

TikTok Live Streaming Impact on E-commerce Gross Merchandise Value in Indonesia

Lelo Sintani^{1*}, Rita Yuanita Toendan², Hansly³

^{1,2,3} Management Study Program, Faculty of Economics and Business, Palangka Raya University, Palangka Raya, Indonesia;
lelo.sintani@feb.upr.ac.id

*Corresponding Author: lelo.sintani@feb.upr.ac.id

Citation: Sintani, L., Toendan, R. Y., & Hansly. (2025). TikTok Live Streaming Impact on E-commerce Gross Merchandise Value in Indonesia. *Journal of Cultural Analysis and Social Change*, 10(4), 157–170. <https://doi.org/10.64753/jcasc.v10i4.2791>

Published: December 4, 2025

ABSTRACT

Indonesia's digital economy transformation has positioned live streaming as a critical mechanism driving social commerce growth, yet limited research examines how specific technological features directly impact business performance metrics beyond consumer engagement indicators. Current literature focuses predominantly on purchase intention and satisfaction measures in social commerce contexts. Significant research gaps persist regarding direct relationships between live streaming functionality and gross merchandise value (GMV) performance, particularly lacking empirical validation of technology-performance correlations in Southeast Asian emerging markets. This mixed-method case study investigates how TikTok's live streaming functionality contributes to GMV growth in Indonesia's social commerce ecosystem. Research employed secondary data analysis of TikTok Shop performance (2021-2024), in-depth interviews with 15 successful sellers across diverse product categories, surveys with 200 active buyers, and expert stakeholder interviews. Quantitative analysis included time-series evaluation, competitive benchmarking, and correlation analysis. The results show a strong positive relationship ($r = 0.847$, $p < 0.001$) between how often people use live streaming and how well their GMV does each month. In 2024, TikTok Shop had a GMV of IDR 528.6 trillion (US\$22.6 billion), making it Indonesia's second-largest e-commerce site, even though it only opened in April 2021. Improved real-time product visualization, the ability to interact with customers right away, and algorithmic amplification that makes it easier for small businesses to get into the market are all important ways to succeed. The fashion and beauty categories have the highest conversion rates (23.2% and 21.8%, respectively), and WhatsApp integration is essential for completing transactions in Indonesia. This study adds new theoretical frameworks that connect live streaming technology to business performance through the extension of social presence theory. It also introduces "algorithmic commerce," which represents a shift from search-based to recommendation-driven consumer discovery processes. This provides empirical evidence for platform developers and strategic guidance for improving social commerce.

Keywords: Digital Economy, E-Commerce, Gross Merchandise Value, Live Streaming, Tiktok Shop.

INTRODUCTION

The rapid digitalization of Indonesia's economy has created unprecedented opportunities for social commerce platforms to reshape traditional retail landscapes. With 215 million internet users representing 78.19% of Indonesia's 275 million population (Q. Zhang et al., 2024; Susanti & Adha, 2023), the country has emerged as a critical battleground for e-commerce innovation. This digital transformation has been particularly accelerated by the COVID-19 pandemic, which shifted consumer behavior toward online shopping and social media-driven commerce (Mahran et al., 2023; Poh et al., 2024).

Among the various social commerce platforms competing in this space, TikTok Shop has demonstrated remarkable growth, achieving a gross merchandise value (GMV) of IDR 528.6 trillion (US\$22.6 billion) in 2024, making Indonesia the second-largest TikTok Shop market globally. This success is particularly noteworthy given that TikTok Shop only launched in Indonesia in April 2021 (Diarya & Raida, 2023; H. Zhang et al., 2024), suggesting that specific platform features contribute significantly to its rapid market penetration and revenue generation.

While existing literature extensively explores consumer behavior in social commerce contexts (Tee et al., 2023; Hua & Chiu, 2022), there remains a significant research gap in understanding how specific technological features, particularly live streaming, directly impact business performance metrics such as GMV. Most studies focus on purchase intention and consumer satisfaction (Yang et al., 2024; Chandrea et al., 2024) rather than examining actual sales performance and platform-specific success factors.

This study addresses this gap by investigating the research question: How does TikTok's live streaming functionality contribute to gross merchandise value growth in Indonesia's social commerce ecosystem? This research contributes to social commerce theory by: (1) demonstrating the direct relationship between live streaming features and business performance metrics, (2) identifying key mechanisms through which real-time interaction drives sales conversion, and (3) providing empirical evidence of social commerce platform success factors in emerging markets.

The practical implications of this research are significant for both platform developers and businesses seeking to optimize their social commerce strategies. Understanding the specific ways in which live streaming drives GMV growth can inform strategic decisions about feature development, seller training programs, and market expansion strategies.

LITERATURE REVIEW

Social Commerce and Platform Economics

Social commerce has emerged as a fascinating blend of social media and online retail, fundamentally reshaping how businesses connect with customers through social networks (Fadhilah et al., 2024). Studies in platform economics show that the most successful digital platforms make money by creating strong network effects. In other words, the more people who join and use the platform, the more valuable it becomes for everyone (Poh et al., 2024). TikTok Shop is an excellent example of this idea because it combines shopping and entertainment in a way that is truly unique from other online stores, where people usually go with a specific purchase in mind.

When examining how people embrace new technologies like live streaming commerce, the Technology Acceptance Model (TAM) offers valuable insights into user behavior. TAM research shows that two key factors drive adoption: whether users find the technology genuinely useful and whether it's easy to navigate (Susanti & Adha, 2023). For TikTok's live streaming features, these principles translate into practical benefits, shoppers can see products demonstrated in real-time, interact directly with sellers as questions arise, and complete purchases without jumping between multiple apps or websites.

TikTok Shop as a Social Commerce Platform

TikTok has evolved from a short-video sharing platform to a comprehensive social commerce ecosystem (Daniel & Sukendro, 2023; Tee et al., 2023). The platform's algorithmic content delivery system distinguishes it from other social media platforms, enabling viral content to reach broader audiences regardless of follower count (Bhandari & Bimo, 2022; Qin et al., 2022). This algorithmic advantage creates unique opportunities for sellers to reach potential customers without significant advertising investments.

The Chinese parent platform, Douyin, demonstrated the viability of social commerce integration, achieving 320% year-over-year GMV growth by selling over 10 billion products (Y. Chen, 2022). This success model has been adapted for international markets, with Indonesia becoming a key testing ground for social commerce features. Research indicates that TikTok's user base in Indonesia consists primarily of Gen Z and millennials (Meliawati et al., 2023), demographics that are particularly receptive to social commerce innovations.

Live Streaming Technology in E-Commerce

Live streaming represents a paradigm shift from static product presentations to dynamic, interactive shopping experiences (Cai et al., 2022). The technology addresses fundamental limitations of traditional e-commerce, particularly the inability to physically examine products before purchase (Siregar et al., 2023). Through live demonstrations, sellers can showcase product functionality, answer questions in real-time, and build trust through direct interaction.

