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Logistics Innovation in Developing Economies: Integrating Digital Solutions in E-Commerce Supply Chains

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ABSTRACT : The rapid expansion of e-commerce has created new challenges and opportunities for logistics systems in emerging markets. This study presents a narrative review exploring how logistics strategies have adapted to these shifts, with a focus on technological integration, collaboration models, financing mechanisms, and regulatory environments. Literature was gathered from Scopus and Google Scholar using targeted keywords related to e-commerce logistics and emerging markets. Inclusion criteria prioritized peer-reviewed articles from 2010 onward that addressed the intersection of logistics, digital technologies, and developing country contexts. Findings show that collaboration between e-commerce platforms and third-party logistics providers enhances operational efficiency, particularly through resource sharing and system integration. Technologies such as artificial intelligence, Internet of Things, and big data are instrumental in real-time route optimization and supply chain responsiveness. Financing models, particularly platform-based investments, have enabled digital upgrades and capacity expansion among logistics providers. Cross-border logistics adaptation and consumer-centric delivery services also emerged as key themes. However, systemic barriers including infrastructural deficits and regulatory fragmentation continue to hinder progress. The review underscores the importance of policy support and integrated technological adoption in enabling sustainable logistics transformation. It concludes by calling for future research on localized consumer dynamics, long-term impacts of digitalization, and inclusive financial frameworks to address existing gaps and strengthen the global competitiveness of e-commerce in emerging economies.

Keywords: E-Commerce Logistics; Emerging Markets; Supply Chain Innovation; Digital Transformation; Logistics Strategy; Cross-Border Delivery; AI In Logistics

INTRODUCTION

The rapid expansion of e-commerce has radically transformed traditional supply chain dynamics, with particularly profound implications in emerging markets. Southeast Asia, in particular, has

experienced a surge in e-commerce activities, driven by rising internet penetration, smartphone adoption, and shifting consumer behaviors. This transformation marks a departure from conventional physical distribution systems to integrated digital frameworks characterized by real-time tracking, Internet of Things (IoT) deployment, and big data analytics for supply chain optimization (Zhu, 2020; Liu & Yan, 2017). These digital tools not only enhance logistical efficiency but also open new opportunities for businesses to access international markets through cross-border e-commerce platforms (Chan et al., 2018). The emergence of innovative distribution methods, such as on-demand warehousing, has further reshaped inventory management and integrated distribution, underscoring the transformative power of e-commerce in the logistics domain (Sułkowski et al., 2022).

Despite the promise of e-commerce to streamline logistics operations, emerging markets face significant barriers that impede its full potential. Infrastructure limitations, fragmented distribution networks, and the need for labor restructuring pose enduring challenges to the implementation of effective e-commerce logistics models (Loewen, 2018; Madleňák et al., 2023). Infrastructural deficiencies and weaknesses in traditional distribution systems often hinder the adoption of digital technologies and integration of modern logistics solutions. Moreover, the dependency on intermediaries, such as temporary labor agencies and third-party logistics providers (3PL), introduces variability and inefficiencies in workforce management, further complicating operational control (Loewen, 2018). The regulatory environment, coupled with the high cost of technological adaptation and elevated service expectations, adds layers of complexity in executing efficient logistics strategies in these settings (Madleňák et al., 2023).

Fundamental technological integration remains a critical avenue for addressing these issues. Studies have shown that the application of AI, IoT, and big data can significantly improve logistics operations in developing regions. For instance, Zhu (2020) emphasized that IoT applications in supply chains enable real-time product tracking and enhanced inventory management, resulting in greater quality control and faster delivery cycles. Luo (2022) observed that AI enhances operational efficiency and provides predictive capabilities essential for strategic decision-making within complex logistics environments. Big data analytics, as noted by Wang et al. (2021), serve as the foundation for electronic supply chain coordination, boosting responsiveness and operational agility amid fluctuating market conditions.

Nonetheless, infrastructural constraints persist as a considerable barrier. Poor logistics infrastructure contributes to higher operational costs, delivery delays, and difficulties in managing demand surges. Loewen (2018) highlighted the necessity for organizational restructuring, including the overhaul of labor models and investment in new technologies, to overcome the inefficiencies imposed by underdeveloped infrastructure. Although IoT integration holds promise for optimizing routing and distribution systems, Li (2023) noted that lack of harmonized technology standards and cybersecurity threats continue to pose substantial obstacles in the logistics landscape of developing countries.

