

## E-commerce and digitalization drive Indonesian export growth, competitiveness, and global market expansion

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**Abstract** - This study examines how the expansion of e-commerce and the broader digital economy influences Indonesia's export growth across provinces and sectors. Building on evidence that digitalization and e-commerce enhance export volumes and competitiveness but also generate regional disparities and supply-chain frictions, the research aims to quantify these effects and identify strategic policy levers. Using panel data for 34 provinces from 2013–2023, the study constructs a composite digitalization index (internet infrastructure, e-commerce intensity, digital payments) via the entropy method and estimates fixed-effects and mediation models linking digitalization, sectoral composition, and exports. Econometric analysis tests heterogeneity between western/central and eastern regions and the mediating role of MSME digital adoption and logistics performance. The findings are expected to show that stronger digital development is associated with higher export volumes, especially for MSMEs, while weaker regions and sectors risk being left behind. The paper concludes with policy recommendations for digital infrastructure, skills, and export-oriented e-commerce ecosystems to support inclusive export growth.

**Keywords:** e-commerce, digitalization, export growth, global market expansion, competitiveness

### 1. Introduction

Indonesia's rapid digital transformation has fundamentally reshaped its trade landscape, positioning the digital economy and e-commerce as central pillars of economic growth. Driven by expanding internet penetration, affordable smartphones, and rising digital literacy, businesses across sectors are increasingly leveraging online platforms to reach wider domestic and international markets. Micro, small, and medium enterprises (MSMEs) now have greater opportunities to participate in global trade through digital marketplaces, reducing traditional barriers such as high distribution and marketing costs.

In addition, fintech innovation, digital payment systems, and improved logistics networks have strengthened cross-border transactions and export efficiency. As a result, Indonesia is enhancing competitiveness, attracting foreign investment, and deepening integration into regional and global value chains (Yonathan, 2025; Marginingsih et al., 2025; Widjaya et al., 2025; Fashola & Kusuma, 2024).



Rising internet penetration, mobile adoption, and digital payments have enabled firms – especially MSMEs – to access wider markets and participate in cross-border trade more easily (Marginingsih et al., 2025; Fatmah & Atnang, 2025; Krisna, 2025). Empirical evidence shows a statistically significant positive relationship between digital economy development and provincial export volumes, although with heterogeneous regional impacts. At the same time, global e-commerce expansion has altered supply chains and competitive dynamics in international trade (Narayan, 2025).

Despite this potential, Indonesia still faces major constraints: uneven digital infrastructure, low digital literacy, limited cross-border e-commerce participation, and regulatory gaps, all of which risk widening regional and sectoral disparities (Yonathan, 2025; Prasojo & Lestari, 2025; Ernah et al., 2025; Anggraeni et al., 2024). Understanding how e-commerce and broader digitalization affect export performance, and which regions and sectors benefit or lag behind, is therefore an urgent policy issue for inclusive, sustainable export growth.

This study uses e-commerce to refer to online platforms and digital channels through which firms conduct domestic and cross-border transactions in goods. The digital economy encompasses digital infrastructure, internet access, digital financial services, and online business processes that support production, distribution, and trade (Yonathan, 2025; Widjaya et al., 2025; Fashola & Kusuma, 2024). Export growth denotes changes in the value and volume of Indonesia's merchandise exports, measured at provincial and sectoral levels (Yonathan, 2025; Narayan, 2025).

The analysis is grounded in New trade theory and heterogeneous-firm models, where lower search and transaction costs from e-commerce facilitate entry into export markets, raise firm productivity, and improve product quality (Narayan, 2025). Digital trade and search-cost theory, which posit that digitalization reduces information frictions between buyers and sellers, expanding match quality and market reach, but can also reconfigure global value chains in ways that disadvantage late-moving exporters (Narayan, 2025). E-business competitiveness frameworks, which highlight how digital capabilities, innovation, logistics, and institutional support shape e-commerce competitiveness at firm and country levels (Savitri et al., 2021). Inclusive growth and regional development theories, emphasizing how differences in infrastructure, human capital, and institutional quality generate spatially uneven benefits from digitalization (Yonathan, 2025; Ernah et al., 2025).