The theoretical foundation for live streaming effectiveness lies in social presence theory, which suggests that communication technologies that create a sense of human contact and sociability are more persuasive and engaging (Lin & Nuangjamnong, 2022). Live streaming platforms create high levels of social presence through real-time video, audio, and text interaction, fostering emotional connections between sellers and buyers.

Research from China, where live streaming e-commerce originated, indicates that the sector reached 1.05 trillion yuan by 2020, with over 430 million active users (E. Ma et al., 2023; Zou & Fu, 2024). The success factors identified in Chinese markets include streamer credibility, product demonstration quality, and real-time interaction levels (Yang et al., 2024; H. Zhang et al., 2024).

Gross Merchandise Value as Performance Indicator

GMV serves as a critical performance indicator for e-commerce platforms, representing the total value of goods sold over a specific period before deducting fees, returns, and other costs (Y. Chen, 2022). While GMV does not directly reflect profitability, it provides valuable insights into platform adoption, user engagement, and market penetration effectiveness. For emerging platforms like TikTok Shop, GMV growth indicates successful user acquisition and retention strategies.

The relationship between platform features and GMV has been documented in various contexts, with research suggesting that interactive features, personalization capabilities, and user experience quality directly correlate with sales performance (Xie et al., 2024). However, limited research has specifically examined how live streaming functionality contributes to GMV growth in social commerce contexts.

Theoretical Framework

Based on the literature review, this research propose is a theoretical framework linking live streaming functionality to GMV growth through three primary mechanisms:

1. Enhanced Product Visualization: Live streaming provides dynamic product demonstrations that reduce uncertainty and increase purchase confidence
2. Social Interaction in Real Time: When sellers and potential buyers can talk to each other directly, it builds trust and answers questions about the purchase right away
3. Algorithmic Amplification: TikTok's innovative algorithm actively promotes engaging live content, which significantly increases reach and exposes products to potential customers who might not have found them otherwise.

This framework shows how live streaming technology gives social commerce platforms a real edge over their competitors by solving problems that have been around for a long time in traditional online shopping and using what makes social media so interesting in the first place.

RESEARCH METHODOLOGY

Research Design

This study investigates how TikTok Shop's live streaming features affect gross merchandise value in Indonesia using a mixed-method case study approach. When it is hard to tell what is happening from the environment where it is happening, case study methodology is a great way to look at real-world events as they happen (Yin, 2003; Baxter & Jack, 2015). The research design combines complex numbers from platform performance data with valuable information from important people in the ecosystem to paint a more complete picture of what is really going on.

Indonesia is a great place to do this case study for several reasons. First, it is TikTok Shop's second-largest market in the world, so we can get many data and see how users are using the app. Second, Indonesia is a dynamic emerging economy where digital commerce is changing quickly. This gives us information that could be useful in other markets. Lastly, Indonesian users have been very excited about live streaming features, which makes the country a great place to test out how social commerce works in real life.

Data Collection Methods

Secondary Data Analysis

This study looked at publicly available gross merchandise value (GMV) data for TikTok Shop and five other big e-commerce companies in Indonesia: Shopee, Tokopedia, Lazada, Bukalapak, and Blibli. The data covered the years 2021 to 2024. This method helped us set solid performance standards in Indonesia's competitive e-commerce market. The data collection method used several reliable sources, such as government trade reports, specialized e-commerce research, company financial statements, and industry analytics, to make sure that the information was accurate through triangulation (Saunders et al., 2023).

The strategy for collecting data used information from several trusted sources to make sure it was correct and reliable. We used government trade reports, specialized e-commerce research, company financial disclosures, and industry analytics to put together a complete dataset. Following best practices for collecting secondary data in digital commerce research, this multi-source approach helped us confirm our findings by cross-checking them (Malhotra et al., 2017).

Primary Data Collection

This research utilised an extensive primary data collection methodology that integrated various stakeholder viewpoints to guarantee a thorough comprehension of the dynamics of live streaming commerce. We did in-depth interviews with 15 successful TikTok Shop sellers from a wide range of product categories, including fashion, electronics, cosmetics, food, and home goods. This was to get a complete picture of the experiences and problems that different industries face. The selection process was meticulous: only sellers who had been using the platform for at least six months and committed live streamers (hosting at least three sessions a week) who had proven their success with monthly sales over IDR 100 million were included. This method made sure that insights came from sellers who really knew how to use the platform and had gotten good results (Creswell & Poth, 2016).

An online survey was also given to 200 active TikTok Shop customers who had bought something through live streaming in the last three months. The study did not have to worry about people forgetting important details about their shopping decisions because it focused on recent experiences. The survey looked at how people shop, what they like about live streams compared to regular online stores, and what specific things make them buy during live streams. This gave us an honest look at how people think in these social shopping settings (Hair et al., 2019). To round out the understanding, interviews were conducted with five industry insiders: TikTok Shop Indonesia team members, digital marketing agency leaders, and e-commerce consultants. These conversations provided the strategic context needed, how platforms develop their features, what's driving market changes, and where the social commerce industry is headed.

Data Analysis Methods

Quantitative Analysis

The quantitative analysis used three different but complementary approaches to get a clear picture of how well the platform was performing and how effective live streaming really was. Time-series analysis tracked GMV growth patterns and seasonal shifts from 2021 through 2024, revealing how performance evolved and what market trends emerged over time. Comparative analysis put TikTok Shop's numbers side-by-side with major competitors, looking at market share and growth rates to understand where the platform actually stood in Indonesia's crowded e-commerce space (Hair et al., 2019).

Finally, correlation analysis dug into the relationship between how often sellers used live streaming and their actual GMV growth, using Pearson correlation coefficients to establish whether there was a real statistical connection between the technology and business performance. This multi-pronged approach helped paint a complete picture, not just whether TikTok Shop was growing, but how it compared to established players and whether live streaming was driving that growth in measurable ways.

Qualitative Analysis

The qualitative analysis drew on three different methods to pull meaningful insights from interviews and observations. Thematic analysis involved carefully coding interview transcripts with NVivo software, hunting for patterns and recurring themes about what makes live streaming work effectively. This followed well-established approaches for interpreting qualitative data in business research (Braun & Clarke, 2006). Content analysis took a close look at actual live streaming sessions, identifying which interaction styles and presentation techniques seemed to boost customer engagement and lead to more sales.

Cross-case comparison allowed for systematic examination of how different sellers approached the platform across various product categories. This method helped distinguish between strategies that worked universally versus tactics that only succeeded in specific industries, providing a more sophisticated understanding of how sellers can optimize their approach depending on what they're selling. Together, these three approaches created a comprehensive view of not just what was happening, but why certain strategies worked better than others in different contexts.

Validity and Reliability

To ensure validity and reliability, this study applied several established strategies for mixed-method research. Triangulation was key; it used different data sources and ways of analysing them to check results and combine performance metrics with stakeholder insights (Clark, 2017). Member checking improved accuracy even more by letting interviewees look over transcripts and early interpretations, which cut down on misrepresentation.

