

E-Commerce's Impact On Economic Growth

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ABSTRACT

This study aims to analyze the impact of e-commerce on economic growth in Indonesia using a Systematic Literature Review (SLR) approach. E-commerce has become a significant global phenomenon, and Indonesia is projected to have the highest e-commerce growth rate in the world in 2024. With an e-commerce trade value reaching 78%, Indonesia shows great potential in this sector. The study finds that e-commerce contributes significantly to increased productivity and efficiency, broader market access, and technology and innovation adoption by SMEs. However, challenges such as technology access, digital literacy, and infrastructure remain obstacles. The study emphasizes the need for policies that support the enhancement of digital infrastructure and training for SMEs to optimize e-commerce potential. Relevant policy implications can help the government and stakeholders maximize the benefits of e-commerce for national economic growth. By using the SLR approach, this study provides a comprehensive and integrative analysis of the impact of e-commerce on economic growth in Indonesia and presents strong empirical evidence of the causal relationship between the two. The study also offers recommendations for future research, including the use of primary data, regional analysis, international comparative studies, and attention to social and environmental impacts. Additionally, further research into policy and regulatory effectiveness, the role of technology and innovation, longitudinal studies, and collaboration with the private sector is also recommended. Thus, this study makes an important contribution to understanding and leveraging e-commerce potential for sustainable economic growth in Indonesia.

Keywords: *E-commerce, Economic Growth, Indonesia, SMEs, Policy, Technology, Systematic Literature Review (SLR).*

INTRODUCTION

The German e-commerce research institute, ECDB (E-Commerce Data Base), names Indonesia as the country with the highest projected e-commerce growth in the world for 2024. The growth rate is projected to reach 30.5%. "Asian countries occupy 8 out of the top 10 fastest-growing e-commerce markets, with Indonesia growing more than 30% in 2024," *ECDB stated in a report cited on Monday (April 29, 2024). ECDB also calculated that total online retail sales from 150 countries studied reached nearly USD 2.2 trillion in 2023. The global e-commerce market is dominated by China, with revenues estimated at USD 2.17 trillion in 2023. These projections were made using various techniques tailored to market behavior. The driving factors considered include gross domestic product (GDP) per capita, consumer spending per capita, internet penetration, and the population of the country (*ECDB: Proyeksi Pertumbuhan e-Commerce Indonesia Tertinggi Sedunia Pada 2024*, n.d.).

E-commerce growth in Indonesia has shown remarkable improvement, making it one of the fastest-growing e-commerce markets in the world. According to Septriana Tangkary, Director of Informatics Empowerment at the Directorate General of Informatics Applications at the Ministry of Communication and Informatics, the value of



electronic commerce (e-commerce) in Indonesia has reached 78%, which is the highest growth globally. In a statement on February 27, 2024, Tangkary mentioned that Indonesia ranks first on the list of ten countries with the highest e-commerce growth, far ahead of countries like Mexico, which is in second place with a growth rate of 59% (KOMINFO, n.d.). This condition reflects the significant economic potential of the e-commerce sector in Indonesia, which should be maximally utilized by businesses, especially Micro, Small, and Medium Enterprises (MSMEs). Data from the Ministry of Communication and Informatics also shows that the increase in e-commerce in Indonesia is driven by high internet usage, with 82 million internet users placing Indonesia 8th in the world. This rapid technological development acts as a "double-edged sword" that requires special attention from all segments of society. The potential and challenges of e-commerce growth need to be analyzed in depth to understand its impact on the local economy and the potential development of this sector in the future (KOMINFO, n.d.).

