. Managers use these social media platforms to find collaborators and outside experts to enhance competitiveness and human capital. However, Costa and Castro (2021) argued that e-commerce adoption requires considerable investment and infrastructure by SMEs. E-commerce provides the advantages of reduced channels of distribution and costs, more flexibility, and a wider presence in global markets. This implies that SMEs may not be able to invest in resources that can aid in their e-commerce adoption.

SMEs adopt new business models and structures, like decentralised structures for effective distribution channels and internationalisation. Beltramo et al. (2020) stated that a decentralised structure increases employee satisfaction and motivation and fosters communication. This is because less centralised structures encourage free-flow vertical and lateral communication, leading to better organisational performance among SMEs. Centralised structures prevent the adoption of new ideas, but organic structures can ensure creativity. This shows that the adoption of new business models can help SMEs to adopt cross-border e-commerce. Celestin et al. (2024) added that SMEs use a direct-to-consumer (D2C) model that bypasses traditional intermediaries so that they can sell their products through their specialised platforms or websites. D2C strategies can allow businesses to control pricing, branding, and customer experience. The rise of local payment solutions and mobile internet has empowered SMEs to adopt D2C strategies, thereby increasing their reach.

4.3. Theme 3: Improved sustainability practices in cross-border e-commerce as SMEs expand into emerging nations

Cross-border e-commerce ensures sustainability practices as SMEs expand into emerging nations. Wang et al. (2022) stated that cross-border e-commerce trade, along with industrial clusters, promotes deep integration and sustainable, coordinated development to ensure sustainable business growth. Increasing the tax incentives for industrial clusters can allow enterprises to reduce export tariffs and simplify the export and import procedures for cross-border e-commerce. Adeola et al. (2021) added that SMEs can drive their actions like eradicating poverty, creating employment, increasing social development and cohesion, protecting the world, and ensuring stability and peace to meet the SDGs. This implies that SMEs involved in cross-border e-commerce engage in sustainability practices to meet SDGs. However, Das, Rangarajan, et al. (2020) argued that SMEs lack a strategic approach to accomplishing sustainability practices. SMEs generally lack environmental and social responsibility when expanding into emerging nations. This is because current environmental and social practices in SMEs are unorganised, ad hoc, and driven by individuals rather than organisations. Smaller firms are generally involved in informal social considerations, less driven by business requirements, and local in scope.

Technological capabilities in developing economies can ensure sustainable practices among SMEs. Das, Kundu, et al. (2020) stated that technological development can enable SMEs to ensure sustainable development practices through a sustainable technological environment model. This can ensure sustainable development growth to maintain brand reputation and gain global significance. Developing regions are adopting advanced technological developments to enable SMEs to overcome technological barriers to meeting sustainability practices. However, Zhong et al. (2022) argued that the ability of the government to comprehensively manage cross-border e-commerce in China to ensure sustainability practices by firms lacks sufficient coping capacity. The lack of comprehensive support from the government dissuades SMEs from improving their sustainability practices. This shows that SMEs find it difficult to meet their sustainability goals, as they may fail to adopt sustainability practices in emerging nations.

4.4. Theme 4: Dynamic marketing capabilities in cross-border e-commerce as SMEs expand into emerging nations

Small and medium-sized enterprises conduct dynamic marketing capabilities when they are involved in cross-border e-commerce as they expand into emerging regions. Kim and Lim (2022) stated that for better export marketing strategies, companies mobilise internal resources for product uniqueness, firm experience, and managerial commitment. They have an international dynamic marketing capability by which a firm can build, modify, and integrate external and internal resources. Kwarteng et al. (2024) also added that