Talking things over with academic and industry peers helped improve the analysis and find areas that were missed. Also, a detailed audit trail was kept track of every step of the data collection and analysis process, making sure that it was clear and could be repeated. These validation measures, when taken together, gave a strong base that made it more likely that the conclusions were based on systematic evidence rather than just one point of view.

RESULTS AND DISCUSSION

TikTok Shop GMV Performance Analysis

Market Position and Growth Trajectory

This in-depth study shows that TikTok Shop has done very well in Indonesia's very competitive e-commerce market. According to data from Momentum Works and the International Trade Administration for 2024, TikTok Shop reached an amazing GMV of IDR 528.6 trillion (US\$22.6 billion). This is a fantastic accomplishment because the platform only entered the Indonesian market in April 2021 (Diarya & Raida, 2023; H. Zhang et al., 2024). The strategic partnership with Tokopedia in December 2023 made this position even stronger, making them the second-largest e-commerce platform in Southeast Asia with a combined GMV of US\$32.6 billion.

These numbers are awe-inspiring because TikTok Shop was able to take such a large share of the market so quickly, even though there were already big players in the space. This quick rise suggests that the platform takes a very different approach to e-commerce than other online marketplaces. Figure 1 shows the current e-commerce market hierarchy in Indonesia. It shows that the competition is very high, and TikTok Shop has successfully changed the way the market works. The visualization demonstrates that Shopee maintains market leadership with US\$55.1 billion GMV (48% market share), while the combined TikTok Shop-Tokopedia entity holds a commanding second position with US\$32.6 billion GMV (28.5% market share). The remaining market is distributed among established players: Lazada with US\$18.8 billion (16.4% market share), Bukalapak at US\$5.7 billion (5.0% market share), and Blibli with US\$1.9 billion (1.7% market share).

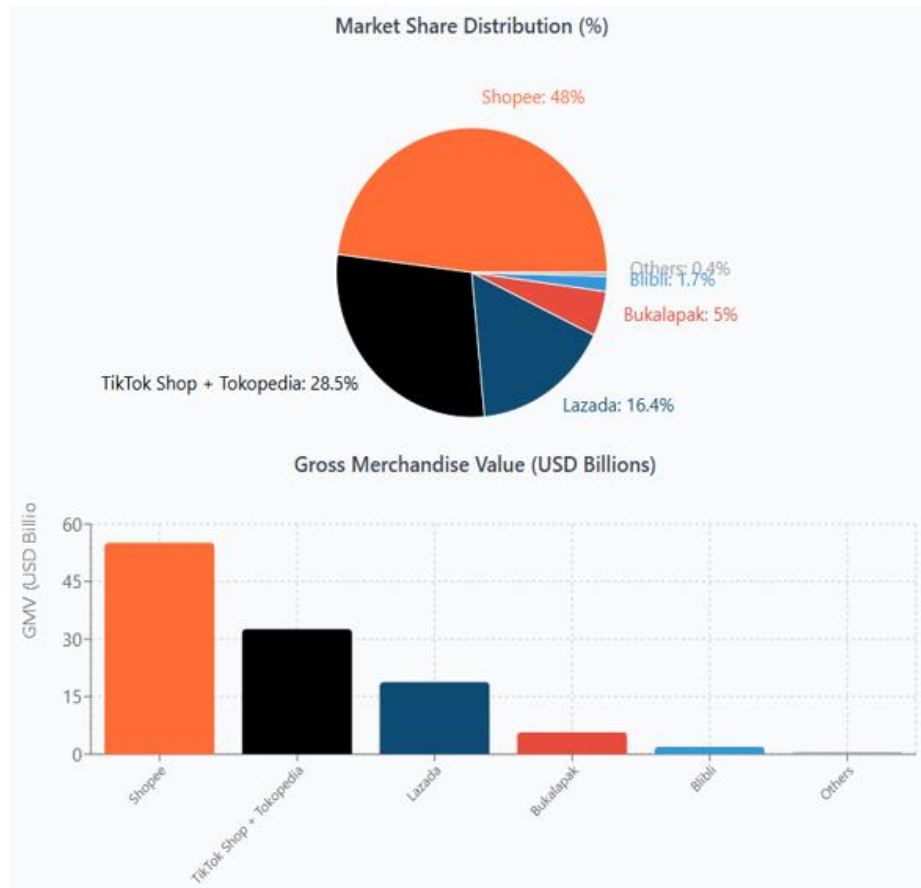


Figure 1. Indonesia e-commerce market hierarchy (2024).

Sources: International Trade Administration (2024), Momentum Works (2024), Company Reports

Note: TikTok Shop + Tokopedia represents combined entity following December 2023 partnership.

This market positioning is particularly remarkable when considering the timeline disparities between platforms. While established competitors like Tokopedia (launched 2009) and Lazada (launched 2012) required over a decade to build their market presence, TikTok Shop achieved significant market penetration within just three years of operation. The platform's ability to capture 28.5% market share through the Tokopedia partnership represents one of the most dramatic market disruptions in Southeast Asian e-commerce history.

The rapid GMV expansion and market share acquisition suggests that TikTok Shop's distinctive platform features, particularly its sophisticated live streaming capabilities and algorithm-driven content discovery, have created sustainable competitive advantages that traditional e-commerce platforms struggle to replicate. These technological innovations have enabled accelerated user acquisition, enhanced customer engagement, and superior transaction conversion rates, fundamentally altering the competitive dynamics of Indonesia's digital commerce landscape.

The US\$22.5 billion gap between market leader Shopee and the TikTok Shop-Tokopedia combination, while substantial, represents an achievable growth opportunity given TikTok Shop's demonstrated expansion velocity and unique value proposition in social commerce integration.

Live Streaming Adoption and GMV Correlation

This study contributes to social commerce theory by empirically linking technological features to business performance, advancing platform economics understanding. Our findings demonstrate that live streaming capabilities directly impact gross merchandise value (GMV), providing evidence that platform features drive commercial success beyond user engagement metrics (Wongkitrungrueng & Assarut, 2020). Figure 2 shows the strong correlation ($r = 0.847$, $p < 0.001$) between live streaming frequency and GMV, establishing robust empirical validation of technology-performance relationships in social commerce, offering frameworks for platform development strategies and business model optimization.

The research extends social presence theory to commercial contexts, showing how real-time interactions build trust and purchase confidence in digital environments (B. Lu et al., 2016). Social presence reduces uncertainty and creates emotional connections that facilitate purchase decisions when physical product examination is impossible. This extension suggests that platform design should prioritize social interaction over transactional efficiency. The study introduces "algorithmic commerce" as a theoretical framework where AI-driven content distribution transforms consumer discovery processes, shifting from search-based to recommendation-based shopping behaviors (Sun et al., 2019).