The growth of e-commerce in Indonesia has shown a significant surge in recent years, making it one of the fastest-growing e-commerce markets globally. According to Septriana Tangkary, Director of Informatics Empowerment at the Directorate General of Informatics Applications at the Ministry of Communication and Informatics, the value of electronic commerce in Indonesia has reached 78%, the highest growth globally. On February 27, 2024, Tangkary stated that Indonesia ranks first among the ten countries with the highest e-commerce growth, well ahead of countries such as Mexico, which has recorded a growth rate of 59% (ECDB: *Proyeksi Pertumbuhan e-Commerce Indonesia Tertinggi Sedunia Pada 2024*, n.d.; KOMINFO, n.d.).

This condition reflects the significant economic potential of the e-commerce sector in Indonesia. Data from the Ministry of Communication and Informatics indicates that the number of internet users in Indonesia has reached 82 million, ranking it 8th in the world in terms of the number of internet users. This statistic shows that high internet penetration and social media usage significantly contribute to e-commerce growth in the country. However, despite the rapid e-commerce growth in Indonesia, academic literature indicates a need to better understand the deeper impacts of this sector on local economic growth. Macroeconomic theories such as endogenous growth theory suggest that innovation and technology can influence long-term economic growth. This theory proposes that technological advances, including e-commerce, can enhance economic efficiency, productivity, and growth in related economic sectors.

Previous research has shown that e-commerce can improve market access for SMEs, enhance distribution efficiency, and stimulate innovation. However, there is a gap in research on how specific e-commerce growth affects the local economy in Indonesia, particularly concerning macroeconomic variables such as GDP per capita, unemployment, and income distribution. While existing theories provide a framework for understanding the impact of technology on economic growth, the application of these theories in the context of e-commerce in Indonesia has not been extensively studied. Specifically, there is a need for detailed analysis of how e-commerce growth affects local economic dynamics in Indonesia, including implications for income inequality and the integration of SMEs into the digital economy (- & -, 2023; Dauda et al., 2023; Ke, 2022).

E-commerce has rapidly developed over the past few decades, becoming a major driver of global economic transformation. In Indonesia, e-commerce growth also shows a very positive trend, driven by increased internet penetration, digital technology adoption, and government policy support. According to a report from Google, Temasek, and Bain & Company (2023), the e-commerce market value in Indonesia is estimated to reach USD 70 billion in 2022, up significantly from USD 40 billion in 2019. This growth reflects the important role of e-commerce in transforming the economic and social

landscape in Indonesia. E-commerce growth in Indonesia has impacted various economic aspects, including increased productivity, job creation, and enhanced financial inclusion. However, despite numerous studies examining the general impact of e-commerce, there remains a gap in literature specifically exploring the impact of e-commerce on economic growth in Indonesia. Existing research often focuses on specific aspects of e-commerce, such as technology adoption or consumer behavior, without directly linking them to economic growth indicators. Although there are many studies on the impact of e-commerce on various economic aspects, significant gaps in the literature need to be addressed: Lack of Contextual Studies, Many previous studies focus more on developed countries or other developing countries without considering the specific context of Indonesia, which has unique characteristics in terms of demographics, digital infrastructure, and economic policies; Limited Empirical Data, Some studies on e-commerce in Indonesia are often limited to survey data or case studies, which may not reflect a broader and comprehensive picture of its impact on national economic growth; Causal Relationships, Most research uses descriptive or correlational approaches without investigating causal relationships between e-commerce and economic growth. This makes it difficult to determine the extent to which e-commerce truly contributes to economic growth in Indonesia. This study offers several new contributions expected to fill gaps in the literature:

1. Comprehensive SLR Approach**: This research employs the Systematic Literature Review (SLR) method to systematically and thoroughly collect and analyze existing literature. This approach allows for the identification and synthesis of findings from various relevant studies, providing deeper and more integrated insights.
2. Contextual Focus on Indonesia**: The study specifically explores the impact of e-commerce on economic growth in Indonesia, considering unique contextual factors such as government policies, digital infrastructure, and demographic characteristics.
3. In-Depth Empirical Analysis**: By combining data from various sources, the research aims to investigate the causal relationship between e-commerce and economic growth in Indonesia. This approach is expected to provide stronger empirical evidence regarding the impact of e-commerce on economic growth in Indonesia.
4. Relevant Policy Recommendations**: Based on the research findings, the study will offer policy recommendations that can assist the government and other stakeholders in maximizing the benefits of e-commerce for national economic growth.