Moreover, e-commerce logistics in emerging economies are often compounded by systemic issues such as fragmented distribution networks and informal employment structures. These challenges necessitate a reconfiguration of both physical and digital logistics elements to support scalable, adaptive, and resilient operations. The involvement of various stakeholders, including public and private sectors, becomes crucial to bridge infrastructural gaps and foster technological adoption. Furthermore, balancing cost-efficiency with service quality remains an ongoing dilemma for logistics providers, particularly in regions where customer expectations are rapidly evolving due to increased digital exposure.

One of the most pressing challenges is the restructuring of labor to match the demands of digitalized logistics ecosystems. Traditional labor models are increasingly misaligned with the speed and scale of e-commerce logistics. The dependence on 3PLs and temporary staffing agencies raises concerns about labor quality, consistency, and long-term sustainability. Loewen (2018) argued that these labor dynamics not only hinder operational control but also complicate efforts to enforce service-level agreements and quality standards. Meanwhile, Madleňák et al. (2023) pointed out that the growing expectation for same-day or next-day delivery imposes additional pressure on already strained logistics systems in developing markets.

Although existing literature has provided considerable insights into e-commerce logistics strategies, critical gaps remain. Much of the current scholarship focuses on operational and technical dimensions, with limited integration of holistic, theoretical frameworks that account for the socio-economic and technological specificities of emerging markets (Liu & Zhao, 2023; Chen et al., 2023). For example, there is inadequate attention to how market volatility, regional disparities, and environmental sustainability concerns interact with logistics strategy formulation. Empirical studies addressing these dimensions, particularly within Southeast Asia, remain sparse. There is a pressing need to expand conceptual models to incorporate social, economic, and technological variables unique to developing regions (Liu & Zhao, 2023). Consequently, a more comprehensive evaluation of how digital innovation, governmental policy, and competitive dynamics shape logistics adaptation is warranted (Chen et al., 2023).

The primary aim of this review is to critically analyze the adaptation strategies employed in e-commerce logistics within emerging markets, with a particular focus on the integration of AI, IoT, and big data technologies. By synthesizing existing literature, the study seeks to identify best practices, common pitfalls, and contextual determinants that influence the success or failure of these strategies. It also aims to highlight the interplay between systemic constraints and technological solutions in shaping logistics outcomes. Through this analysis, the review aspires to contribute to the development of a conceptual framework that can inform both academic discourse and practical implementation in resource-constrained settings.

This study focuses geographically on Southeast Asia, a region that epitomizes the opportunities and challenges of e-commerce growth in developing contexts. Countries such as Indonesia, Vietnam, the Philippines, and Thailand offer fertile ground for examining diverse logistics scenarios, given their varying degrees of infrastructural maturity, digital readiness, and policy

environments. The region's strategic significance in global supply chains, coupled with its demographic dynamism and burgeoning digital economy, renders it an ideal context for investigating logistics adaptation models. The findings from this region may serve as proxies for broader trends in emerging markets, offering insights that can be extrapolated to other developing regions facing similar constraints and opportunities.

METHOD

This study adopts a narrative review methodology to explore the adaptation of e-commerce logistics strategies in emerging markets. A narrative review enables the synthesis of diverse research findings by integrating theoretical perspectives, empirical evidence, and contextual insights. Unlike systematic reviews, which emphasize replicability and rigid selection criteria, a narrative review provides flexibility in exploring the breadth and depth of literature, allowing a more nuanced interpretation of how digital technologies interact with logistics systems under the dynamic conditions of developing economies.

The literature collection process was carried out through comprehensive searches in two leading academic databases: Scopus and Google Scholar. These databases were selected for their extensive coverage of peer-reviewed journals and their ability to retrieve interdisciplinary studies relevant to the domains of e-commerce, logistics, supply chain management, and digital transformation. Searches were conducted between January and March 2025 using a flexible, iterative approach that involved refining search queries based on preliminary results and thematic relevance.

