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# THE INFLUENCE OF E-COMMERCE ON THE DYNAMICS OF MAKASSAR CITY DEVELOPMENT PLANNING

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***ABSTRACT***

*The development of digital technology has significantly changed the consumption patterns of urban communities in Indonesia, including Makassar City. One of the latest innovations in e-commerce is livestream shopping, a form of online shopping that combines entertainment and real-time transactions. This study aims to analyze the influence of e-commerce livestream shopping on the dynamics of urban development planning, particularly in terms of spatial planning, community economic behavior, and the transformation of the retail sector in Makassar. A quantitative approach was used with survey methods and descriptive analysis of secondary data from various sources. The results show that the rise of livestream shopping activities has driven a shift in spatial functions from physical to digital, and demands new adaptations in urban infrastructure planning, such as internet connectivity and logistics. Furthermore, this phenomenon influences the consumption behavior and lifestyles of urban communities, which are increasingly digitally oriented. The implications of these findings demonstrate the importance of integrating digital planning into Makassar's city development policies to create an environment responsive to digitalization trends.*

*Keywords: Shopping, E-Commerce, Urban Planning, Digitalization.*

**Abstrak**

Perkembangan teknologi digital telah mengubah secara signifikan pola konsumsi masyarakat urban di Indonesia, termasuk Kota Makassar. Salah satu inovasi terbaru dalam e-commerce adalah livestream shopping, yaitu bentuk belanja daring yang menggabungkan hiburan dan transaksi secara real-time. Penelitian ini bertujuan untuk menganalisis pengaruh e-commerce livestream shopping terhadap dinamika perencanaan pembangunan kota, khususnya dalam aspek tata ruang, perilaku ekonomi masyarakat, dan transformasi sektor retail di Makassar. Pendekatan kuantitatif digunakan dengan metode survei dan analisis deskriptif terhadap data sekunder dari berbagai sumber. Hasil penelitian menunjukkan bahwa maraknya aktivitas livestream shopping mendorong pergeseran fungsi ruang dari fisik ke digital, serta menuntut adaptasi baru dalam perencanaan infrastruktur kota, seperti konektivitas internet dan logistik. Selain itu, fenomena ini memengaruhi perilaku konsumsi dan gaya hidup masyarakat urban yang semakin digital-oriented. Implikasi dari temuan ini menunjukkan pentingnya integrasi perencanaan digital dalam kebijakan Pembangunan kota Makassar untuk menciptakan lingkungan yang responsif terhadap tren digitalisasi.

Kata kunci: *Shopping, E-Commerce*, Perencanaan Kota, Digitalisasi.

## INTRODUCTION

In the past decade, the rapid advancement of digital technology has reshaped economic systems, consumer behavior, and urban development across the world.

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The proliferation of the digital economy has transformed how individuals interact, consume, and conduct business, creating new opportunities for economic inclusion while simultaneously challenging traditional spatial and policy frameworks. In Indonesia, this transformation is most clearly reflected in the exponential growth of e-commerce, which has become a critical driver of urban economic activity.

According to data from Google, Temasek, and Bain (2024), Indonesia remains the largest digital economy in Southeast Asia, with an estimated e-commerce transaction value projected to surpass USD 62 billion by 2025 (Harianto, 2024). The rapid expansion of digital marketplaces such as Shopee, Tokopedia, and TikTok Shop has accelerated the diffusion of online commerce across cities, including secondary metropolitan areas like Makassar. The emergence of livestream shopping — a form of real-time interactive selling that combines entertainment and marketing — has further intensified digital consumption and reshaped the dynamics of local urban economies.

In this context, Makassar City serves as a representative case of digital transformation in eastern Indonesia. As a major economic hub and gateway to the eastern archipelago, Makassar has witnessed a significant rise in the number of online entrepreneurs and small digital-based enterprises. Studies by Arianty et al. (2023) and Daud et al. (2024) reveal that e-commerce has improved business efficiency, marketing reach, and income generation among local MSMEs. Furthermore, platforms integrating social media and e-commerce — particularly livestream shopping — have empowered small businesses to access larger markets and engage directly with consumers.