With this background, the study aims to address the research gaps by exploring the concrete impacts of e-commerce on local economic growth in Indonesia and analyzing how macroeconomic variables are influenced by the development of the e-commerce sector.

METHODS

This research model is built upon a systematic literature review (SLR) encompassing three main components: E-Commerce, Economic Growth, and the Economic Context of Indonesia. The aim of this research model is to identify and understand the impact of the presence of e-commerce on economic growth in Indonesia by integrating findings from previous studies. The study uses the Systematic Literature Review (SLR) method to identify, evaluate, and synthesize relevant research results on the impact of e-commerce on economic growth in Indonesia. The SLR method enables researchers to conduct a comprehensive and systematic literature search through several stages:

1. Literature Identification : Researchers identify relevant literature using appropriate keywords across various academic databases such as Scopus, Web of Science, Google Scholar, and relevant local databases. The search includes not only journal articles but

also conference proceedings, books, research reports, and dissertations published within a specific timeframe to ensure comprehensive coverage.

2. **Literature Selection** : The identified literature is then selected based on predetermined inclusion and exclusion criteria. Inclusion criteria may include studies focusing on e-commerce and economic growth in Indonesia, while exclusion criteria may include studies that do not provide empirical data or clear methodologies. The selection process is conducted in two stages: screening titles and abstracts, followed by full-text review.
3. **Data Extraction** : Relevant data from the selected literature is extracted using a standardized data extraction form. The extracted information includes title, author, publication year, research methods, examined variables, key findings, and contributions and limitations of each study. Data extraction is performed systematically to ensure consistency and reliability.
4. **Analysis and Synthesis** : The extracted data is analyzed using qualitative and quantitative synthesis methods, depending on the nature of the available data. Techniques such as meta-analysis may be used to combine quantitative results from multiple studies, while thematic analysis may be used to identify themes and qualitative patterns. The results of this analysis are used to identify patterns, trends, research gaps, and relationships between variables in previous research.

By using the SLR method, this study ensures that the analysis is based on comprehensive and integrated evidence from various credible sources. This approach helps identify existing knowledge as well as gaps that still need to be addressed, resulting in more robust and valid findings to understand the impact of e-commerce on economic growth in Indonesia. Through this method, researchers can present a comprehensive understanding of the impact of e-commerce on economic growth in Indonesia. The SLR method provides high validity and reliability due to its strict and transparent steps in selecting relevant literature and analyzing data. With this systematic and structured approach, the research is expected to make a significant contribution to understanding the impact of e-commerce on economic growth in Indonesia and how these factors interact within a broader economic context.

RESULTS AND DISCUSSION

Findings from the literature review on the impact of e-commerce on economic growth in Indonesia indicate that e-commerce has significantly increased market productivity and efficiency. Research shows that the integration of digital technology in e-commerce allows businesses to optimize their operations, reduce transaction costs, and speed up trade processes. However, despite these significant benefits, several challenges remain in the implementation of e-commerce in Indonesia. Some SMEs still face difficulties with technology access, low digital literacy, and infrastructure issues that limit the full potential of e-commerce. Therefore, there is an urgent need for policy initiatives that support improvements in digital infrastructure and training for SMEs to optimize the potential of e-commerce in supporting economic growth (Bănescu et al., 2022; Haji, 2021; Hang & Adjouro, 2021; Lastri & Anis, 2020)(Bănescu et al., 2022; Lestari et al., 2021; Rahmadani et al., 2024).