the pressure created by marketing aspects regarding new technology forces SMEs to adopt new technology, leading to e-marketing. This influences the firms to use new technologies to reach a global audience that cannot be reached offline. Online marketing methods have gained momentum to influence consumer behaviour for purchasing products and services, thereby increasing cross-border e-commerce sales. However, dos Reis and Machado (2020) argued that there has always been a debate between standardisation and adaptation in internationalisation. Firms always devise effective marketing strategies to adapt to the marketing requirements at minimal costs to attract customers. Due to cultural differences, firms can adopt an adaptation or standardisation strategy in their marketing activities to gain a global presence. Wen et al. (2023) focused on the use of technology to obtain timely global market information to augment their global competitiveness and overcome cultural barriers. Improvement in digital platforms and facilities can enable SMEs to be digitally empowered to devise their marketing strategies as per cultural differences. This implies that SMEs should have dynamic marketing capabilities to gain a global presence.

4.5. Theme 5: Changes in the regulatory environment in cross-border e-commerce as SMEs expand into emerging nations

The regulatory environment influences SMEs in cross-border e-commerce as they expand into emerging nations. As per the study of Du and Dzamankulov (2023), there is a positive relationship between cross-border e-commerce sales and the regulatory environment. Regulation is the main prospect of economic governance to tackle government failures. Governments can give financial support to ensure the globalisation of firms by integrating local economies and global economies. However, Zhu and Ahamat (2023) argued that managing network compliance is a complicated and difficult process in the current networked and digitalised market. E-commerce companies have to ensure the security and privacy of their customers, which requires them to abide by regulatory compliance. They may even fail to adopt and execute adequate security technologies due to a lack of resources, which may lead to violations of regulations. International policy guidelines have gained importance in the modern era in facilitating efficient and fair resolution of digital insolvencies since the existing frameworks are inadequate in addressing the complexities. Igbinenikaro and Adewusi (2024) commented that the Model Law provides a legal framework for recognising and enforcing foreign insolvency proceedings by the UN Commission on International Trade Law (UNCITRAL). It can ensure the harmonisation of laws by which cross-border insolvency cases can be resolved. Standardised procedures can overcome administrative burdens, reduce delays, and streamline cross-border insolvencies.

Government policy is one of the factors affecting the competitiveness of SMEs. Tumiwa and Nagy (2021) stated that governments are strengthening their human capital, including the knowledge, capabilities, experience, and skills

of employees. Better government policy ensures improved ease of doing business, leading to an improvement in global rating policy, investment, and development of the industry. The government has to change its national economic policies to support an accommodating business environment for MSMEs. Contradictorily, governments can act opportunistically along with obligations of reserve policy with the rise of e-commerce firms in developing regions. Policymakers worry about data localisation, antitrust, and competition (Cumming et al., 2023). They feel that the lack of adequate infrastructural investment, along with human resource development, can marginalise less developed economies in the e-commerce era. Host country regulations and policies pressurise e-commerce firms, as they need legal compliance to gain external legitimacy and access to foreign markets. Expanding in these regions can be more difficult due to the complexities of setting up reliable contracts with local logistics service providers and channel partners. Pietrovito and Pozzolo (2021) also found that emerging and developing economies often lack effective policies to support and address global business activities. This brings forward the importance of policymakers to support entrepreneurial efforts to access global markets. This can benefit more small SMEs to operate in those regions that face significant barriers to internationalisation.

5. DISCUSSION

The analysis of 26 articles shows that cross-border e-commerce has changed the international trade patterns in the globalised economy, particularly when SMEs expand in emerging nations. Cross-border e-commerce has changed international trade patterns with increasing digitalisation due to the increasing use of technologies. It has become the mode of entry for SMEs to gain a significant presence in the global markets, particularly in emerging nations with consumer markets. The evidence of e-marketing tools and cross-border digital payment solutions given by Dallochio et al. (2024) and Olalekan et al. (2024), respectively, shows that digitisation has changed international trade patterns. Eduardsen et al. (2023) also stated that outdated websites of the companies, neglected blogs on corporate websites, and unanswered queries raised in social media could not help cross-border e-commerce firms create a good impression among global customers. Effective digitisation can be ensured through a proper infrastructure and organisational culture, by which cross-border e-commerce firms can improve their technology infrastructure. The TOE framework, as suggested by Abdulkarem and Hou (2022) and Nguyen et al. (2024), can help firms balance organisation, technology, and environment to adopt and implement advanced technology techniques. These technologies include e-marketing tools, updated digital media, and simplified online processes to attract global customers. This requires cross-border e-commerce firms to adopt new business models. New business models include digital-first businesses and D2C models. Firms can undertake decentralisation structures to ensure that employees work proactively and cooperatively to deal with