Keywords were carefully selected to capture the intersection between e-commerce, logistics, and the specific challenges of emerging markets. Core terms included "e-commerce logistics," "supply chain management," "last-mile delivery," "cross-border e-commerce," "digital supply chain," and "emerging markets." To ensure inclusivity and regional specificity, these keywords were also used in translated forms such as "logistik e-commerce" and "pasar negara berkembang." The selection of these keywords was informed by prior literature mapping and bibliometric analyses, including those by Zennaro et al. (2022), which confirmed their relevance in identifying pertinent studies.

While narrative reviews are not bound by strict inclusion and exclusion protocols, this study still applied evaluative criteria to enhance the credibility and coherence of the findings. Studies were prioritized if they (a) were published in peer-reviewed journals; (b) provided explicit discussions on the intersection of e-commerce and logistics, such as supply chain coordination, last-mile challenges, or digital technology integration; (c) focused on the context of developing or emerging economies; and (d) were published from 2010 onwards, a period marked by significant digital transformation in global logistics.

Exclusion criteria were used to avoid the inclusion of irrelevant or low-quality studies. Articles were excluded if they (a) focused exclusively on traditional logistics without reference to e-commerce or digital transformation; (b) lacked empirical data or theoretical depth; (c) were non-

academic in nature, such as commercial white papers or blog posts; or (d) were not accessible in English or widely understood regional languages, which could limit the generalizability and comparability of insights.

The process of literature selection followed a conceptual and thematic relevance model. Initial searches produced a broad set of articles, which were reviewed at the title and abstract level to determine thematic alignment. Full texts of potentially relevant studies were read to assess their contribution to understanding how emerging markets are adapting their logistics systems in response to the rise of e-commerce. The evaluation emphasized conceptual richness, contextual detail, and the degree to which each study addressed technological, infrastructural, or strategic dimensions of logistics transformation.

Included studies covered a diverse array of methodological approaches, including case studies, empirical fieldwork, theoretical modeling, and literature-based conceptual analyses. The diversity of methods allowed the review to capture both depth and breadth, accommodating perspectives from industry, academia, and policy. For example, qualitative case studies provided granular insights into firm-level adaptations, while comparative analyses offered a macro-level view of regional trends. The inclusion of theoretical frameworks such as institutional theory, digital maturity models, and supply chain resilience paradigms enriched the interpretive lens of the review.

The narrative synthesis process involved organizing the literature around emerging themes, including infrastructural constraints, digital innovation, workforce transformation, regulatory challenges, and cross-border logistics. Each theme was explored through a multi-layered analysis that considered geographic variation, technological sophistication, and market maturity. Thematic insights were not only described but also critically examined to reveal contradictions, consensus, and knowledge gaps across studies.

This narrative review methodology supports a flexible yet rigorous exploration of the evolving relationship between e-commerce and logistics in developing economies. By integrating diverse sources and perspectives, the review offers a comprehensive understanding of how digital technologies are reshaping supply chain dynamics in settings characterized by resource constraints, infrastructural deficits, and regulatory fluidity. Ultimately, the narrative approach facilitates the development of context-sensitive insights that can inform both academic discourse and practical interventions in the field of logistics and e-commerce.

RESULT AND DISCUSSION

The narrative review revealed five key thematic areas through which e-commerce logistics in emerging markets have evolved: collaborative logistics strategies, the role of technology in logistics adaptation, customer service models and consumer preferences, financing and investment in digital infrastructure, and cross-border e-commerce adaptation strategies. Each theme reflects a

constellation of insights derived from the literature and presents patterns that signify how technological transformation intersects with logistical innovation in resource-constrained contexts.

In the domain of collaborative logistics strategies, findings consistently underscore the pivotal role of cooperation between e-commerce platforms and third-party logistics providers (3PLs) in enhancing operational efficiency in developing economies. Zhang et al. (2023) documented that integration of information systems, shared distribution networks, and the consolidation of logistics resources are among the most effective forms of collaboration. These arrangements allow involved parties to reduce individual operational risks and costs while enhancing service speed through synchronized scheduling and better route coordination. Shared platforms have facilitated not only the pooling of logistical assets but also the dynamic management of supply chains that are often vulnerable to fluctuations in demand. Such integrated systems prove particularly valuable in responding to sudden surges in online orders during promotional periods or in regions where logistics infrastructures are fragmented. By fostering joint capacity planning and adaptive inventory management, collaborative models have contributed significantly to enhancing responsiveness and delivery reliability, which are crucial metrics of performance in emerging markets.