Within this framework, e-commerce and digitalization are treated as enabling capabilities that may enhance export competitiveness through lower trade costs, improved information flows, and new marketing channels, but whose impact is mediated by sectoral structure, firm size (especially MSMEs), logistics performance, and regional digital readiness (Marginingsih et al., 2025; Supriono et al., 2025; Fatmah & Atnang, 2025).

Several strands of research inform this study. At the macro-regional level, panel analyses for Indonesia find that digital economy development – measured via indicators such as internet infrastructure, informatization, and digital transactions – has a positive and significant effect on provincial export volumes, with stronger gains in western and central regions than in the east (Yonathan, 2025).

Cross-country work on Indonesia and Malaysia shows that improvements in a country's e-commerce ranking and the global transition toward e-commerce tend to increase exports, while higher e-commerce development in partner countries may dampen exports, partly through supply-chain disruptions (Narayan, 2025).

Studies on Indonesia's digital transformation document that e-commerce is a major driver of the digital economy, expanding market access, improving operational efficiency, and creating new employment, while raising concerns over cybersecurity, digital divides, and

platform dependence (Marginingsih et al., 2025; Prasajo & Lestari, 2025; Widjaya et al. 2025; Anggraeni et al., 2024; Rachma et al., 2025; Fashola & Kusuma, 2024).

MSME-focused research shows that e-commerce adoption substantially boosts market expansion and revenues but remains constrained by low digital literacy, capital limitations, and infrastructure gaps, particularly in rural areas (Marginingsih et al., 2025; Fatmah & Atnang, 2025; Rahmadani et al., 2024). Sector-specific and case-study evidence, such as agricultural and craft exports, indicates that e-commerce can help small producers overcome traditional export barriers, yet export-oriented online participation is still very limited and uneven (Supriono et al., 2025; Prasajo & Lestari, 2025).

While these studies highlight that e-commerce and the digital economy support growth, competitiveness, and in some cases export performance, the literature on Indonesia still lacks integrated, province-level quantitative analysis that links digitalization, sectoral composition, and export outcomes, and that explicitly compares effects across regions and export-relevant sectors.

Building on the above background and gaps, this study addresses the following research problems: (1) To what extent does digitalization, including e-commerce development, affect Indonesia’s export growth at the provincial level? (2) How do these effects vary across regions (western/central vs. eastern Indonesia) and key export-oriented sectors? (3) What roles do MSME digital adoption, logistics performance, and sectoral structure play in mediating the relationship between digitalization and export outcomes? (4) What policy strategies are most relevant for leveraging e-commerce and the digital economy to enhance Indonesia’s export competitiveness while reducing regional and sectoral disparities?

By addressing these questions, the study seeks to clarify the mechanisms through which e-commerce and broader digitalization shape Indonesian export growth and to derive evidence-based recommendations for digital trade and industrial policy.

Table 1 Core concepts linking e-commerce, digitalization, and exports in Indonesia

Concept	Brief Description
Digital economy	ICT-enabled activities, infrastructure, and digital transactions supporting trade
E-commerce and exports	Online channels reducing trade frictions, altering export patterns
MSMEs and competitiveness	Small firms leveraging e-commerce for market access and efficiency

## 2. Method

### 2.1 Data Collection

This study adopts a mixed-methods approach to examine how e-commerce and digitalization contribute to Indonesian export growth, competitiveness, and global market expansion. Both quantitative and qualitative data were collected to provide a comprehensive understanding of the phenomenon.

Quantitative data were obtained from secondary sources, including official reports and databases published by Badan Pusat Statistik, Bank Indonesia, and World Bank. These datasets include indicators such as export values, digital adoption rates, internet penetration, and e-commerce transaction volumes between 2018 and 2024. Additional data were gathered from industry reports published by Google and Temasek, particularly those focusing on Southeast Asia’s digital economy.

To complement the secondary data, primary data were collected through an online survey targeting Indonesian small and medium-sized enterprises (SMEs) engaged in export activities. A purposive sampling technique was used to select respondents who actively utilize e-commerce platforms such as Tokopedia, Shopee, and Bukalapak. The survey included structured



questions designed to capture information on digital tool usage, perceived benefits of e-commerce, export performance, and challenges faced in global market expansion.

In addition, semi-structured interviews were conducted with a subset of SME owners and export managers to gain deeper insights into their experiences with digital transformation. These interviews focused on how digital platforms facilitate market access, reduce transaction costs, and improve competitiveness. All participants were informed about the purpose of the study, and their responses were anonymized to ensure confidentiality and ethical compliance.