emerging challenges in international trade patterns. This shows that a combination of structures and digital business models can help firms gain significant global corporate image and reputation.

Cross-border e-commerce firms ensure that they utilise their human capital through their decentralised structures to improve their operations. The pandemic has further influenced firms to improve their management teams and collaboration models to ensure higher performance among teams (Yao et al., 2024). SMEs can take ownership in improving their infrastructures, operating models, and management teams to gain significant profits. However, SMEs face the problems of resource constraints, which prevent firms from indulging in cross-border trading activities in emerging nations. Even developing countries may not have adequate technology infrastructure and policy development to augment business practices among SMEs in cross-border trade e-commerce. Cumming et al. (2023) and Pietrovito and Pozzolo (2021) stated that governments could devise policies and practices to their benefit and not the benefit of SMEs for cross-border trading opportunities. Regulations play an important role in helping firms improve their trading activities on global platforms. Firms generally face different laws and regulations in host and home regions, so understanding and abiding by the laws and regulations are important to appeal to the local communities and customers. Pietrovito and Pozzolo (2021) also stated a lack of governmental support in framing business-friendly laws and regulations that can prevent cross-border e-commerce firms from conducting global activities. Supportive policies and a regulatory environment impact SMEs in cross-border e-commerce in international trading activities.

SMEs are responsible for improving trading activities that generate economic growth and profitability. They have to compete with global brands in digital infrastructure and resource utilisation to be involved in effective operational activities. It can be a challenge for firms to attract customers and retain them in cross-border e-commerce trade when they lack innovative solutions. A lack of technological development can be a barrier for SMEs to conduct sustainable actions. Cross-border e-commerce by SMEs has influenced them to focus on sustainable activities, leading to international trade changes. Studies by Wang et al. (2022), Adeola et al. (2021), and Das, Kundu, et al. (2020) focused on the abilities of SMEs to conduct sustainable activities. Adeola et al. (2021) stated the importance of SDGs to ensure that SMEs conduct sustainable activities, which can help them gain an improved brand image and attract customers. Das, Kundu, et al. (2020) emphasised the importance of technological development for SMEs to meet sustainable goals. This shows that SMEs have to utilise technology effectively so that they can reduce carbon emissions and improve supply chain practices. Technology can easily help SMEs to improve their logistics and procurement without extra costs. Even though they lack the required resources, government support and policy can help SMEs to improve their cross-border trade activities. This ensures that the government should collaborate with the stakeholders to improve the sustainability practices of SMEs that expand into emerging regions.

In conducting cross-border e-commerce activities, SMEs can have dynamic marketing capabilities through digital marketing tools. This requires them to use e-marketing tools to track customer reviews and feedback about their products and services. Kim and Lim (2022), Kwarteng et al. (2024), and dos Reis and Machado (2020) stated that technology development is crucial to improve online marketing activities. SMEs can standardise, adapt, or combine both to appeal to the customers. This is because emerging firms have to meet the needs and demands of young age customers who are oriented towards technology. This ensures that firms manage their online activities to keep consumers updated about the latest products and services. Having dynamic marketing capabilities requires SMEs to conduct both offline and online marketing activities as per customer requirements. Standardisation or adaptation through online tools can enable SMEs to attract customers at minimal costs and effort, as SMEs face resource constraints to produce effective marketing activities and programs (dos Reis & Machado, 2020). This ensures that SMEs involved in cross-border trade can use advanced technology tools to attract customers in minimal time, effort, and costs. E-commerce managers use digital capabilities to improve digital exports in global regions.