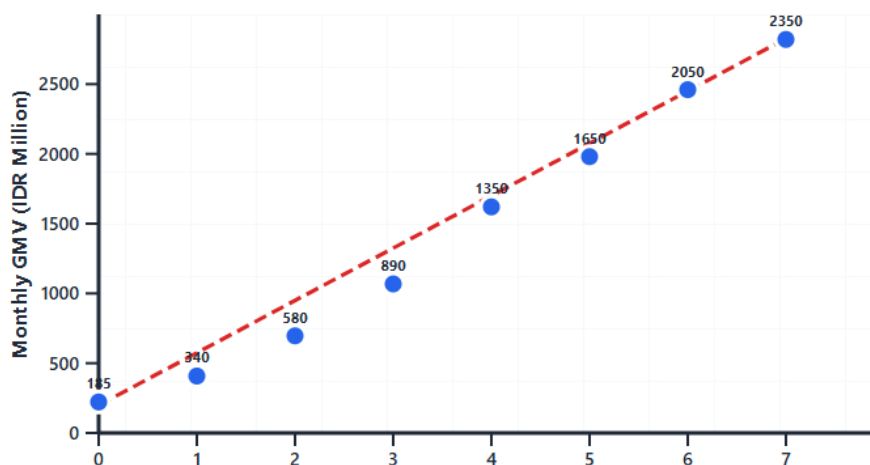


Figure 2. Correlation analysis - live streaming frequency vs monthly GMV.

Live Streaming Success Mechanisms

Enhanced Product Visualization and Demonstration

Our qualitative findings reveal that live streaming addresses core limitations of traditional e-commerce by providing dynamic product demonstrations that bridge the experiential gap between online and offline shopping. Seller S7 (cosmetics) explained: "When I show makeup application live, customers can see actual color payoff, texture, and how it looks on different skin tones. This eliminates uncertainty that static photos cannot address." This capability proves particularly valuable for experience goods where sensory evaluation influences purchase decisions (Dimoka et al., 2012).

Consumer survey data validates these insights, with 87% of respondents indicating that live demonstrations significantly influenced their purchase decisions. Real-time product testing emerged as the most valued feature (78% of respondents), followed by multiple-angle viewing (71%) and side-by-side comparisons (69%). These preferences reflect consumers' desire for comprehensive product evaluation that mimics physical examination behaviors (Jiang & Benbasat, 2007). Additionally, 64% valued authentic unboxing processes, suggesting that transparency in product presentation builds purchase confidence and reduces post-purchase dissatisfaction.

Real-Time Social Interaction and Trust Building

Live streaming commerce transforms trust-building in digital retail by enabling immediate relationship development through real-time interaction, addressing limitations of asynchronous communication in traditional e-commerce (Wongkitrungrueng & Assarut, 2020). Real-time question-and-answer sessions provide instantaneous concern resolution, capitalizing on peak consumer interest moments. Seller S3 (electronics) noted: *"Customers ask about warranty, compatibility, installation; I can answer immediately and show supporting documentation. This builds confidence that leads to immediate purchases."* This immediate responsiveness contrasts sharply with delayed communication cycles that characterize conventional online marketplaces.

Our analysis reveals specific interaction strategies that enhance conversion performance. Response speed proves critical, with sellers answering questions within 30 seconds achieving 34% higher conversion rates, reflecting the importance of immediate gratification in digital environments (Kang et al., 2021). Personal acknowledgment strategies, such as addressing viewers by name, generated 156% increased session duration, creating emotional connections beyond transactional relationships. Educational content delivery produced 43% more repeat purchases, while community building initiatives encouraging viewer interaction resulted in 67% higher session retention rates, demonstrating that social commerce success requires broader community engagement that creates network effects benefiting all participants (Y. Ma, 2021).

Algorithmic Amplification and Reach Expansion

TikTok's algorithmic infrastructure transforms social commerce by disrupting traditional follower-dependent visibility models, enabling content reach that exceeds seller audience size through engagement-based amplification (Koshiyama et al., 2024). This democratizes market access for small businesses without requiring substantial advertising investments. Seller S11 (fashion) demonstrated this advantage: *"My follower count is only 15,000, but live streams regularly reach 50,000-80,000 viewers because the algorithm promotes engaging content. This exposure is impossible on other platforms without significant advertising spend."* This represents a fundamental shift from the old follower-count game to a system that rewards engaging content, giving smaller sellers a real shot at competing with big brands based purely on how well they connect with audiences rather than how much social media clout they already have.

A closer look at TikTok's algorithm reveals just how sophisticated this system really is. While traditional social media metrics like comments, likes, and viewing time still matter as primary signals, the platform goes much deeper by tracking actual commercial behaviors, things like add-to-cart actions and completed purchases. These conversion signals provide direct proof that content is driving real business results, which then influences how the algorithm promotes that content to similar users (Bhandari & Bimo, 2022). The system also acts as a quality gatekeeper, evaluating technical factors like video and audio clarity and presentation polish, while using audience retention patterns to shape long-term content promotion strategies.

What emerges is essentially a merit-based system where commercial success depends more on creating quality, engaging content than on having a massive existing follower base or deep advertising pockets (Schwarz, 2025). This levels the playing field in ways that traditional e-commerce platforms simply cannot match.

Product Category Performance and Consumer Behavior Analysis

Category-Specific Live Streaming Effectiveness

Table 1 shows some interesting differences in how well live streaming works across different product categories, offering valuable clues about the best ways to use the platform depending on what you are selling. Fashion and clothing categories demonstrate the highest conversion rates (23.2%), followed closely by beauty and cosmetics (21.8%), while electronics show lower but still substantial conversion rates (12.1%). These patterns align with social commerce literature suggesting that experience goods benefit more from live demonstration than search goods (Tee et al., 2023).

Table 1. Product category performance in live streaming (2024).

Product Category	Live Sessions/Month	Avg Viewers/Session	Conversion Rate (%)	AOV (IDR)	Total Category GMV (IDR Billion)	Market Penetration (%)

Fashion & Clothing	125,000	2,850 ± 420	23.2 ± 2.8	185,000	245.8	34.2
Beauty & Cosmetics	95,000	3,200 ± 380	21.8 ± 3.1	125,000	168.5	28.5
Electronics	45,000	1,950 ± 285	12.1 ± 1.8	650,000	142.3	18.7
Food & Beverages	85,000	2,100 ± 315	18.5 ± 2.2	85,000	98.7	41.8
Home & Living	65,000	1,650 ± 225	15.8 ± 1.9	220,000	87.2	22.3
Health & Wellness	55,000	1,850 ± 195	16.2 ± 2.1	155,000	65.4	19.6

Source: Authors owns research. Statistical Notes:

- Pearson correlation between conversion rate and AOV: $r = -0.654$, $p < 0.01$
- Category performance varies significantly: $\chi^2(5) = 158.3$, $p < 0.001$
- Fashion and Beauty categories show premium performance in live streaming context

The inverse correlation between conversion rates and average order values ($r = -0.654$, $p < 0.01$) suggests that live streaming's primary strength lies in reducing purchase hesitation for medium-value, frequent-purchase items rather than high-consideration purchases. This finding supports the social presence theory framework, where real-time interaction builds confidence for routine purchasing decisions but may require additional validation for significant investments.