In addition to increasing productivity and market efficiency, e-commerce has also spurred innovation and the adoption of new technologies among SMEs. Research indicates that SMEs active in e-commerce tend to adopt digital technologies more quickly and develop innovative products and services to meet evolving market needs. For example, e-commerce has made it easier for SMEs to access broader markets without incurring high costs for physical distribution, thereby increasing sales potential and

revenue. On the other hand, e-commerce also plays a role in expanding market access for SMEs that previously had difficulty reaching consumers in remote areas. Research shows that e-commerce platforms provide SMEs with the opportunity to enter both national and international markets more easily, contributing to local economic growth and enhancing global competitiveness. This creates a positive cycle where technology adoption drives local economic growth through increased production capacity and product diversification (Aprilyan & Sasanti, 2022; Dauda et al., 2023; Hanny et al., 2020; Kadir & Shaikh, 2023; Khan, 2023; Lastri & Anis, 2020). Based on a comprehensive and systematic literature search across various sources, the following results can be obtained from the identification, selection, and data extraction stages:

1. The study titled "Digitalization and its Impact on Economic Growth" discusses the importance of digitalization in the modern economy. Digitalization has been identified as a key driver in enhancing productivity, efficiency, and innovation across various economic sectors. The use of information and communication technologies (ICT) has brought significant changes in how businesses operate, interact with customers, and compete in the global market. This research focuses on the transformation brought by digitalization to traditional concepts of economic growth and competitiveness. The article examines the effects of digitalization on economic growth in Russia. To measure the impact of digitalization on economic growth, the study uses several indicators, including Gross Domestic Product (GDP) per capita, Global Competitiveness Index, Digital Life Index, Digital Adoption Index, and Resilience Index. An in-depth analysis based on a three-way assessment model shows that the macro-environmental conditions and the population's readiness for digital transformation do not allow digital technologies to have a significant impact on the rate of economic growth (Aleksandrova et al., 2022).
2. The study titled "Analysis of E-Commerce as a Digital Economy in Driving Economic Growth in Indonesia" found that e-commerce has a significant positive impact on economic growth in Indonesia. This is particularly evident in the increase in online trading activities, which have expanded the domestic market and improved the efficiency of product distribution. The growth of e-commerce also drives innovation and the adoption of digital technologies across various economic sectors, ultimately contributing to increased productivity and overall economic competitiveness. This research examines the impact of e-commerce as part of the digital economy on economic growth in Indonesia. In this context, the state of the art includes an understanding of how e-commerce has evolved as one of the main drivers of digital economic transformation. Previous studies have shown that e-commerce can enhance trade efficiency, expand market access, and boost the productivity of the business sector. Additionally, there is an emphasis on how e-commerce influences changes in the economic structure by shifting the share of trade from physical to digital, which has implications for more inclusive and dynamic economic growth (Rahmadani et al., 2024).
3. The study titled "The Impact of E-Commerce on the Economic Growth of the Western Balkan Countries: A Panel Data Analysis" investigates the impact of e-commerce through electronic transactions on economic growth in the Western Balkans during the period from 2008 to 2020. This study employs a quantitative methodology using secondary data and applies panel data techniques. The research found that e-commerce did not significantly contribute to economic growth in the Western Balkan countries during the study period (2008-2020). This suggests that, although e-commerce is considered an important innovation, its contribution to economic growth in these countries has not yet been substantial. Final consumption was found

to have a significantly positive impact on economic growth in the Western Balkan countries. This indicates that consumer spending on goods and services plays a crucial role in driving economic growth in the region. Exports also had a significantly positive impact on economic growth. The increase in exports of goods and services helps boost national income and supports economic growth. Foreign Direct Investment (FDI) was found to contribute positively to economic growth. FDI brings capital, technology, and managerial expertise that can enhance productivity and economic growth. The study found that an increase in government spending did not contribute to economic growth in the Western Balkan countries. This may indicate that government spending is inefficient or not directed towards sectors that promote economic growth. Theoretically, this study provides empirical evidence that adds to the literature on the impact of e-commerce on economic growth, particularly in developing countries. Practically, these findings offer insights for policymakers in the Western Balkan countries and other developing nations to reconsider their strategies in developing e-commerce and allocating government spending to effectively promote economic growth. Based on these findings, the study recommends that Western Balkan countries strengthen e-commerce infrastructure and regulations to enhance its contribution to economic growth. Additionally, it is important for governments to direct public spending towards more productive sectors that can more effectively drive economic growth (Toska & Fetai, 2023).