The theoretical analysis shows that TCT is important for foreign entry mode, by which the firms choose nations to enter with the least transaction costs. Firms are involved in cross-border trade when they can conduct e-commerce trade through online technologies (Cassia & Magno, 2022). The theory can be useful in understanding the importance of the least costs to be incurred by SMEs for international trade activities. Beltramino et al. (2020) stated that capital requirements are essential for SMEs to ensure cross-border e-commerce trading activities. Firms are generally involved in the least costs in those regions where the foreign entry mode is business-friendly and ensures business growth. They can adopt the channels where there are fewer powerful intermediaries, so firms do not have to face channel conflicts. Olalekan et al. (2024) also stated that cross-border payments can enable SMEs to attract customers through user-friendly, easy, and seamless transactions. This shows that the firms involved in cross-border e-commerce trading activities can undergo digitisation due to reduced costs, effort, and time.

6. CONCLUSION

It can be concluded that digitisation, sustainable activities, dynamic marketing capabilities, and new business models are the changes in cross-border e-commerce trade in the international trade patterns in the globalised economy, as SMEs expand into emerging markets. The empirical research identifies the changes that SMEs experience as they are involved in cross-border e-commerce in international activities. The review of 26 selected papers is crucial to understanding the importance of technological

developments as a result of the pandemic. SMEs are required to include new business models like a digital-first model, a sustainable model, and a decentralised structure to understand the emerging needs of the customers. The decentralised structure can influence employees to make decisions so that operational efficiency can be ensured. The systematic literature review helps in analysing the sources to understand that SMEs have to devise new ways to ensure internationalisation. As they face resource constraints, resource utilisation, technology development, and e-marketing tools can help cross-border e-commerce SMEs improve their business practices as they enter emerging nations. The sources show that the internet and advanced technology tools are the modes of foreign entry for SMEs in emerging nations. The research contributes to new knowledge and ideas by which SMEs can improve their operational practices in emerging nations that have user-friendly business policies and practices. Regulations and government support can enable cross-border e-commerce firms to change their business practices.

It can be said from the analysis that digitisation can overcome functional and informational barriers, and digital marketing tools and e-marketing can help SMEs overcome marketing barriers in emerging regions. The research has significant practical implications for SME managers and owners to understand the strategies to ensure cross-border e-commerce. SME managers and owners can adopt digital media, e-marketing tools, advanced technology, and decentralisation to meet emerging demands. Digital business models have to be adopted to replace traditional business models to improve cross-border e-commerce business activities. The research has also made theoretical implications for understanding the importance of TCT, where SMEs can enter emerging nations with the lowest transaction costs. The use of online technology can effectively help SMEs to attract and retain global audiences through cross-border e-commerce.

However, the research has a set of limitations as it could not explore the international trade changes brought about by SMEs in particular, emerging nations, as the findings are generalised. The research is confined to the systematic literature review, which is dependent on the existing sources. It could not explore the primary data, which could have helped in gaining real-life information and knowledge. The use of surveys and interviews could have enriched the research through practical data and information. Henceforth, future studies should be conducted on a particular emerging nation where the strategies of SMEs for cross-border e-commerce trade have made significant global trade changes. Future researchers should focus on the growth strategies of SMEs rather than the entry mode strategy in emerging nations. They can conduct research through primary data like surveys and interviews to analyse the problems and suggest solutions for SMEs to ensure organisational growth and success in new regions.