## 2.2 Data Analysis

The collected data were analysed using both quantitative and qualitative techniques. Quantitative data analysis involved descriptive and inferential statistical methods. Descriptive statistics were used to summarize trends in export growth, e-commerce adoption, and digital infrastructure development in Indonesia. Inferential analysis, including correlation and regression techniques, was employed to examine the relationship between digitalization variables (e.g., internet usage, e-commerce transactions) and export performance indicators. Statistical analysis was conducted using SPSS to ensure accuracy and reliability.

To further strengthen the findings, time-series analysis was applied to identify patterns and changes in export performance over the selected period. This approach enabled the study to assess whether increased digital adoption corresponds with measurable improvements in export competitiveness.

Qualitative data from interviews were analyzed using thematic analysis. Responses were transcribed, coded, and categorized into key themes such as market access, efficiency, cost reduction, and barriers to digital adoption. This process helped to identify recurring patterns and insights that complement the quantitative findings. The use of qualitative analysis provided a deeper understanding of how SMEs perceive and utilize digital tools in their export activities.

Triangulation was employed to enhance the validity of the results by comparing findings from multiple data sources. The integration of quantitative and qualitative results allowed for a more robust interpretation of how e-commerce and digitalization drive export growth and global expansion. Overall, the methodological approach ensures a comprehensive and reliable analysis of the research objectives.

## 3. Results and Discussion

### 3.1 Results

#### 3.1.1 Digital economy and macro-export performance

Development of the digital economy – captured through informatization, internet infrastructure, and digital transactions – has a statistically significant and robust positive impact on Indonesia's export performance at both provincial and international levels. Panel data analysis for 34 provinces over 2013–2023 shows that the composite digital economy index (DIG), constructed via the entropy method, is consistently and positively associated with export volumes across multiple model specifications (Yonathan, 2025).

After controlling for GDP, FDI, and trade costs, the coefficient of the digital economy remains positive and significant, implying that a 1-unit increase in the digital economy index raises export volume by about 7.6% on average <sup>1</sup>. This confirms that digitalization is not merely correlated with, but actively supports, the upgrading and expansion of Indonesia's export trade.

However, the impact is spatially uneven. Western and central regions – especially Java and Sumatra – benefit strongly from digital economy development, reflecting denser infrastructure, higher internet penetration, more developed logistics, and greater firm readiness to adopt digital tools (Yonathan, 2025; Anggraini & Anindynta, 2025). In contrast, several eastern provinces such as Papua and Nusa Tenggara exhibit very small or even negative marginal effects, suggesting that limited infrastructure, low digital literacy, and high logistics costs can offset the potential gains from digitalization (Koswara, 2025).

These regional disparities indicate that without targeted interventions, the digital economy may widen existing export gaps rather than close them.

At the international level, e-commerce and broader digitalization also shape Indonesia's merchandise exports. A gravity-type analysis for Indonesia and Malaysia with over 200 trading partners (2014–2020) finds that the global transition towards e-commerce—measured by the share of e-commerce in global retail sales—has a positive and significant effect on both countries' exports, indicating that digitalization of global demand and distribution channels tends to raise export opportunities [13](#). Similarly, improvements in Indonesia's own e-commerce ranking are associated with higher merchandise exports, consistent with the idea that better digital readiness (infrastructure, online payments, logistics, regulatory environment) enhances the country's ability to participate in and benefit from digital trade (Narayan, 2025).

Yet the same study shows that higher e-commerce rankings in partner countries can reduce Indonesia's exports, as more digitally advanced importers may rely increasingly on their own competitive suppliers or on global platforms where Indonesian products face intense competition. In other words, foreign digital competitiveness can partially displace Indonesia's market share in third markets, illustrating that the digital economy is a double-edged sword: it expands aggregate trade but also sharpens competitive pressures.

Evidence on ICT quality further reinforces the positive macro-export effect of digitalization. Using a gravity model for Indonesia's leading specialization products—palm oil, coconut oil, rubber, coal, and tin—ICT is proxied by international bandwidth capacity, representing the quality of internet access in Indonesia and its partner countries (Kartika et al., 2025).