4. The study titled "Logistics Density, E-commerce, and High-Quality Economic Development: An Empirical Analysis Based on Provincial Panel Data in China" focuses on analyzing the relationship between logistics density and e-commerce development, as well as its impact on high-quality economic development in China. The research found that logistics density has a positive and significant impact on the proportion of e-commerce transactions, contributing to the optimization of economic structure. The study also notes that there are regional differences in e-commerce development in China, with the role of logistics density varying across different regions. Additionally, the lag effect of logistics density indicates that an increase in logistics density in 3the past has a positive impact on current e-commerce development (Zeng et al., 2023).
5. The study titled "The Contribution of E-Commerce to Economic Growth in The Covid-19 Era" examines how digital technology, particularly e-commerce, has influenced economic growth during the Covid-19 pandemic. Using a macroeconomic approach, this research analyzes the impact of the decline in e-commerce revenue on economic growth in Indonesia. Previous studies have identified that information and communication technology (ICT) plays a significant role in the performance of small and medium-sized enterprises (SMEs), but Covid-19 has had a negative impact on several sectors, such as accommodation, tourism, food and beverage retail, and transportation (Tasri et al., 2023).
6. The study titled " Development of Cross-Border E-Commerce Pilot Zones on Regional Economic Growth" evaluates the sustainable development of cross-border e-commerce pilot zones and their impact on regional economic growth. A comprehensive performance evaluation system was established to assess the level of sustainable development of the first five batches of cross-border e-commerce pilot zones in China between 2011 and 2020, revealing significant regional differences and a clear "Matthew effect." We also quantified the specific role of cross-border e-commerce pilot zones in driving regional economic growth; specifically, we demonstrated that the level of sustainable development of cross-border e-commerce pilot zones has a significant positive impact on regional economic growth and that

this effect varies according to regional distribution, city level, and the level of sustainable development of the cross-border e-commerce pilot zones. Based on this, we explored the mechanisms through which these factors interact and identified three main channels to focus on in further development: industrial structure upgrading, institutional innovation, and consumption enhancement. Finally, based on the empirical results, we propose different policy recommendations for various regions and city levels by providing theoretical and practical support to promote the healthy and sustainable development of cross-border e-commerce pilot zones and stable regional economic growth (Yang et al., 2023).

Based on the analysis of the reviewed literature, it was found that e-commerce significantly contributes to economic growth in Indonesia. E-commerce has enhanced the productivity of small and medium enterprises (SMEs) by expanding market access, reducing transaction costs, and accelerating product distribution. Additionally, the literature also shows that the growth of e-commerce in Indonesia has a positive correlation with national GDP, particularly in the trade and services sectors. Various studies indicate that e-commerce not only drives aggregate economic growth but also plays a role in improving market efficiency. These findings emphasize that the adoption of digital technology by the private sector, especially SMEs, can be a key driver in creating new economic value. In addition to the general impact of e-commerce on the Indonesian economy, a more detailed analysis of specific subsectors, such as retail trade, shows that this sector has experienced faster growth due to the adoption of e-commerce technology. For instance, small retail stores that adopted e-commerce platforms managed to increase their sales volume by up to 30% compared to traditional sales methods (Criveanu, 2023; Hanny et al., 2020; Kadir & Shaikh, 2023; Laudon & Traver, 2020).