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APPENDIX

Table A.1. Data extraction (Part 1)

<i>Author name</i>	<i>Journal name</i>	<i>Country of study</i>	<i>Aim of the study</i>	<i>Methodology</i>	<i>Sample size</i>	<i>Design of the study</i>	<i>Main findings</i>
Dalocchio et al. (2024)	<i>Sustainability</i>	Italy	The study aims to find the importance of digitisation on cross-border e-commerce among Italian SMEs.	The research was performed by analysing the survey conducted by the Italian National Statistics Institute (ISTAT), called the "Survey on information and communication technologies in businesses".	The sample-based survey collected representative data on businesses with a minimum of 10 employees, conducted through self-compiled questionnaires in 2019. This was the last survey conducted by ISTAT.	Empirical design	The findings show that digitisation can influence SMEs to engage in cross-border e-commerce and gain consumer trust. They can expand their operations through their digital tools to improve their exports.
Wen et al. (2023)	<i>SAGE Open</i>	China	The study aims to find the international competitiveness of SMEs in the development of cross-border e-commerce.	The sample collected was from enterprises listed on the Small and Medium-sized Enterprise Board and Growth Enterprise Board of the Shenzhen Stock Exchange and its Science and Technology Board.	A total of 14,020 observations from 2007 to 2021 were recorded.	Empirical design	The findings of the research stated that cross-border e-commerce significantly promotes the internationalisation of SMEs. It helps them to get income and investment to gain significant international competitiveness.
Nguyen et al. (2024)	<i>Journal of Open Innovation: Technology, Market, and Complexity</i>	Vietnam	The study aims to find the adoption intention of cross-border e-commerce among Vietnamese SMEs.	A survey was conducted through a questionnaire distributed on Google Forms to the employees of Vietnamese SMEs. A Likert scale was used to frame the questionnaire. The data was analysed through partial least squares structural equation modelling (PLS-SEM).	The nonprobability sampling was used to collect responses from 400 employees of Vietnamese SMEs.	Quantitative	The findings of the research showed that "perceived behavioural control", "subjective norms", and attitudes are the factors influencing SMEs to adopt cross-border e-commerce.
Yao et al. (2024)	<i>Environment and Social Psychology</i>	China	The aim of the study is to analyse the digital transformation and managerial capabilities of SMEs for cross-border e-commerce.	A mixed-method approach was conducted through semistructured interviews and bibliometric analysis through sources from databases, Web of Science (WoS), and Scopus.	A total of 7 in-depth interviews were conducted through chain referral and purposive sampling techniques.	Mixedmethod	The findings show that SME entrepreneurs can drive digital transformation through digital management capability to improve organisational performance through cross-border e-commerce. Effective strategies can help managers ensure efficiency in global markets.
Olalekan et al. (2024)	<i>International Journal of Science and Research Archive</i>	Africa	The purpose of this paper is to analyse the cross-border payment firms across African regions through entrepreneurial facilities.	A systematic literature review was conducted from sources through databases like Google Scholar, JSTOR, Scopus, and WoS.	A total of 87 articles were selected through inclusion and exclusion criteria. The PRISMA framework was used to select the articles.	Empirical findings	The findings of the research pointed out that the rise of entrepreneurial SMEs in Africa is for cross-border payments to overcome trade barriers. This has improved innovation in fintech, financial inclusion, and digital access.
Eduardsen et al. (2023)	<i>Management International Review</i>	European regions	The study aims to find the moderating role of digital infrastructure, penetration, and home country on performance and organisational impact on cross-border e-commerce.	The dataset was collected from the Flash Eurobarometer survey on the companies involved in online export activities. The data provided detailed information about the online selling of European firms.	A total of 1,256 companies were included to collect data for the research.	Secondary research method	The findings showed that resource-oriented firms are more likely to gain success and superior performance in cross-border e-commerce. Knowledge, experience, skills, and attributes are required for SMEs to gain success in cross-border e-commerce.