Technological advancement has become a cornerstone for logistics adaptation. The literature points to the increasing use of machine learning and artificial intelligence (AI) to support decision-making in route optimization and time management. Algorithms such as adaptive simulated annealing and heuristic-based simulations are employed to evaluate multiple routing scenarios in real-time, accommodating the unpredictable road and traffic conditions common in developing countries (Zhu, 2020; Li & Wu, 2024). These methods offer flexible and context-sensitive solutions by simulating operational disruptions and testing optimization strategies under simulated conditions. This not only minimizes delays but also supports contingency planning. Yang (2022) highlighted that these technologies allow logistics firms to operate more efficiently even with incomplete or dynamic data, which is often the case in environments with underdeveloped digital infrastructure. Furthermore, the integration of AI with Internet of Things (IoT) sensors enables real-time tracking and remote monitoring of delivery conditions, improving transparency and control across the distribution process. Such adaptive technological solutions are not only instrumental in maintaining service quality but also in expanding logistics capabilities beyond urban centers.

Regarding customer service models and consumer preferences, the literature confirms that logistics quality significantly affects customer satisfaction and loyalty within e-commerce platforms. Qin and Liu (2022) as well as Wang et al. (2018) have shown that speed, cost-effectiveness, and flexibility are critical factors influencing consumer trust and repeat purchases. Consumers in emerging markets have shown heightened sensitivity to delivery timeframes and reliability, prompting logistics providers to engineer systems that prioritize these parameters. The inclusion of digital tracking, real-time delivery updates, and personalized scheduling options contribute to a superior customer experience, thereby enhancing platform competitiveness. Additionally, consumer behavior analyses suggest a strong correlation between perceived logistical reliability and brand reputation in the e-commerce space. Platforms that fail to ensure timely and traceable deliveries often suffer reputational setbacks, especially in markets where alternative

shopping channels remain limited. The importance of a user-centric logistics design is further underscored in regions with inadequate public delivery infrastructure, where consumers rely heavily on accurate delivery estimates and flexible service configurations.

In terms of financing and investment strategies, platform-based financial models have facilitated the adoption of advanced technologies among logistics providers. Bi et al. (2024) highlighted how such platforms act as enablers, offering funding mechanisms that empower 3PLs to modernize their systems using AI, IoT, and automation. These investments contribute to vertical integration within the supply chain, allowing logistics providers to operate at higher efficiency and scale. Strategic investment in digital infrastructure not only reduces manual labor dependence but also enables predictive analytics for demand forecasting, which is vital in uncertain and fast-changing markets. Moreover, access to financing enhances competitiveness, enabling smaller logistics firms to meet the rising expectations of e-commerce platforms without compromising profitability. As a result, market entry barriers are lowered, and innovation becomes more inclusive. Evidence from Bi et al. (2024) also suggests that logistics firms that adopt digital technologies in response to platform incentives experience higher operational performance and customer satisfaction ratings. The strategic alignment between technological investment and financial support thus emerges as a key factor in driving sustainable logistics transformation in developing economies.

The complexities of cross-border e-commerce adaptation are among the most pressing issues for logistics innovation. Studies highlight regulatory heterogeneity, customs-related delays, and volatile international demand as core challenges facing cross-border logistics (Liu & Yan, 2017; Xie et al., 2024). Responsive adaptation models that incorporate data-driven monitoring systems and algorithmic decision-making are increasingly employed to address these issues. These models allow logistics providers to adapt routes and timelines according to regulatory changes or market shifts, thereby reducing risks associated with international trade operations. Cross-border logistics strategies also involve collaborations with local partners in destination countries to navigate regulatory environments and optimize the last-mile delivery process. The deployment of blockchain and real-time tracking tools ensures transparency and helps build trust among stakeholders, particularly in markets with weak institutional oversight. Liu and Yan (2017) reported that such strategies significantly reduce the incidence of delayed deliveries and customs disputes, which are among the primary deterrents to cross-border e-commerce adoption in developing markets.

Comparative insights from countries in Latin America and Sub-Saharan Africa reveal parallel challenges and innovations. For instance, studies in Brazil and Kenya reflect similar efforts to integrate local delivery networks with digital tracking technologies to enhance last-mile logistics performance. Both countries also exhibit growing investment in micro-distribution centers and urban logistics hubs that support faster delivery within high-density urban areas. While Southeast Asia leads in platform-based logistics financing and AI integration, Latin American markets show greater experimentation with mobile-based delivery coordination and informal logistics networks. These regional variations highlight the importance of contextualizing logistics strategies, suggesting that there is no universal model but rather a spectrum of adaptive pathways shaped by infrastructure, regulation, and consumer demand.