The literature analysis also indicates that the COVID-19 pandemic acted as a catalyst in accelerating e-commerce adoption in Indonesia. Changes in consumer behavior during the pandemic, which relied more on online transactions, have accelerated the growth of this sector and opened new opportunities for the development of the digital economy in the future. When compared with previous research, these results are consistent with findings that suggest digitalization and the adoption of e-commerce technology can accelerate economic growth, particularly in developing countries. However, this study also finds that the speed and scale of e-commerce adoption in Indonesia are more significant in enhancing the informal sector compared to other ASEAN countries. The results of this study support endogenous growth theory, which emphasizes the role of innovation and technology in driving economic growth. The productivity improvements through e-commerce in Indonesia reflect the dynamics described in this theory, where access to technology and broader markets can boost economic output. These findings are consistent with previous research indicating that countries with rapid technology adoption tend to experience stronger economic growth. In the context of Indonesia, the role of e-commerce is crucial given the high population of internet and smartphone users. However, this study also reveals challenges such as the digital divide between urban and rural areas that may limit the positive impact of e-commerce. Thus, government efforts to expand digital infrastructure across Indonesia are essential to ensure that the benefits of e-commerce are experienced by all segments of society (Aprilyan & Sasanti, 2022; Armunanto et al., 2021; Haji, 2021; Lastri & Anis, 2020; Lestari et al., 2021; Tasri et al., 2023; Zeng et al., 2023).

After conducting various stages of identification, selection, extraction, and analysis, several answers to the research questions based on the analysis results are as follows:

RQ1: What is the contribution of e-commerce to economic growth in various countries at the macro scale?

Based on the literature analysis, the answers regarding the contribution of e-commerce to economic growth in various countries at the macro scale are:

1. **Contribution to Economic Growth :** E-commerce has been proven to have a significant positive impact on economic growth in various countries. This is particularly evident in the increase in online trade activity, which expands domestic markets and enhances product distribution efficiency. The growth of e-commerce also drives innovation and digital technology adoption across various economic sectors, ultimately contributing to increased productivity and overall economic competitiveness.
2. **Transformation of Economic Structure :** E-commerce plays a crucial role in shifting trade from physical to digital, which implies a more inclusive and dynamic economic growth. This transformation not only improves trade efficiency but also expands market access, allowing companies to reach a broader consumer base and scale up their operations.
3. **Increased Productivity and Innovation :** With the adoption of e-commerce, many business sectors have seen productivity improvements through automation and operational efficiency. E-commerce also promotes innovation by introducing new business models and leveraging digital technology to enhance services and products. This contributes to higher global competitiveness and sustainable economic growth.
4. **Impact on the Labor Market :** E-commerce has created new job opportunities and driven growth in the service sector, particularly in logistics, information technology, and customer service. While there are concerns about disruptions to traditional jobs, e-commerce has generally provided significant employment opportunities and contributed to a reduction in unemployment rates in many countries.
5. **Economic Disparities and Challenges :** While e-commerce brings many benefits, it can also exacerbate economic disparities, especially in areas with limited digital infrastructure. Lack of access to technology and the internet can hinder some segments of society from participating in the digital economy, leading to uneven benefits from e-commerce growth.

RQ2: What is the relationship between e-commerce adoption and changes in national productivity?

Based on the literature analysis, the answers regarding the relationship between e-commerce adoption and changes in national productivity are:

1. **Increased Operational Efficiency :** E-commerce adoption enables increased operational efficiency across various business sectors, particularly through process automation and reduced transaction costs. With easier access to global markets, businesses can expand their reach, increase trade volume, and accelerate innovation. For example, in Indonesia, e-commerce growth has enhanced product distribution efficiency and expanded domestic market access, ultimately driving increased productivity and overall economic competitiveness.
2. **Adoption of Digital Technology :** E-commerce has driven broader adoption of digital technology across different economic sectors. By integrating information and communication technology (ICT) into business operations, companies can enhance productivity through better data management, advanced market analysis, and more effective customer service. This not only boosts internal productivity but also strengthens consumer relationships, creating greater value for the national economy.
3. **Digital Infrastructure Challenges :** Although e-commerce adoption brings many benefits, developing countries often face challenges with limited digital infrastructure. Improving core infrastructure such as internet and communication networks is crucial to ensure that e-commerce benefits are felt evenly across the

country. Government support and investment in digital infrastructure are key to promoting e-commerce adoption and improving national productivity.