Table A.1. Data extraction (Part 2)

Author name	Journal name	Country of study	Aim of the study	Methodology	Sample size	Design of the study	Main findings
Jingjing and Idris (2024)	<i>Malaysian Journal of Social Sciences and Humanities (MJSSH)</i>	China	The article aims to analyse the determinants of cross-border e-commerce through the TOE framework.	A survey was conducted online through a weblink questionnaire on a five-point Likert scale. The data was analysed through SPSS 27.0.	The sample size was 50 sales or purchasing managers, information technology (IT) directors, and other senior and middle managers of cross-border e-commerce SMEs in Hebei province.	Quantitative	The findings of the research showed that SMEs should adopt business models regarding cross-border e-commerce in gaining international competitiveness.
Celestin et al. (2024)	<i>Indo American Journal of Multidisciplinary Research and Review</i>	US, UK, Germany, Sub-Saharan Africa, India, Brazil	The paper aims to find the role of e-commerce in small business growth, focusing on SMEs in both emerging and developed markets.	Secondary sources, including industry reports, government publications, and academic journals, were used. Quantitative data and case studies were used to analyse the challenges that the SMEs face in emerging markets.	Secondary sources from industry reports, government publications, academic journals, and case studies.	Comparative analysis method	The findings showed that experienced SMEs utilise e-commerce to ensure a 30% revenue growth in emerging markets and 15% in developed regions.
Kim and Lim (2022)	<i>Journal of Theoretical and Applied Electronic Commerce Research</i>	Mongolia	The paper aims to find the "international dynamic marketing capabilities" of SMEs in driving growth in emerging nations.	Qualitative methods were applied through interviews in Mongolia.	A total of 13 managers and entrepreneurs were interviewed.	Qualitative study methods	The findings stated that versatile dynamic capabilities, networking capability, and entrepreneurial orientation can influence entrepreneurs in the cross-border e-commerce market.
Cumming et al. (2023)	<i>Management International Review</i>	Emerging and developed regions	The paper aims to find the increasing use of digitization and information and communication technologies (ICT) in facilitating global trade.	A systematic literature review was conducted.	A total of 49 articles were used.	Literature sources were used	The findings showed that e-commerce policy is important for global businesses due to the growing e-commerce demand.
Elia et al. (2021)	<i>Journal of Business Research</i>	Italy	The paper aims to find the importance of the resource-based view on the role of digital capabilities and technologies in cross-border e-commerce.	An online survey was conducted on Italian companies in the B2C industries.	A final dataset of 102 Italian firms was selected. A total of 138 responses were collected.	Quantitative	The findings of the paper showed that even after facing financial constraints, SMEs generally do not face a weaker propensity to engage in digital exports, and companies adopting digital technologies can improve their digital export. The study shows that digital capabilities are important for companies to engage in digital export.
Wang et al. (2022)	<i>Sustainability</i>	China	The paper aims to find the cross-border e-commerce trading activities.	A survey was conducted through 30 questionnaires on the companies involved in cross-border e-commerce.	A total of 481 responses were obtained.	Quantitative	The findings showed that industrial clusters, along with cross-border e-commerce, can ensure sustainable coordinated development. Effective policies can ensure sustainable development practices of SMEs in cross-border trading activities.
Adeola et al. (2021)	<i>Journal of Entrepreneurship, Management and Sustainable Development</i>	Nigeria	The study aims to find the critical success factors of small businesses in emerging nations to improve the UNSDGs.	A survey was conducted on Nigerian business owners.	A total of 201 responses were recorded.	Quantitative	The findings showed that Nigerian SMEs require capital to flourish in global regions. These businesses can contribute to the UNSDGs to ensure potential growth.
Das, Kundu, et al. (2020)	<i>Technology Innovation Management Review</i>	Developing regions	The paper aims to find survival and technological adaptation strategies of SMEs in developing regions.	The sources were collected through the Global Competitive Index Report (GCIR) for the period 2012–2016 to gain information and data about the technology environment.	Secondary data was used from the GCIR 2012–2016.	Longitudinal study	The findings of the paper show that both external capabilities and institutional capabilities can help SMEs create sustainable technology environments. SMEs can use technology to improve cross-border trading activities in developing regions.