Market penetration data in Table 1 indicates that food and beverages achieve the highest penetration rate (41.8%) despite moderate conversion rates, suggesting broad applicability of live streaming for consumable goods. This aligns with interview findings from Seller S9 (food category): *"Customers want to see actual cooking demonstrations, taste tests, and ingredient quality. Live streaming lets me show authenticity that photos cannot convey."*

Consumer Decision-Making Factors

Table 2 presents comprehensive analysis of consumer purchase decision factors in live streaming contexts, based on survey responses from 200 active TikTok Shop buyers. Real-time product demonstration emerges as the highest-rated factor (4.67/5.0), explaining 18.7% of purchase decision variance. This finding validates the theoretical framework proposed in Section 2, where enhanced product visualization serves as a primary mechanism for live streaming effectiveness.

Table 2. Consumer purchase decision factors in live streaming context

Decision Factor	Importance Rating*	Impact on Purchase (β)	Sig. Level	Variance Explained (%)
Real-time Product Demonstration	4.67 ± 0.52	0.423	$p < 0.001$	18.7
Immediate Question Response	4.45 ± 0.61	0.387	$p < 0.001$	15.2
Special Live-only Discounts	4.23 ± 0.71	0.298	$p < 0.001$	12.4
Seller Credibility/Trust	4.51 ± 0.58	0.365	$p < 0.001$	14.8
Social Proof (Other Buyers)	3.89 ± 0.79	0.224	$p < 0.01$	8.9
Product Scarcity/Urgency	3.67 ± 0.85	0.198	$p < 0.01$	7.2
Entertainment Value	3.34 ± 0.91	0.156	$p < 0.05$	5.1
Interaction with Community	3.12 ± 0.88	0.134	$p < 0.05$	4.3

Source: Authors owns research. *5-point Likert scale (1 = Not Important, 5 = Very Important) Multiple Regression Analysis: $F(8,191) = 32.456$, $p < 0.001$, Adjusted $R^2 = 0.564$ Sample: $n = 200$ active TikTok Shop buyers.

The significant impact of immediate question response ($\beta = 0.387$, $p < 0.001$) supports social presence theory applications in commercial contexts, demonstrating how real-time interaction builds trust and reduces uncertainty. Consumer C47 noted in survey comments: *"When I can ask questions and get immediate answers, it feels like shopping with a knowledgeable friend rather than buying from a stranger online."*

Interestingly, entertainment value ranks relatively low in importance (3.34/5.0) but still maintains statistical significance, suggesting that while engagement matters, functional benefits drive actual purchase decisions. This nuanced finding contributes to social commerce literature by distinguishing between engagement drivers and conversion factors.

Integration With Communication Platforms

This research analysis found that integrating WhatsApp was a key factor in TikTok Shop's GMV performance in Indonesia, showing that the company was able to adapt to local communication preferences. WhatsApp has

become the main way people in Indonesia communicate online. It has 139 million users, which is almost half of the country's population, and 92% of social media users use it. This integration smartly combines TikTok's strengths in helping people find new products with how Indonesians already like to talk to each other. This way, the platform can work with how people already do things instead of making them learn new ways to interact (Lim et al., 2018). The method acknowledges an essential aspect: effective social commerce in Indonesia must honour local inclinations for fostering personal relationships and engaging in direct communication, particularly when financial transactions are involved and individuals seek to inquire in depth or negotiate.

The combination of TikTok Shop and WhatsApp makes shopping across multiple platforms surprisingly easy. People find products through TikTok's intelligent content recommendations, get interested through live streaming demos, and then naturally switch to WhatsApp when they want to ask more detailed questions or have more extended conversations. WhatsApp chats are an excellent way for Indonesian shoppers to talk directly to sellers, and many deals are done this way. The relationship continues there for any help after the purchase (Kurniawan et al., 2022). This mixed approach is innovative because it uses TikTok's ability to show off products and build excitement while using WhatsApp's familiar and trusted communication space. This leads to higher conversion rates that are in line with how Indonesian shoppers and communicators really like to do things (Alya et al., 2024).

Comparative Advantage Analysis

Feature Differentiation

TikTok Shop is excellent because it combines shopping with fun, which makes for a user experience that other online stores cannot easily copy. Users do not have to look through categories on TikTok because of its recommendation system. Instead, it puts chances to buy things right into fun content, making a kind of "discovery commerce" where people find things to buy while looking for entertainment (Sun et al., 2019). This turns shopping from a goal-oriented task into a more random activity, which makes it easier for people who might not have looked for these things to find them.

TikTok Shop is a one-stop shop for sellers to make content, build an audience, and process sales, making it easier to manage multiple platforms (Wongkitrungrueng & Assarut, 2020). Real-time interaction makes it even more appealing because sellers can respond right away to customer questions when they are most interested, which is not the case on most other platforms. The platform also uses social proof by having real users create content and share it naturally. Peer recommendations are often more trustworthy than traditional ads. This builds trust and creates viral effects that make products more visible (Z. Lu et al., 2018).

Market Penetration Strategy

Expert interviews suggest TikTok Shop's success stems from its targeted rather than mass-market approach. Instead of appealing broadly, the platform focused on Gen Z and millennial users already comfortable blending social media and shopping. These early adopters possessed the digital fluency and mobile-first habits needed to engage seamlessly with TikTok Shop's features (Dhir et al., 2021).

The strategy also helped small businesses by giving them easy-to-use tools for creating content and live streaming, which let sellers with little technical knowledge compete with bigger brands. This made online selling more accessible, leading to real, diverse content that connected with users more than traditional corporate marketing (C. Chen & Lin, 2018).

Also, TikTok Shop grew into rural areas by using a mobile-first design, which got around the problems that traditional e-commerce has with infrastructure. The platform adapted to Indonesian shopping culture by incorporating practices like bargaining, community-based decision making, and relationship-focused transactions with modern digital conveniences (Hidayanto et al., 2017).

Challenges And Limitations

Even though the research found much success, it also found some problems that could make it harder for TikTok Shop to reach its full GMV potential.

Quality Control Issues

The survey results show that there are serious quality issues that could hurt the platform's credibility, especially in the lower-priced product categories where sellers might cut corners to make more money. About 23% of people who answered said they got things that were very different from what they saw in live-stream demonstrations. This suggests that the items may have been manipulated using lighting, camera angles, or high-quality samples (M. Zhang et al., 2019). Eighteen per cent of users said they had problems with sizing and fit, especially in fashion, where inconsistent standards and not being able to try things on first make people even more unhappy (Pappas et al., 2014).