Collectively, the findings demonstrate that while technological solutions and collaborative models are central to improving e-commerce logistics in emerging markets, their success depends on nuanced implementation that aligns with local constraints and opportunities. The evidence suggests that integrating digital innovations into logistics operations not only enhances efficiency and responsiveness but also strengthens the structural capacity of supply chains to absorb shocks and scale sustainably. Nonetheless, the studies also point to persistent gaps, particularly in regulatory harmonization, labor digitalization, and long-term financing, which continue to limit the full potential of logistics transformation. Future research should aim to deepen empirical understanding of these gaps while advancing policy dialogues that facilitate inclusive and resilient logistics ecosystems.

The findings of this review confirm and extend existing literature on e-commerce logistics in emerging markets, particularly emphasizing the critical roles of collaborative strategies and technological integration. The evidence supports earlier assertions that operational restructuring and labor management challenges—identified prominently by Loewen (2018)—necessitate collaborative approaches between e-commerce platforms and logistics providers. Such collaboration is not only reactive to infrastructural and labor-related deficiencies but also emerges as a strategic enabler for scaling operations in fragmented distribution environments. Zhang et al. (2023) illustrate how partnerships with third-party logistics (3PL) providers enhance system responsiveness through resource sharing and coordinated route planning. This model resonates with Madleňák et al. (2023), who underscore the necessity of cross-sector collaboration to overcome the limitations of existing distribution networks. Despite the broad consensus on collaboration, however, differences in implementation strategies are evident across regions, reflecting diverse infrastructural readiness and policy frameworks.

Systemic factors, including infrastructure, regulation, and public policy, exert both enabling and constraining influences on e-commerce logistics transformation. In many emerging markets, underdeveloped transport infrastructure and outdated regulatory environments continue to pose substantial barriers to operational efficiency. As noted by Loewen (2018) and Madleňák et al. (2023), the inability of regulatory frameworks to adapt to the pace of digital transformation often results in misalignment between policy objectives and market realities. For example, inconsistent customs regulations and limited digital infrastructure hinder the effectiveness of cross-border e-commerce logistics. Conversely, regions that have implemented targeted digital infrastructure investments and fiscal incentives for technology adoption report significantly improved logistics performance. These policy-driven advancements highlight the potential for governmental interventions to act as catalysts in digital logistics transformation, provided they are accompanied by regulatory reform and infrastructural modernization.

The adoption of digital technologies such as Internet of Things (IoT), artificial intelligence (AI), and big data analytics is consistently presented in the literature as a cornerstone of logistics innovation in emerging markets. Zhu (2020) and Yang (2022) highlight how machine learning

algorithms and adaptive simulations enable real-time optimization of distribution routes, which is particularly valuable in environments marked by unpredictable traffic and road conditions. These technologies not only offer tactical benefits, such as reduced delivery times and enhanced traceability, but also provide strategic advantages by facilitating data-driven decision-making and long-term planning. Luo (2022) and Wang et al. (2021) further emphasize that predictive analytics derived from big data can enhance demand forecasting, reduce inventory holding costs, and align supply with fluctuating consumer behavior. Nonetheless, the effectiveness of these technologies remains contingent upon systemic readiness, including digital literacy, cybersecurity infrastructure, and access to capital for technological upgrades.

Policy-technology integration emerges as a critical pathway for overcoming persistent logistical barriers. Settey et al. (2021) provide compelling evidence for the role of urban logistics hubs supported by hybrid electric vehicles in alleviating last-mile inefficiencies in cities with congested infrastructure. Similarly, Sułkowski et al. (2022) highlight how adaptive last-mile technologies, such as drone-assisted deliveries and autonomous vehicles, can significantly reduce operational costs and enhance service reliability. When paired with policies that incentivize green logistics practices and urban infrastructure improvement, these technologies can accelerate the transition toward sustainable logistics systems. However, the scalability of such models is often restricted by institutional inertia, insufficient funding, and lack of cross-sector coordination, particularly in lower-income regions.