However, the growing digitalization of trade also presents substantial urban and spatial challenges. The increasing volume of online transactions has triggered new logistical demands, including last-mile delivery systems, storage spaces, and distribution hubs located within residential zones. This phenomenon indicates a gradual transformation of urban land use, where physical retail activity is increasingly replaced or complemented by virtual economic functions. As a result, traditional city planning — which has long been oriented toward physical infrastructure — must now evolve to accommodate digital spatial patterns, logistical flows, and new socio-economic behaviors (Putra, 2025).

Unfortunately, the current urban planning policies in Makassar remain fragmented and largely reactive. While the city has launched its Smart City Roadmap (Aziz & Djunaedi, 2022), the integration of digital commerce into spatial planning remains limited. Policy frameworks often treat e-commerce as a separate economic issue rather than as a spatial transformation process that affects zoning, land use, and infrastructure. This lack of integration highlights the urgency of developing planning models that bridge the gap between digital economic growth and urban development sustainability.

Previous research has predominantly focused on the economic dimension of e-commerce — analyzing its contribution to MSME performance, consumer satisfaction, and revenue generation (Madrianah et al., 2023; Zikri, 2024). However, fewer studies have explored the spatial and infrastructural implications of the digital economy at the city level. Understanding how e-commerce reshapes urban

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structures, logistics networks, and policy frameworks is essential for formulating responsive and inclusive city planning strategies.

Therefore, this study aims to analyze the influence of e-commerce, particularly livestream shopping, on the dynamics of urban development in Makassar City. Specifically, it examines how digital trade activities affect spatial patterns, logistics infrastructure, and policy adaptation within the city's planning framework. By linking empirical evidence and theoretical perspectives, this study seeks to offer conceptual insights and practical recommendations for designing digitally integrated and adaptive urban development policies. Such integration is vital for building sustainable, resilient, and future-oriented cities in the era of digital transformation.

## LITERATURE REVIEW

### 1. E-Commerce

Electronic commerce (e-commerce) refers to the buying and selling of goods and services through digital platforms facilitated by internet technology. It encompasses a wide range of commercial activities carried out by individuals, micro, small, and medium-sized enterprises (MSMEs), as well as large corporations. According to Laudon and Traver (2023), e-commerce represents a paradigm shift from traditional market transactions toward a "borderless digital marketplace," enabling global trade interactions without physical constraints.

The emergence of e-commerce has been driven by the convergence of technological innovation, increased internet accessibility, and changing consumer lifestyles. Zikri (2024) explains that e-commerce enables direct communication between producers and consumers, reducing transaction costs and improving time efficiency. In addition, digital payment systems, social media integration, and artificial intelligence-based product recommendations have further accelerated the adoption of online shopping globally.

In the context of urban economies, e-commerce has evolved beyond a mere technological tool to become a driver of structural change. Castells (2000) describes this shift as part of the rise of the "network society," where economic and social interactions are increasingly mediated by digital networks. E-commerce platforms not only expand market reach but also influence consumption patterns, labor mobility, and urban land use. The digital marketplace thus acts as both an economic enabler and a spatial disruptor, altering how cities organize retail, logistics, and consumer activities.

### 2. Urban Development Planning

Urban development planning is a systematic process that seeks to direct urban growth toward sustainability, equity, and spatial efficiency. It integrates multiple dimensions—physical, economic, and social—into a coherent framework for long-term city management. Traditionally, urban planning has focused on physical infrastructure and land use regulation; however, the rise of the digital economy has necessitated new planning paradigms that account for virtual activities and technology-driven interactions.

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Putra (2025) emphasizes that modern urban planning can no longer be separated from digitalization processes. Cities are increasingly defined by digital infrastructures—such as broadband networks, data centers, and logistics systems—that function as essential public utilities. As a result, planners must now address new spatial dynamics, including the conversion of residential areas into e-commerce operational spaces, the expansion of logistics hubs, and the emergence of hybrid commercial-residential zones.

According to Alonso (1964) and Christaller (1966), classical urban theories such as the Location Theory and Central Place Theory explained city structures based on physical accessibility and economic clustering. However, in the era of digital connectivity, these spatial hierarchies are being redefined. Economic activities are no longer confined to central business districts but are distributed through digital networks, creating what Castells (2000) terms a "space of flows." This transformation challenges conventional planning models and calls for adaptive strategies that integrate both physical and digital dimensions of urban growth.