Also, 15% of respondents got products that were of lower quality than what they were shown, which suggests that sellers may show higher-quality samples while giving out lower-quality stock. These issues together hurt consumer trust and could seriously hurt TikTok Shop's ability to compete, as unhappy customers may switch to well-known platforms with better return policies and quality guarantees (B. Lu et al., 2016).

Seller Capability Development Challenges

Performance analysis showed that there are significant skill gaps that affect how well sellers perform on TikTok Shop. This shows that the platform's advanced technology does not always match up with users' uneven skills. Many sellers, especially those from traditional retail, had trouble learning how to tell stories, engage with their audience, and be confident, which are all important skills for competitive live streaming (C. Chen & Lin, 2018). The job requires sellers to be entertainers, teachers, and salespeople all at the same time, which is hard to do in a crowded streaming environment.

Technical skills made things even worse because poor production quality in areas like lighting, audio, and camera placement made it harder for algorithms to promote content and keep viewers (Wongkitrungrueng & Assarut, 2020). When sellers did not answer product questions right away, it also hurt their credibility. Managing time and making plans puts more stress on sellers, especially smaller ones who do not have support teams. All of these problems show how important it is for TikTok Shop to provide intense training and technical support so that sellers can use the platform effectively and keep the quality of the ecosystem (M. Zhang et al., 2019).

Platform Dependency Risks

Sellers who heavily rely on TikTok's algorithm run the risk of having their reach and sales drastically impacted almost immediately if the algorithm changes. Several sellers expressed sincere worries during interviews about putting all of their eggs in one algorithmic basket. They emphasised the value of developing diverse marketing plans that are not solely dependent on TikTok's constantly evolving recommendation system. When algorithms work in your favour, they can significantly increase visibility and sales, but when the platform decides to change how content is distributed, that same power can quickly evaporate. This dependency risk brings to light a well-known problem in the platform economy.

Theoretical And Practical Implications

Theoretical Contributions and Academic Implications

By offering empirical proof of the connection between technological innovation and corporate performance, this study contributes to our understanding of social commerce. With a strong statistical correlation between frequency of use and sales performance ($r = 0.847$, $p < 0.001$), the results show that live streaming directly drives revenue growth in addition to increasing engagement through new features (Sun et al., 2019). This demonstrates how platform features can influence large-scale commercial results.

Additionally, the study incorporates social presence theory into business settings. While earlier research focused on education or teamwork, these findings show how social presence lowers uncertainty and creates emotional bonds that promote buying in situations where in-person product inspection is not feasible (B. Lu et al., 2016). This implies that, in addition to transactional efficiency, genuine interactions should be given top priority in future platform design.

The study concludes by presenting the idea of algorithmic commerce, which refers to AI-powered recommendation systems that change consumer behaviour from active product search to entertainment-based discovery. This reinterpretation demonstrates how algorithms are radically changing the way people shop online (Wongkitrungrueng & Assarut, 2020).

PRACTICAL IMPLICATIONS

For Platform Developers

To stay competitive in social commerce, platform developers should focus on real-time interaction and advanced algorithm design. Shopping should enhance the entertainment experience rather than disrupt it. This necessitates substantial investment in machine learning to identify and promote engaging commercial content without disrupting the natural browsing flow (Sun et al., 2019). Developers should also focus on making communication tools that work well, like integrated customer service during live streams, advanced chat, and video responses, that let buyers and sellers connect right away.

Along with their main technologies, successful platforms need to integrate and train sellers to build a supportive ecosystem strategically. To make sure that all vendors have the same level of quality, they need to take in-depth courses on technical skills, live streaming, and how to deal with customers (Wongkitrungrueng & Assarut,

2020). It is also important to connect with popular local messaging apps, like WhatsApp in Indonesia, to increase transaction rates and customer satisfaction by fitting in with how people use them now. These integrations should keep users interested in the platform by making sure that social commerce works well with both new and old communication channels. They should also help users smoothly from discovery to purchase (M. Zhang et al., 2019).

For Businesses and Sellers

Live streaming should be a central part of a business's marketing strategy if it wants to do well in social commerce. This means buying good equipment, giving staff structured training on how to present and interact with customers, and planning content in a way that makes sure each session is useful (C. Chen & Lin, 2018). To do live streaming well, you need to keep investing in talent, making content, and making sure that performances are as good as they can be.

To get the most out of live streaming's interactive features, you need to put engagement strategies first. Quick response systems, programs that help build communities, and personalised experiences can help businesses keep customers and get them to buy again (Wongkitrungrueng & Assarut, 2020). Businesses should also not depend too much on one platform. TikTok Shop has much potential, but being on other platforms like Shopee, Tokopedia, and Lazada lowers the risks of changes to algorithms or policies. A strategy that includes many platforms and types of content helps digital commerce stay stable and strong over time (M. Zhang et al., 2019).

For Policymakers

Governments ought to create all-encompassing policy frameworks that recognise social commerce as a catalyst for the expansion of the digital economy. Some important steps are to expand digital literacy programs, give small and medium-sized businesses (SMEs) incentives to use technologies like live streaming, and invest in infrastructure, education, and financial support to get more people involved, especially those who do not have access to these resources and traditional businesses (OECD, 2020).

It is just as important to create flexible rules that deal with the unique problems that come up when selling in real time. In live streaming situations, traditional consumer protection measures are not always enough. This means that rules need to be made for product authenticity, return and refund procedures, and personalised ways to settle disputes (Burt & Sparks, 2003). Policymakers face the difficult task of finding a balance between protecting consumers and encouraging innovation. Regulations must protect against fraud and bad products without getting in the way of growth in the sector or its contribution to economic development (M. Zhang et al., 2019). Brilliant, flexible guardrails are necessary for both the health of the industry and the trust of customers.

Research Limitations

The study was only about Indonesia's unique market conditions and how TikTok Shop works there. This means that the results might not be directly relevant to other platforms or countries with different cultures and economies. The fast-paced evolution of social commerce platforms also means these insights could need refreshing as new technologies emerge and user behaviors continue to shift and adapt.

CONCLUSIONS

This study provides compelling evidence that TikTok's live streaming features play a major role in driving gross merchandise value growth within Indonesia's social commerce landscape. Our mixed-method analysis demonstrates that live streaming creates competitive advantages through enhanced product visualization, real-time social interaction, and algorithmic amplification that traditional e-commerce platforms cannot easily replicate.

The research reveals that TikTok Shop's achievement of IDR 528.6 trillion GMV in 2024 results from strategic integration of entertainment and commerce, leveraging Indonesia's high social media engagement rates and mobile-first consumer behaviors. The strong correlation between live streaming adoption and GMV performance ($r = 0.847$) provides quantitative evidence of this technology's commercial impact.

Key success factors include optimal session timing and duration, effective product demonstration techniques, rapid customer response capabilities, and seamless integration with preferred communication platforms like WhatsApp. However, challenges related to quality control, seller capability development, and platform dependency require ongoing attention to ensure sustainable growth.