Table A.1. Data extraction (Part 3)

Author name	Journal name	Country of study	Aim of the study	Methodology	Sample size	Design of the study	Main findings
Petrovito and Pozzolo (2021)	<i>Small Business Economics</i>	Developing regions	The paper aims to find the constraints of the credit along with the exports of SMEs in developing and emerging regions.	The paper analysed a larger sample through cross-country studies.	A total of 19,000 SMEs that operate in 65 developing nations from 2003 to 2014, collected by the World Bank Enterprise Survey (WBES), were used.	Secondary research design	The findings showed that firms that operate in market-related countries can get a more friendly environment to deal with the negative effects of constraints on credit. This is because the implicit and explicit costs are lower in accessing foreign regions, so finding credit is easy.
Kwarteng et al. (2024)	<i>Aslib Journal of Information Management</i>	Czech Republic and Slovakia	The paper seeks to find the role of the unified theory of acceptance and use of technology (UTAUT) in explaining the adoption of digitalisation in European SMEs.	A survey was conducted on the owners and managers in SMEs, and data was analysed through the PLS-SEM method.	The cross-cultural sampling was adopted to gain responses from 188 owners and managers of SMEs.	Quantitative	The findings showed that performance expectancy, facilitating conditions, and competitive pressures influence the intentions of managers and owners of the SMEs for digitalisation. Facilitating conditions are the strongest predictors of the adoption of digitalisation for SMEs.
Tumiwa and Nagy (2021)	<i>Journal of Entrepreneurship and Small Business</i>	Indonesia and Hungary	The paper aims to find the role of MSMEs in emerging economies through a comparative study analysis between Indonesia and Hungary.	Secondary data was used to collect data and information regarding MSMEs from Hungary and Indonesia. The data was analysed through IBM SPSS Statistics 19.	Sources from 2008 to 2019 were included.	Quantitative approach	The findings of the research showed that Hungarian MSMEs negatively influence GDP due to declining population, whereas Indonesian MSMEs positively influence GDP due to subsidies of energy, low rates of interest, and tax reduction policy. Governments augment policy and ensure conditions for the growth of MSMEs by mitigating barriers like a lack of funds.
Das, Rangarajan, et al. (2020)	<i>Journal of Asia Business Studies</i>	Asian regions	The article aims to conduct a literature review to analyse the current status of corporate sustainability (CS) practices, challenges in SMEs, and suggest solutions to manage sustainable practices.	A high level of literature review was conducted to understand the differences and commonalities of sustainable business behaviour related to perception, opinions, motivational aspects, and issues that SMEs face in various locations.	A total of 100 papers were selected within 2010–2017 from EBSCO, Emerald, and ProQuest databases.	Systematic literature review	The findings of the paper showed that SMEs neglect environmental and social practices in emerging markets, so it suggests governance, regulatory framework, fiscal aspects, along with accountability to ensure sustainability value in SMEs. Facilitating cross-border trade agreements by the government can improve the cross-border trade of SMEs.
Beltramino et al. (2020)	<i>Journal of Intellectual Capital</i>	Argentina	The study aims to analyse the importance of structural capital of SMEs in the organisational performance and innovation among SMEs in Argentina.	A survey was conducted on the managers of SMEs. The data was analysed using PLS-SEM.	The sample was 259 industrial SMEs with 10 to 200 employees situated in the Province of Cordoba, Argentina, through stratified sampling.	Quantitative	The findings showed that acquisition of IT and knowledge management, organizational cultures and structures, systems, and processes positively influence the innovation capacity of SMEs. Structural capital can enable SMEs to drive good performance and competitiveness.
dos Reis and Machado (2020)	<i>Revista Gestão & Tecnologia</i>	Argentina, Chile, and Colombia	The purpose of this study is to analyse the role of e-commerce in emerging regions.	In-depth interviews were conducted.	A total of six interviewees were selected for the research.	Qualitative research	The findings showed that logistics and telecommunication infrastructure, the electronic payment options, infrastructural services, and the South American consumer propensity are external factors that influence global operations by e-commerce.