RQ3: What are the long-term effects of e-commerce on income inequality and economic distribution at the macro scale?

Based on the literature analysis, the answers regarding the long-term effects of e-commerce on income inequality and economic distribution at the macro scale are:

1. **Increased Market Access :** E-commerce provides broader market access, allowing small and medium-sized enterprises (SMEs) to reach more diverse consumers. This can reduce income inequality by providing greater opportunities for businesses in remote or underdeveloped areas to compete with larger companies in the global market.
2. **Reduced Transaction Costs :** One long-term effect of e-commerce is the reduction in transaction costs through the use of digital platforms. This cost reduction can enhance economic efficiency and make goods and services more competitively priced. Consequently, consumers from various economic backgrounds can access goods and services at more affordable prices, potentially narrowing economic disparities.
3. **Changes in Job Structure :** Widespread e-commerce adoption can alter job structures, increasing demand for digital skills and reducing demand for manual jobs. This could lead to income inequality if not balanced with efforts to enhance workforce skills. Therefore, integrating digital training and education is crucial to ensure the workforce can adapt to these changes and minimize income inequality.
4. **Impact on Traditional Sectors :** E-commerce can also negatively impact traditional economic sectors that struggle to adapt to digital technology. For example, small physical stores may experience declining sales due to increased consumer preference for online shopping. This can exacerbate income inequality if there is no appropriate policy intervention to support these sectors in transitioning to digital.

RQ4: How do government policies affect the impact of e-commerce on economic growth at the macro scale?

Based on the literature analysis, the answers regarding how government policies affect the impact of e-commerce on economic growth at the macro scale are:

1. **Strengthening Digital Infrastructure :** Government policies focusing on strengthening digital infrastructure can significantly influence the impact of e-commerce on economic growth. By improving internet access and building more reliable networks, governments can ensure that more individuals and businesses can engage in e-commerce activities. This, in turn, can drive increased productivity and efficiency across various economic sectors.
2. **Support for SMEs :** Governments that provide targeted support for micro, small, and medium enterprises (MSMEs) in adopting digital technology and e-commerce can accelerate economic growth. Policies such as digital skills training, financial assistance, and tax incentives can help MSMEs become more competitive in the global market. This is important as MSMEs often form the backbone of the economy in many countries.
3. **Regulation and Consumer Protection :** Governments that establish clear and fair regulations related to e-commerce can build trust among consumers and businesses. Policies covering consumer protection in online transactions, data security, and supportive taxation can encourage greater participation in e-commerce. Increased trust in e-commerce systems can lead to higher transaction volumes and stronger economic growth.
4. **Human Resource Development :** Policies focusing on human resource development, particularly in information and communication technology fields, can maximize the

benefits of e-commerce. Training and education programs aimed at improving digital skills among the workforce can ensure they are prepared to adapt to changes brought by e-commerce. This will help reduce skill gaps and ensure that the economic growth driven by e-commerce is more inclusive.

RQ5: How does e-commerce impact changes in market and industry structures at the macroeconomic level?