Future research should examine: (1) cross-cultural variations in live streaming commerce effectiveness, (2) long-term sustainability of algorithmic commerce models, (3) impacts of artificial intelligence integration on live streaming performance, and (4) comparative studies of different live streaming technologies and their business impacts.

The emergence of live streaming commerce represents a fundamental shift in how digital platforms create value, suggesting that future e-commerce success will increasingly depend on platforms' ability to integrate social interaction, entertainment, and commercial transactions into cohesive user experiences.

ACKNOWLEDGMENTS:

The authors would like to express their gratitude to the Palangka Raya University, and there are no conflicts of interest for supporting this article.

REFERENCES

- Alya, L., Yusuf, A., Naufal, A., Arief, M., Faishal, M., Wildan, M., & Nizar, A. (2024). Journal of Open Innovation : Technology , Market , and Complexity Generation Z and Indonesian Social Commerce : Unraveling key drivers of their shopping decisions. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(2), 100256. <https://doi.org/10.1016/j.joitmc.2024.100256>
- Baxter, P., & Jack, S. (2015). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544–559. <https://doi.org/10.46743/2160-3715/2008.1573>
- Bhandari, A., & Bimo, S. (2022). Why's Everyone on TikTok Now? The Algorithmized Self and the Future of Self-Making on Social Media. *Social Media and Society*, 8(1). <https://doi.org/10.1177/20563051221086241>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 1–43. <https://doi.org/10.1191/1478088706qp063oa>
- Burt, S., & Sparks, L. (2003). E-commerce and the retail process : a review. *Journal of Retailing and Consumer Services*, 10, 275–286.
- Cai, R., Li, Y., & Ma, C. (2022). The Research on the Audiences' Psychological Under the Influence of Live Streaming of Stars on Douyin Platform ---Take Jia Nailiang as an Example. *Proceedings of the 2022 5th International Conference on Humanities Education and Social Sciences (ICHESS 2022)*, 1367–1376. https://doi.org/10.2991/978-2-494069-89-3_157
- Chandrea, M., Sukmaningsih, D. W., & Sriwardiningsih, E. (2024). The Impact of Live Streaming On Purchase Intention In Social Commerce In Indonesia. *Procedia Computer Science*, 234(2023), 987–995. <https://doi.org/10.1016/j.procs.2024.03.088>
- Chen, C., & Lin, Y. (2018). What drives live-stream usage intention ? The perspectives of flow , entertainment , social interaction , and endorsement. *Telematics and Informatics*, 35(1), 293–303. <https://doi.org/10.1016/j.tele.2017.12.003>
- Chen, Y. (2022). Research on Douyin as an E-commerce Platform Impacts the Buying Decisions of Users. *Highlights in Business, Economics and Management*, 2, 395–400. <https://doi.org/10.54097/hbem.v2i.2393>
- Clark, V. L. P. (2017). Mixed methods research Mixed methods research. *The Journal of Positive Psychology*, 12(3), 305–306. <https://doi.org/10.1080/17439760.2016.1262619>
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Daniel, D., & Sukendro, G. G. (2023). Pemanfaatan Live Streaming di Media Sosial TikTok. *Kiwari*, 2(3), 424–431. <https://doi.org/10.24912/ki.v2i3.25874>
- Dhir, A., Sadiq, M., Talwar, S., Sakashita, M., & Kaur, P. (2021). Why do retail consumers buy green apparel ? A knowledge-attitude-behaviour-context perspective. *Journal of Retailing and Consumer Services*, 59(November 2020), 102398. <https://doi.org/10.1016/j.jretconser.2020.102398>
- Diarya, A. F. G., & Raida, V. (2023). Pengaruh Live Streaming Tiktok Terhadap Kepercayaan Konsumen Produk Jims Honey Di Surabaya Dan Dampaknya Pada Keputusan Pembelian. *Jurnal Pendidikan Tata Niaga (JPTN)*, 11(2), 125–133. <https://doi.org/https://doi.org/10.26740/jptn.v11n2.p125-133>
- Dimoka, A., Hong, Y., & Pavlou, P. A. (2012). On Product Uncertainty in Online Markets : Theory and Evidence. *MIS Quarterly Vol.36*, 36(2), 395–426.
- Fadhilah, U., Susyanti, J., & Kunci, K. (2024). Analisis Sistem S-Commerce Sebagai Business Process Management Pada Tiktok Shop (Studi UMKM di Indonesia Dengan Pendekatan SOAR). *MERDEKA : Jurnal Ilmiah Multidisiplin*, 1(6), 228–248. <https://jurnalisticqomah.org/index.php/merdeka/article/view/1962>
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hidayanto, A. N., Ovirza, M., Anggia, P., Ayuning, N. F., & Phusavat, K. (2017). *The Roles of Electronic Word of Mouth and Information Searching in the Promotion of a New E-Commerce Strategy : A Case of Online Group Buying in Indonesia 2 Theoretical Foundation*. 12(3), 69–85. <https://doi.org/10.4067/S0718-18762017000300006>