Although the review presents a broad spectrum of successful adaptation strategies, it also exposes limitations in existing research. A prominent gap lies in the lack of empirical analysis that integrates socio-economic, cultural, and institutional variables into logistics adaptation models. Most studies focus on operational metrics, such as cost reduction and delivery speed, while overlooking how informal labor markets, regional consumer behavior, and governance structures shape logistics outcomes. Liu and Zhao (2023) and Chen et al. (2023) have called for more nuanced frameworks that account for these contextual dimensions, particularly in the heterogeneous landscapes of Southeast Asia and Sub-Saharan Africa. Furthermore, there is limited exploration of the ethical implications of automation and digital surveillance in logistics operations, which could have far-reaching consequences for labor practices and data privacy.

This review also reveals the need for greater integration of micro- and macro-level analyses in the study of logistics transformation. While case studies offer valuable insights into firm-level innovation and adaptation, they often lack generalizability across different market contexts. Conversely, cross-national analyses provide macro-level trends but fail to capture the localized complexities that determine implementation success. A multi-scalar research approach that combines both perspectives could provide a more holistic understanding of how e-commerce logistics systems evolve under varying structural and cultural constraints. Additionally, there is a noticeable absence of longitudinal studies tracking the impact of technological and policy

interventions over time. Such studies would be invaluable in assessing the sustainability of observed improvements and identifying latent challenges that may emerge during scaling.

Another critical implication drawn from the review is the role of consumer behavior in shaping logistics strategies. As confirmed by Qin and Liu (2022) and Wang et al. (2018), consumer preferences for speed, reliability, and personalization directly influence logistics design. Yet, few studies delve into the evolving expectations of digital consumers in emerging markets or explore how socio-economic disparities affect access to premium delivery services. Addressing this research gap is essential for developing inclusive logistics models that cater to diverse population segments without exacerbating digital divides.

The role of financial models in enabling logistics innovation also warrants further exploration. While Bi et al. (2024) demonstrate the effectiveness of platform-based financing in supporting 3PL digital transformation, there is limited discussion on the financial risks and dependency that may arise from such arrangements. Questions remain about the long-term sustainability of external funding mechanisms, particularly when market conditions fluctuate or when platform providers alter their strategic priorities. Exploring alternative financial models, such as public-private partnerships and cooperative investment schemes, may yield more resilient funding structures that support inclusive technological adoption.

In sum, the analysis reaffirms the intertwined nature of technological innovation, systemic readiness, and institutional alignment in shaping the future of e-commerce logistics in emerging markets. While substantial progress has been made in identifying effective strategies, the field would benefit from more comprehensive, context-sensitive research that addresses both the visible and latent dimensions of logistics transformation. There remains a critical need to bridge the gap between high-level policy ambitions and ground-level implementation realities, ensuring that logistics innovations are not only efficient and scalable but also equitable and sustainable in the long term.

CONCLUSION

This narrative review has demonstrated that the adaptation of e-commerce logistics in emerging markets is driven by a combination of collaborative strategies, technological integration, financial innovation, and policy responsiveness. Key findings reveal that strategic collaboration between e-commerce platforms and logistics providers significantly enhances delivery efficiency and system resilience. The integration of technologies such as AI, IoT, and big data plays a central role in optimizing distribution operations, while platform-based financing mechanisms have enabled smaller logistics providers to modernize infrastructure and compete effectively. Additionally, responsive cross-border logistics models and adaptive customer service approaches have emerged as essential components in addressing diverse market demands and regulatory complexities.

Despite the progress, this review reaffirms the urgency of addressing persistent structural and systemic barriers, including inadequate infrastructure, fragmented regulatory frameworks, and labor instability. Targeted policy interventions—such as digital infrastructure investment, fiscal incentives for technology adoption, and harmonized customs regulations—are recommended to create enabling environments for logistics innovation. Future research should explore localized consumer behavior, long-term effects of digital transformation, and inclusive financial models that support sustainable logistics ecosystems.

Ultimately, the findings emphasize that advancing digital collaboration, promoting strategic investments, and aligning policy frameworks are key strategies to overcome the multifaceted challenges of e-commerce logistics in developing countries. A deeper, more contextualized understanding of these dynamics will be critical to building resilient, efficient, and inclusive logistics systems capable of sustaining the future growth of e-commerce.

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