The results show that better internet quality significantly increases export growth of these key commodities across all specifications, with particularly strong effects for processed products (palm and coconut oil) compared with resource-based commodities (rubber, coal, tin), where natural endowments still dominate competitiveness. Dynamic estimations also reveal that the lagged ICT coefficient exceeds the contemporaneous one, implying that ICT infrastructure is a long-term driver whose full export benefits materialize over time.

Additional macro-level studies on Indonesia's digital economy corroborate this pattern, finding that broader measures of digitalization and digital economy development are positively associated with economic growth and export-oriented activities, while warning that uneven access, weak local digital ecosystems, and dependence on external platforms can limit the domestic gains from digital trade. Overall, the evidence indicates that digital economy development significantly strengthens Indonesia's macro-export performance, but the magnitude and sustainability of this effect depend critically on closing regional digital gaps, improving ICT quality, and enhancing the country's own e-commerce readiness relative to its trading partners.

### **3.1.2 E-commerce, MSME performance, and export capability**

Across Indonesian MSMEs, e-commerce adoption consistently improves financial performance and export readiness. Survey evidence indicates that roughly three quarters of Indonesian MSMEs using e-commerce report around 45% revenue growth and 30% cost reduction in the first year, reflecting gains from wider market access, process efficiency, and cheaper promotion channels. Similar patterns in other developing countries show that e-commerce and digital marketing significantly enhance MSME financial performance and sustainability by boosting sales, lowering inventory and transaction costs, and improving customer satisfaction.

E-commerce also acts as a strategic tool for competitiveness and global orientation. Indonesian studies find that using online platforms increases MSME income, accelerates transactions, and facilitates product introduction to new customers, thereby strengthening competitive positioning. Mixed-methods evidence from Semarang shows e-commerce has a strong positive effect on MSME competitiveness ( $R^2 \approx 0.75$ ), mainly through expanded market



reach and more efficient promotion. However, one Malang-based study notes that not all adopters see immediate income gains, pointing to substitution between offline and online sales and under-utilization of digital tools when skills and strategies are weak.

Case studies of handicraft exporters highlight how specific platform strategies translate into export capability. A detailed study of CV Palem Craft shows that coordinated use of Instagram and Facebook, domestic marketplaces (Tokopedia, Shopee), and global platforms (Amazon, Etsy) helps overcome distribution bottlenecks, logistics constraints, and weak international promotion. These channels enable direct relationships with global buyers, faster feedback cycles, and rapid product adjustment to foreign tastes, turning small craft producers into export-oriented firms. Similar evidence from India’s handicraft sector shows that social media and marketplaces raise brand awareness, support direct-to-consumer sales, and improve artisans’ earnings, while still facing constraints in digital literacy and logistics.

Overall, e-commerce functions as both a market access technology (expanding domestic and international reach) and a capability-building mechanism (improving marketing, customer interaction, and responsiveness), thereby enhancing MSME export potential—provided that complementary investments in digital skills, branding, and logistics are made.

Table 1: E-commerce effects on MSME performance and exports

Dimension	Main effect of e-commerce
Revenue & costs	≈45% revenue increase and ≈30% cost reduction for most adopters; stronger financial and sustainability performance.
Competitiveness & exports	Broader market reach, faster transactions, stronger competitiveness, higher export readiness; strong effect on handicraft exporters.
Constraints	Low digital literacy, skills gaps, limited guidance, infrastructure and logistics challenges, platform dependence.

### 3.1.3 Sectoral evidence: agribusiness and palm oil

In **palm oil**, e-commerce and broader digitalization play a growing role in export development. Qualitative analyses show that online channels accelerate product promotion, enlarge international buyer networks, and improve logistics efficiency and transaction transparency along the palm oil supply chain. Digital tools (including forecasting systems linked to e-commerce) can also reduce transaction costs and strengthen business intelligence, supporting better price discovery and bargaining power for producers. A broader review of digitalization in the oil palm industry underscores the potential of precision agriculture, data platforms, and blockchain to enhance efficiency, traceability, and sustainability, which are increasingly important for maintaining global market access.

However, structural constraints limit export gains. Key challenges include incomplete digital trade regulations, uneven digital and transport infrastructure between regions, and low digital literacy among agribusiness MSMEs, which hinder effective use of e-commerce and advanced digital tools.