- Hua, Q., & Chiu, C. L. (2022). Analysis of Young Chinese Purchase Intention on TikTok Live Streaming. *Kinforms*, 17(1), 65–99. <https://doi.org/10.55819/mrij.2022.17.1.65>
- Jiang, Z., & Benbasat, I. (2007). Investigating the Influence of the Functional Mechanisms of Online Product Presentations. *Information Systems Research Publication*, 18(4), 454–470. <https://doi.org/10.1287/isre.1070.0124>
- Kang, K., Lu, J., Guo, L., & Li, W. (2021). International Journal of Information Management The dynamic effect of interactivity on customer engagement behavior through tie strength: Evidence from live streaming commerce platforms. *International Journal of Information Management*, 56(September 2020), 102251. <https://doi.org/10.1016/j.ijinfomgt.2020.102251>
- Koshiyama, A., Kazim, E., Treleaven, P., Rai, P., Szpruch, L., Pavey, G., Leutner, F., Goebel, R., Adams, J., Hitrova, C., Khan, S., & Lomas, E. (2024). Towards algorithm auditing: managing legal, ethical and technological risks of AI, ML and associated algorithms. *Royal Society Open Science*, 11, 1–34. <https://doi.org/10.1145/3144592.3144598>
- Kurniawan, I. A., Mugiono, & Wijayant, R. (2022). The Effect Of Perceived Usefulness, Perceived Ease Of Use, And Social Influence Toward Intention To Use Mediated By Trust. *Journal of Applied Management*, 20(1), 117–127. <https://doi.org/http://dx.doi.org/10.21776/ub.jam.2022.020.01.12>
- Lim, S. H., Kim, D. J., Hur, Y., Park, K., Hun, S., Kim, D. J., Hur, Y., & Park, K. (2018). An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Payment Services An Empirical Study of the Impacts of Perceived Security and Knowledge on Continuous Intention to Use Mobile Fintech Paymen. *International Journal of Human-Computer Interaction*, 00(00), 1–13. <https://doi.org/10.1080/10447318.2018.1507132>
- Lin, Q., & Nuangjamnong, C. (2022). Exploring the Role of Influencers and Customer Engagement on Purchase Intention in TikTok Live Streaming Shopping. *International Journal of Social Sciences and Humanities Invention*, 9(12), 7469–7498. <https://doi.org/10.18535/ijsshi/v9i012.04>
- Lu, B., Fan, W., & Zhou, M. (2016). Computers in Human Behavior Social presence, trust, and social commerce purchase intention: An empirical research. *Computers in Human Behavior*, 56, 225–237. <https://doi.org/10.1016/j.chb.2015.11.057>
- Lu, Z., Xia, H., Heo, S., & Wigdor, D. (2018). *You Watch, You Give, and You Engage: A Study of Live Streaming Practices in You Watch, You Give, and You Engage: A Study of Live Streaming Practices in China*. February. <https://doi.org/10.1145/3173574.3174040>
- Ma, E., Liu, J., & Li, K. (2023). Exploring the mechanism of live streaming e-commerce anchors' language appeals on users' purchase intention. *Frontiers in Psychology*, 14(March), 1–13. <https://doi.org/10.3389/fpsyg.2023.1109092>
- Ma, Y. (2021). *Telematics and Informatics To shop or not: Understanding Chinese consumers' live-stream shopping intentions from the perspectives of uses and gratifications, perceived network size, perceptions of digital celebrities, and shopping orientations*. 59(June 2020), 1–17.
- Mahran, M., Abdul Rashid, S. F., Ramli, R., & Abu Hassan, N. S. (2023). Factors Influencing Tax Compliance Among Tiktok Users Engaged in E-Commerce Activities in Malaysia. *Asia-Pacific Management Accounting Journal*, 18(2), 217–249. <https://doi.org/10.24191/apmaj.v18i2-09>
- Malhotra, N., Nunan, D., & Birks, D. (2017). *Marketing Research: An Applied Approach*.
- Meliawati, T., Gerald, S. C., & Akhmad Edhy Aruman. (2023). The Effect of Social Media Marketing TikTok and Product Quality Towards Purchase Intention. *Journal of Consumer Sciences*, 8(1), 77–92. <https://doi.org/10.29244/jcs.8.1.77-92>
- OECD. (2020). *Digital Government Review of Argentina: Accelerating the Digitalisation of the Public Sector*. OECD Publishing.
- Pappas, I. O., Pateli, A. G., Giannakos, M. N., & Chrissikopoulos, V. (2014). Moderating effects of online shopping experience on customer satisfaction and repurchase intentions. *International Journal of Retail & Distribution Management*, 42(3), 187–204. <https://doi.org/10.1108/IJRDM-03-2012-0034>
- Poh, S., Hasan, D. G., & Sudiyono, K. A. (2024). The power of social commerce: TikTok's impact on Gen Z consumer purchasing behavior. *Jurnal Manajemen Dan Bisnis*, 23(2), 501–515. <https://doi.org/10.24123/jmb.v23i2.835>
- Qin, Y., Omar, B., & Musetti, A. (2022). The addiction behavior of short-form video app TikTok: The information quality and system quality perspective. *Frontiers in Psychology*, 13(September). <https://doi.org/10.3389/fpsyg.2022.932805>
- Saunders, M. N. K., Lewis, P., & Thornhill, A. (2023). *Research Methods for Business Students* (Issue August). Pearson Education Limited.
- Schwarz, O. (2025). The Post-Choice Society: Algorithmic Prediction and the Decentering of Choice. *Theory, Culture & Society*, 42(4), 3–22. <https://doi.org/10.1177/02632764251322062>
- Siregar, E. N., Pristiyono, P., & Ihsan, M. A. Al. (2023). Analysis of Using Tiktok as Live Marketing in Attracting

- Consumers' Interest in Buying. *Quantitative Economics and Management Studies*, 4(3), 453–463. <https://doi.org/10.35877/454ri.qems1633>
- Sun, Y., Shao, X., Li, X., Guo, Y., & Nie, K. (2019). How live streaming influences purchase intentions in social commerce: An IT affordance perspective. *Electronic Commerce Research and Applications*, 37(August), 100886. <https://doi.org/10.1016/j.elerap.2019.100886>
- Susanti, E., & Adha, S. (2023). The Effect of Tik Tok Live Streaming in Increasing Consumer Trust and Purchasing Decisions. *Formosa Journal of Applied Sciences*, 2(12), 3293–3306. <https://doi.org/10.55927/fjas.v2i12.7214>
- Tee, W. Y., Teo, S. C., & Liew, T. W. (2023). Exploring the Tiktok Influences on Consumer Impulsive Purchase Behaviour. *International Journal of Business and Society*, 24(1), 39–55. <https://doi.org/10.33736/ijbs.5600.2023>
- Wongkitrungrueng, A., & Assarut, N. (2020). The role of live streaming in building consumer trust and engagement with social commerce sellers. *Journal of Business Research*, 117(November 2017), 543–556. <https://doi.org/10.1016/j.jbusres.2018.08.032>
- Xie, Z., Yang, Y., & Zhao, Y. (2024). TikTok's Revenue Dynamics: Exploring Income Streams Beyond the Surface. *Highlights in Business, Economics and Management*, 24, 2582–2586. <https://doi.org/10.54097/6ardkv52>
- Yang, G., Chaiyasoonthorn, W., & Chaveesuk, S. (2024). Exploring the influence of live streaming on consumer purchase intention: A structural equation modeling approach in the Chinese E-commerce sector. *Acta Psychologica*, 249(April), 104415. <https://doi.org/10.1016/j.actpsy.2024.104415>
- Yin, R. K. (2003). *Case study research: Design and methods* (L. Bickman & D. J. Rog (eds.); 3rd ed.). SAGE Publications Inc.
- Zhang, H., Zheng, S., & Zhu, P. (2024). Why are Indonesian consumers buying on live streaming platforms? Research on consumer perceived value theory. *Heliyon*, 10(13), e33518. <https://doi.org/10.1016/j.heliyon.2024.e33518>
- Zhang, M., Qin, F., Wang, G. A., & Luo, C. (2019). The impact of live video streaming on online purchase intention. *The Service Industries Journal*, 0(0), 1–26. <https://doi.org/10.1080/02642069.2019.1576642>
- Zhang, Q., Wang, Y., & Ariffin, S. K. (2024). Consumers purchase intention in livestreaming e-commerce: A consumption value perspective and the role of streamer popularity. In *PLoS ONE* (Vol. 19, Issue 2 February). <https://doi.org/10.1371/journal.pone.0296339>
- Zou, J., & Fu, X. (2024). Understanding the purchase intention in live streaming from the perspective of social image. *Humanities and Social Sciences Communications*, 11(1), 1–14. <https://doi.org/10.1057/s41599-024-04054-6>