3. Impact of E-Commerce on Urban Areas

The expansion of e-commerce has produced profound implications for urban systems, influencing transportation, land use, and socio-economic patterns. Gustina et al. (2022) argue that increased online transactions in major Indonesian cities have restructured the logistics landscape, leading to higher demand for delivery services and the need for small-scale logistics facilities such as micro-fulfillment hubs. This has contributed to a new spatial form of urban logistics—often referred to as logistic urbanism—where delivery centers and courier depots are embedded within residential or mixed-use neighborhoods (Zhang & Chen, 2021).

While e-commerce has created new opportunities for MSMEs, freelance workers, and digital entrepreneurs, it has also introduced challenges related to congestion, environmental degradation, and zoning conflicts. The rise in last-mile delivery traffic, for instance, has placed pressure on existing transportation networks, particularly in dense urban cores. Furthermore, the proliferation of home-based businesses has blurred the traditional boundaries between residential and commercial zones, prompting the need for more flexible zoning policies (Gustina et al., 2022).

At the same time, the digitalization of commerce has redefined the geography of consumption. Consumers now prioritize convenience and accessibility through digital interfaces rather than physical proximity. This behavioral shift reduces foot traffic in traditional retail centers and increases the importance of digital infrastructure—such as high-speed internet and logistics coordination systems—as critical determinants of urban competitiveness. Consequently, e-commerce acts as both a catalyst for local economic growth and a challenge for spatial governance, requiring innovative urban management frameworks.

4. Smart City and Digitalization of the Economy

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The smart city concept has emerged as a comprehensive approach to integrating digital technologies, urban governance, and citizen engagement. Caragliu, Del Bo, and Nijkamp (2011) define a smart city as one that "uses digital technologies to enhance performance and well-being, reduce costs and resource consumption, and engage more effectively with its citizens." In this regard, e-commerce represents a vital component of smart urban economies, facilitating digital entrepreneurship, financial inclusion, and data-driven policy innovation.

In Indonesia, smart city initiatives have been implemented in various metropolitan regions, including Makassar, Jakarta, and Surabaya, aiming to enhance digital infrastructure and improve public service delivery. However, the linkage between smart city development and e-commerce ecosystems remains underexplored. Gustina et al. (2022) note that the effectiveness of smart city implementation depends on strong collaboration between government and private sectors, particularly in the areas of digital logistics, urban data management, and innovation ecosystems.

Makassar, as one of Indonesia's rapidly developing cities, possesses significant potential to leverage digitalization for sustainable urban development. Yet, as Aziz and Djunaedi (2022) observe, the city's current smart city initiatives have focused primarily on administrative digitalization rather than integrating economic and spatial dimensions of digital transformation. For Makassar to evolve into a fully integrated smart city, policy frameworks must recognize the interplay between e-commerce, spatial planning, and urban governance.

## RESEARCH METHODS

1. Research Type and Approach

This study adopts a quantitative descriptive approach to analyze the influence of e-commerce on urban development dynamics in Makassar City. This approach is appropriate for describing socio-economic phenomena systematically using empirical and statistical data (Sugiyono, 2023).

The descriptive method enables the researcher to identify relationships between e-commerce growth and various aspects of urban planning, including spatial structure, logistics infrastructure, and changes in community economic behavior.

2. Research Location and Object

The research was conducted in Makassar City, South Sulawesi Province — one of the fastest-growing metropolitan areas in Eastern Indonesia in terms of digital economy expansion. The study focuses on e-commerce and livestream shopping activities, assessing their impact on local economic transformation, MSME participation, and policy adaptation by local government institutions.

3. Data Types and Sources

This study utilizes secondary data obtained from several reliable sources, including:

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- Statistical data on e-commerce from the Indonesian Central Bureau of Statistics (BPS);
- Urban planning documents such as the Spatial Plan (RTRW) and Medium-Term Development Plan (RPJMD) of Makassar City;
- Academic publications and research related to digital economy and urban transformation;
- Data and reports from major digital platforms (Shopee, Tokopedia, TikTok Shop) and related institutions.