In the wider agricultural sector, human capital emerges as a critical lever. A nationwide study finds a moderate, statistically significant correlation ( $r \approx 0.52$ ) between the number of e-commerce export training recipients and export volume across Indonesia’s 34 provinces. This suggests that training in digital trade, platform use, and cross-border procedures materially improves agricultural export performance, even though only about 0.85% of e-commerce firms currently export, leaving large untapped potential. International evidence from rural China

similarly shows that e-commerce participation in agriculture improves market access, supports higher-value production (including organic and cash crops), and raises incomes, especially when supported by training and social networks.

Sectoral findings indicate that e-commerce can transform agribusiness and palm oil exports by shortening value chains, widening buyer networks, and improving transparency, but these gains depend heavily on farmer and firm capabilities, regulatory clarity, and robust digital and logistics infrastructure.

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### **3.1.4 Constraints and policy implications**

Across the digital trade and MSME literature, four binding constraints recur and jointly limit Indonesia's ability to translate digitalization into broad-based, export-led growth. **Digital infrastructure inequality** is the most fundamental barrier. Spatial analyses of Indonesia's digital development show clear west–east and urban–rural divides: digital readiness indices and ICT development scores are systematically higher in Java and major western cities than in eastern and remote regions. A digital inequality index for Jakarta/West Java versus East Nusa Tenggara/Papua confirms that internet density, logistics facilities, and internet speed are strongly correlated with the number of online MSMEs, e-commerce GDP contribution, and poverty outcomes, underscoring how poor infrastructure suppresses digital entrepreneurship and export participation in lagging regions.

A second major constraint is low digital literacy and weak capabilities, especially among agribusiness and rural MSMEs. Multiple Indonesian studies identify limited technological literacy, poor knowledge of online marketing, and difficulty using e-commerce tools as central obstacles to adoption and effective use. Rural MSMEs face a “double divide” of weak connectivity



and limited skills, leaving them unable to exploit e-commerce for upgrading or export, and exacerbating regional inequality.

Third, complex cross-border regulation and logistics raise transaction costs and deter smaller exporters. International reviews of e-commerce policy emphasize fragmented customs procedures, inconsistent data-protection and consumer rules, and opaque delivery, returns, and pricing as key barriers to cross-border e-commerce, with SMEs particularly disadvantaged. Evidence from West Africa and global SME trade similarly shows that regulatory misalignment and weak logistics networks can absorb 15–30% of firm revenues and significantly depress SME participation in digital trade.

Finally, cybersecurity risks and platform dependence undermine trust and resilience. Indonesian MSMEs report fear of fraud and data breaches as a deterrent to digitalization, while global evidence documents that SMEs are highly exposed to cyberthreats but lack resources for robust protection. Heavy reliance on a few dominant foreign marketplaces also creates vulnerability to fee changes, algorithm shifts, and unfair practices, threatening margins and long-term autonomy.

### 3.2 Discussion

The findings confirm that e-commerce and broader digitalization function as export-enhancing capabilities, primarily by lowering information and transaction costs, expanding market reach, and enabling product upgrading, in line with new trade and search-cost theories (Yonathan, 2025; Narayan, 2025; Prasojo & Lestari, 2025; Facrudin & Purnomo, 2025).

The strong positive association between the digital economy index and provincial exports indicates that investments in ICT infrastructure and digital transactions directly support Indonesia's integration into global markets (Yonathan, 2025; Facrudin & Purnomo, 2025). However, the uneven regional impacts show that digitalization can amplify existing disparities. Western and central provinces, which already possess better logistics, human capital, and industrial bases, are able to translate digital tools into higher export volumes, whereas less-developed eastern regions may not reach the threshold where digitalization yields net gains (Yonathan, 2025; Widjaya et al., 2025; Anggraeni et al., 2024). This suggests non-linear effects and the importance of complementary capabilities (skills, logistics, finance) for turning digital access into export competitiveness (Marginingsih et al., 2025; Fashola & Kusuma, 2024; Prasojo & Lestari, 2025).

At the international level, the evidence that partner countries' higher e-commerce rankings can dampen Indonesia's exports underlines the competitive and disruptive dimension of global digital trade (Narayan, 2025). Partners with more advanced e-commerce ecosystems can reorganize supply chains and capture value that might otherwise accrue to Indonesian exporters, especially in standardized products.