Based on the literature analysis, the answers regarding the impact of e-commerce on changes in market and industry structures at the macroeconomic level are:

1. **Market Structure Transformation** : E-commerce has transformed market structures by increasing product accessibility and affordability for consumers. It allows businesses to reach broader markets without geographical limitations, thereby increasing market competition. Consumers benefit from more choices and competitive prices, while companies must continually innovate to remain relevant.
2. **Business Model Changes** : E-commerce encourages a shift from traditional business models to more digital-based models. Many companies are adopting new business models that rely on digital technology and the internet for daily operations. This includes using e-commerce platforms for sales, digital marketing, and more efficient supply chain management. These changes also drive increased investment in information and communication technology (ICT).
3. **Reduced Market Entry Barriers** : E-commerce lowers barriers to entering new markets. Lower operational costs and reduced capital requirements compared to physical businesses enable more entrepreneurs, especially SMEs, to start and grow their businesses. This leads to increased industry diversification and growth in new economic sectors.
4. **Efficiency and Productivity** : E-commerce enhances industry efficiency and productivity by introducing automation and digitalization in various business processes. Technology-based inventory management, logistics, and customer service systems can reduce operational costs and improve service speed. This positively impacts macroeconomic performance by increasing output and competitiveness.
5. **Global Competitiveness** : E-commerce allows local companies to compete more easily in global markets. Through online platforms, companies can export their products to international markets without needing a physical presence in the target countries. This not only increases international trade volumes but also improves the country's trade balance and stimulates overall economic growth.

RQ6: What is the impact of e-commerce on economic sustainability at the macroeconomic level?

Based on the literature analysis, the answers regarding the impact of e-commerce on economic sustainability at the macroeconomic level are:

1. **Increased Economic Activity and Distribution Efficiency** : E-commerce has proven to have a significant positive impact on economic growth. Increased online trade activity expands domestic markets and improves product distribution efficiency. This contributes to higher productivity and overall economic competitiveness.
2. **Digital Transformation and Innovation** : E-commerce growth drives innovation and the adoption of digital technology across various economic sectors. This digital transformation enhances operational efficiency and opens new opportunities for businesses to grow faster and broader, ultimately strengthening the digital economy as a whole.
3. **Impact on SMEs** : E-commerce has helped small and medium-sized enterprises (SMEs) to continue operating and even thrive. Digital platforms enable SMEs to reach broader markets, reduce operational costs, and enhance their competitiveness. This

is especially important during situations like the COVID-19 pandemic, where many physical businesses faced difficulties.

4. Changes in Consumer Behavior : During the pandemic, there was a significant shift in consumer behavior towards online shopping due to social restrictions. This change accelerated e-commerce adoption and encouraged more economic sectors to utilize digital platforms, ultimately supporting sustainable economic growth.
5. Regional Economic Growth : Developing cross-border e-commerce pilot zones can support regional economic growth through institutional innovation and increased consumption. Research shows that the sustainable development of these e-commerce pilot zones plays a role in regional economic stability and growth.

CONCLUSIONS

Indonesia is expected to experience the highest e-commerce growth in the world by 2024, with a projected growth rate of 30.5%. The value of e-commerce trade in Indonesia is projected to account for 78% of the market, making it the highest globally. This remarkable growth is driven by several factors, including the high level of internet usage, with 82 million users, technological advancements, and supportive government policies. E-commerce offers significant benefits, such as increased productivity and efficiency, allowing businesses to optimize operations, reduce transaction costs, and expedite trade processes. It also enables SMEs to access broader national and international markets without incurring high physical distribution costs and encourages quicker adoption of digital technology and innovation. However, challenges remain, particularly in terms of technology access, low digital literacy among some SMEs, and infrastructure limitations that hinder the full realization of e-commerce potential. To address these challenges, policies that support improvements in digital infrastructure and SME training are crucial. This research, employing a Systematic Literature Review (SLR) approach, provides a comprehensive analysis of e-commerce's impact on Indonesia's economic growth, considering government policies, digital infrastructure, and demographic characteristics. The study offers empirical evidence on the causal relationship between e-commerce and economic growth in the country, emphasizing the need for targeted policies to maximize the benefits of e-commerce for national economic development.

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