4. Data Collection Techniques

Data were collected through document analysis and literature review methods. Relevant publications, government reports, and statistical data were carefully selected to ensure the reliability of the information. Additional data were compiled from journal articles, conference proceedings, and previous studies that explored the nexus between e-commerce, smart cities, and urban planning.

5. Data Analysis Techniques

Data were analyzed using quantitative descriptive analysis, which interprets statistical indicators to illustrate the relationship between e-commerce expansion and urban planning adaptation. The analytical process involved several stages:

- Trend identification of e-commerce growth in Makassar based on transaction and business data;
- Descriptive correlation analysis between e-commerce activities and changes in logistics and spatial functions;
- Thematic interpretation of literature to assess how local government policies have responded to digital economic transformation.

This approach aims to provide a comprehensive understanding of how e-commerce development shapes spatial planning, infrastructure requirements, and policy design for sustainable urban development.

## RESULTS AND DISCUSSION

### Results

The 2023 E-Commerce Statistics Report, published by the Central Statistics Agency (BPS) on January 30, 2025, revealed several key indicators reflecting the development of the digital economy in Indonesia, including at the provincial level. In South Sulawesi Province, which includes Makassar City as the center of economic activity, a significant increase was recorded in the number of e-commerce businesses and transaction value throughout 2023. These findings indicate that the region is experiencing accelerated economic digitalization in line with national trends (Lisdayanti & Padmanegara, 2024).

In aggregate, Indonesia's e-commerce transaction value showed positive growth compared to the previous year, reflecting the increasingly widespread adoption of digital commerce practices. While specific e-commerce transaction data for Makassar City is not yet available separately, Statistics Indonesia (BPS) emphasized that more than 60% of online transaction activity in South Sulawesi was

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conducted through major marketplace platforms, particularly through livestream shopping features like Shopee Live and TikTok Shop (Judijanto et al., 2024). This phenomenon reflects the increasing participation of local MSMEs in the digital ecosystem through interactive, livestream-based marketing strategies.

A systematic mapping effort for the e-commerce ecosystem has been underway since 2019 through a national survey that has been continuously expanded, and by 2024–2025, it had covered 365 regencies/cities across Indonesia. This demonstrates the institutional commitment to building a comprehensive database to assess digital economic transformation in various regions, including major cities like Makassar. The increased penetration of e-commerce in South Sulawesi has implicitly driven changes in the urban landscape, including increased demand for logistics infrastructure, the growth of digital-based MSMEs utilizing livestream shopping, and changes in the function of business spaces in urban areas. Furthermore, recent data estimates that the growth of the digital business sector in metropolitan areas is experiencing double-digit annual growth, in line with national and regional dynamics (Oktavia et al., 2024). Although specific data regarding Makassar City is not yet available. Although published separately, provincial-level trends and the expanded scope of the national survey provide a strong analytical basis for examining the links between e-commerce expansion, the adaptive behavior of digital entrepreneurs, and the implications for urban development planning. Therefore, to gain a deeper understanding, access to internal documents from local governments or relevant technical agencies is necessary to obtain more detailed contextual data.

**Discussion**

Research results show that e-commerce has significantly contributed to improving the performance of MSMEs in Makassar City. These positive impacts include expanded market access, operational efficiency, and increased turnover at the micro-enterprise level (Rosidah & Harefa, 2023). This finding aligns with the digital economic transformation theory approach, which emphasizes that integrating digital technology into local economic activities can boost productivity and increase competitiveness, particularly for small and medium-sized businesses. This transformation not only influences economic dynamics but also has a direct impact on the city's spatial structure. The shift in business patterns from conventional to digital-based systems, such as the use of residential spaces as "home studios" and the use of livestream shopping, presents new challenges in Makassar's spatial planning. This phenomenon puts pressure on the urban logistics system, driving an increased need for intra-city distribution facilities such as micro-hubs, urban logistics routes, and special business zones. These changes indicate a tendency for shifts in the function of residential areas, which are directly related to changes in the zoning structure of the region. This aligns with the concept of adaptive urban planning theory, which requires cities to develop spatial policies responsive to the dynamics of the digital economy to avoid land use inequality (Welhelmina et al., 2023).