Micro-level studies on MSMEs demonstrate that firm-level digital transformation—e-commerce, digital marketing, payments, and process automation—significantly improves competitiveness and export performance (Hardaningtyas & Sudarmiatin, 2024; Wijayanto et al., 2024; Hardaningtyas & Sudarmiatin, 2024). Yet the very low share of firms engaging in cross-border e-commerce, particularly in agriculture and crafts, indicates a large untapped potential constrained by skills, financing, and export-specific knowledge (Prasojo & Lestari, 2025; Supriono et al., 2025; Ernah et al., 2025).

Taken together, the results imply that policy should shift from simply expanding connectivity to building export-oriented digital ecosystems: targeted MSME training and mentoring, sector-specific e-export facilitation, incentives for digital logistics and secure payments, and regionally differentiated strategies to close the digital-export gap (Yonathan, 2025; Prasojo & Lestari, 2025; Hardaningtyas & Sudarmiatin, 2024; Supriono et al., 2025; Krisna, 2025; Marginingsih et al., 2025; Mala et al., 2024; Widjaya et al., 2025; Dewi & Lusikooy, 2024).

Table 3: Summary of core empirical findings and patterns

Result area	Main pattern
Digitalization → exports	Positive overall, regionally heterogeneous
E-commerce & global trade	Home ranking helps; partner ranking can hurt exports
MSMEs, competitiveness, exports	E-commerce boosts performance; export use still limited

#### 4. Conclusion

This study shows that e-commerce and broader digitalization are key drivers of Indonesia’s export growth, but their benefits are uneven across regions, sectors, and firm sizes. At the macro level, development of the digital economy—measured through informatization, internet infrastructure, and digital transactions—has a statistically significant positive effect on provincial export volumes, especially in western and central Indonesia, while eastern regions still lag behind (Yonathan, 2025). ICT quality and digital connectivity also support export growth in leading specialized products, reinforcing the role of digital infrastructure as a trade-enabling asset (Kartika et al., 2025).

At the international level, Indonesia’s own progress in e-commerce and the global shift toward online trade tend to raise merchandise exports, yet more advanced e-commerce capabilities in partner countries can intensify competition and partially offset these gains (Narayan, 2025)..

This underlines that digitalization is not only an opportunity, but also a source of new competitive pressure in global value chains. Firm- and MSME-level evidence confirms that digital transformation directly improves export performance. E-commerce adoption, digital marketing, and business process automation are associated with higher export revenues, broader market reach, and stronger competitiveness, with dynamic capabilities and digital leadership acting as important mediators (Hardaningtyas & Sudarmiati, 2024; Mala et al., 2024; Fatmah & Atnang, 2025; Wijayanto et al, 2024; Putera et al., 2023).

Case studies from craft, palm oil, and manufacturing exporters illustrate how platforms, websites, and social media help overcome traditional barriers such as limited distribution networks, weak promotion, and information asymmetries (Prasojo & Lestari, 2025; Ernah et al., 2025; Aryanti & Hapsari, 2025).

At the same time, persistent challenges—digital literacy gaps, capital constraints, cybersecurity risks, regulatory complexity, and regional infrastructure disparities—limit the ability of many Indonesian MSMEs and peripheral regions to fully exploit digital export opportunities (Prasojo & Lestari, 2025; Supriono et al., 2025; Marginingsih et al., 2025; Fatmah & Atnang, 2025; Anggraeni et al., 2024; Widjaya et al., 2025; Krisna, 2025). Very few e-commerce firms currently reach international markets, particularly in agriculture, indicating large unrealized potential (Hersusetiyati & Chandra, 2024);

Overall, the findings imply that Indonesia’s path to sustained, export-led growth in the digital era requires more than expanding connectivity. Policy priorities should focus on: (i) closing regional digital and logistics gaps, (ii) building export-oriented digital capabilities in strategic sectors and MSMEs, (iii) strengthening human capital through targeted digital and export training, and (iv) refining regulatory and cybersecurity frameworks to support cross-border e-commerce (Yonathan, 2025; Prasojo & Lestari, 2025; Supriono et al., 2025; Marginingsih et al., 2025; Mala et al., 2024; Wahyudi et al 2025; Widjaya et al.,2025; Krisna, 2025).

By aligning digital economy development with trade and industrial strategies, Indonesia can enhance sectoral competitiveness and secure a stronger position in global markets.



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