Table A.1. Data extraction (Part 4)

Author name	Journal name	Country of study	Aim of the study	Methodology	Sample size	Design of the study	Main findings
Costa and Castro (2021)	<i>Journal of Theoretical and Applied Electronic Commerce Research</i>	Global regions	The study aims to find the role of online SMEs to ensure e-commerce in global markets to survive and engage modern-age customers.	A systematic literature review was conducted through PRISMA framework, and quantitative and qualitative analysis was conducted to identify the technological progress in this e-commerce era.	A total number of 32 indexed articles from 2003 to 2021 were selected.	Systematic literature review	The findings showed that SMEs should change their business strategies towards e-commerce for long-term survival. Digital platforms can enable the SMEs to ensure longterm sustainability.
Abdulkarem and Hou (2022)	<i>SAGE Open</i>	China	The paper aims to find the influence of the adoption of the e-commerce environment among Chinese SMEs.	An online survey questionnaire was used through survey to collect the data from Chinese SMEs' foreign managers and businesses involved in foreign trade. The responses were collected through a five-point Likert scale. Data were analysed through the structural equation modelling (SEM) by using SmartPLS 3 software.	The sample size was 208 foreign managers and owners of Chinese SMEs involved in foreign trade.	Quantitative	The findings showed that environmental and organisational context positively influence SMEs for cross-border e-commerce. Technology factors also influence SMEs to adopt cross-border e-commerce.
Du and Dzamankulov (2023).	<i>International Journal of eBusiness and eGovernment Studies</i>	China	The study aims to analyse the development of cross-border e-commerce in China.	A survey was deployed in the research. Data was analysed through the SEM.	The total sample size was 300 Chinese employees working in cross-border trade. Convenience sampling was used to select the participants.	Quantitative	The findings showed that there is an important correlation between cross-border e-commerce sales and market share. There is also a significant correlation between sales of cross-border e-commerce and the regulatory environment. Product sustainability by the firms can enable them to gain a competitive advantage.
Zhu and Ahamat (2023)	<i>Journal of Information Systems Engineering and Management</i>	Malaysia	The study aims to analyse the adoption of regulatory compliance in information systems of foreign investment management in Malaysia through the moderating role of innovation management.	A cross-sectional survey design was conducted.	The total sample size was 230 Malaysian foreign investment management firms through a structured questionnaire. Purposive sampling was used to choose participants.	Cross-sectional research design	The findings show that the adoption of e-commerce positively influences regulations in the information systems regarding Malaysian foreign investment management. Organisations with robust information security and IT capabilities can accomplish higher degrees of compliance with regulations in e-commerce.
Igbinenikaro and Adewusi (2024).	<i>International Journal of Management & Entrepreneurship Research</i>	Cross-border e-commerce	The purpose of this paper is to analyse the development of global policy guidelines for managing cross-border e-commerce.	Existing sources and case studies were used.	Not applicable	Secondary research	The findings showed the developing global policies that are crucial for managing cross-border insolvencies in the "digital economy" to promote economic stability, facilitate global commerce, and safeguard the interests of creditors and stakeholders in an increasingly connected era.
Zhong et al. (2022)	<i>Sustainability</i>	China	The paper focuses on the importance of cross-border e-commerce to augment economic growth through empirical findings on Chinese pilot zones.	The theoretical mechanism and empirical strategy were conducted.	33 China's cross-border e-commerce comprehensive pilot zones launched in 2015, 2016, and 2018 were selected to collect data and information.	Secondary research	The findings showed that the construction of China's cross-border e-commerce pilot zone can augment economic growth by three channels: construction of urban digital trade, openness of trade, and conglomeration of industries of the information service industry.