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However, the integration between digital economic architecture and spatial planning policies in Makassar City is still not optimal. Although the city government has launched a smart city strategy since 2015 (Aziz & Achmad Djunaedi, 2022), there has been no explicit policy linking digital platforms such as e-commerce, commerce and livestream shopping with urban spatial planning policies. The lack of integration This creates a gap between the practical needs of the digital economy and the existing infrastructure policy framework.

Furthermore, challenges in regulatory aspects and institutional capacity are also major obstacles in managing a space-based digital economy. Hasbi & Putro (2025) noted that although Makassar City has developed digital marketing applications such as Allesai Saromase and Omni Channel, their implementation remains partial and has not been able to systematically reach all MSMEs. The lack of regulatory readiness regarding online business zoning in residential areas further emphasizes the urgency of developing new policies that accommodate digital business forms more comprehensively.

From a logistics infrastructure perspective, various studies show that the national logistics system remains predominantly dependent on land transportation. This dependence not only drives high distribution costs but also creates congestion that disrupts the efficiency of the e-commerce system, particularly in large cities like Makassar. Therefore, strengthening the intra-city distribution network and integrating public transportation and logistics modes is necessary to support efficient digital distribution on an urban scale.

## CONCLUSIONS

The findings of this study demonstrate that the rapid expansion of e-commerce — particularly through livestream shopping — has had a substantial impact on the dynamics of urban development in Makassar City. The growth of digital commerce has not only enhanced the performance and competitiveness of MSMEs but also transformed spatial structures, altered consumer behavior, and introduced new challenges in urban infrastructure and spatial planning.

From an economic perspective, e-commerce has become a key driver of inclusive growth, enabling small enterprises to expand market access and operate more efficiently within digital ecosystems. From a spatial perspective, the proliferation of home-based digital businesses and the increasing demand for logistics hubs have redefined the use of urban space, requiring adaptive zoning and planning approaches. From a policy perspective, however, the integration of digital economic activities into Makassar's urban planning framework remains limited and fragmented.

The study highlights the urgent need for a digitally integrated urban planning model that combines spatial management, logistics innovation, and data-based policymaking. To achieve this, local governments must strengthen collaboration between the public and private sectors, develop supportive digital infrastructure, and design regulations that accommodate the evolution of the digital economy.

Ultimately, building a city that is both smart and inclusive requires not only technological investment but also institutional readiness, human capacity

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development, and participatory governance. Makassar's experience underscores that embracing digital transformation in urban planning is not an option — it is an essential pathway toward creating a resilient, adaptive, and future-oriented city in the era of the digital economy.

**RECOMMENDATIONS**

Based on the findings and conclusions of this study, several strategic recommendations are proposed to strengthen the integration between e-commerce growth and urban development planning in Makassar City:

1. Integrate E-Commerce into Urban Spatial Planning

The local government should incorporate digital economic activities—such as online retail, logistics hubs, and home-based digital enterprises—into the city's Spatial Plan (RTRW) and Medium-Term Development Plan (RPJMD). This integration ensures that zoning policies are adaptive to new digital business models and prevent spatial conflicts between residential and commercial uses.

2. Develop Smart Logistics and Digital Infrastructure

The increasing volume of online transactions necessitates efficient intra-city logistics systems. The establishment of micro-fulfillment centers, smart delivery networks, and data-driven traffic management can enhance distribution efficiency while minimizing congestion and environmental impact. Investment in broadband internet and data centers should also be prioritized to support digital business growth.

3. Strengthen Institutional and Regulatory Capacity

Local authorities should update existing regulations to accommodate digital-based economic activities, such as simplified licensing systems for home-based online businesses and guidelines for e-logistics zoning. Inter-agency coordination between urban planning, transportation, and ICT departments must be improved to create coherent policy frameworks.

4. Promote MSME Digital Literacy and Inclusion

Comprehensive digital training programs are essential to ensure that local entrepreneurs—especially traditional MSMEs—can effectively utilize e-commerce platforms. Partnerships between government agencies, universities, and private tech companies could accelerate digital upskilling and entrepreneurship among local communities.

5. Encourage Public–Private Collaboration for Smart City Implementation

Collaboration between municipal governments, technology providers, and private e-commerce platforms should be strengthened to co-develop smart city solutions. Joint initiatives such as digital market hubs, logistics data-sharing systems, and e-commerce innovation zones can create a sustainable ecosystem for the digital economy.

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