

Research Article

Understanding AI-Assisted Social Commerce Practices among SMEs in Kudus, Indonesia

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Abstract. The rapid growth of digital technologies has transformed the way Small and Medium-sized Enterprises (SMEs) conduct business activities, particularly through the adoption of social commerce and AI-assisted digital tools. This study aims to explore AI-assisted social commerce practices among SMEs in Kudus, Indonesia. A qualitative exploratory approach was employed involving eight SME owners from various sectors, including fashion, culinary, skincare, garment production, and hijab retail. Data were collected through semi-structured interviews and analyzed using thematic analysis. The findings reveal that TikTok has emerged as the dominant social commerce platform, with five out of eight participants utilizing it as their primary channel for promotion and customer engagement. In addition to TikTok, participants also used Shopee, Instagram, WhatsApp, ShopeeFood, GoFood, and GrabFood to support their business activities. The study further identified the use of several AI-assisted features, including chatbots, automatic caption generation, Canva-based content creation, and AI-generated promotional ideas. Interestingly, although participants actively utilized these features, many were unaware that the technologies they used incorporated artificial intelligence. This finding suggests that the level of AI utilization among SMEs is higher than the level of AI awareness. Furthermore, intense digital competition and the need to continuously create engaging content were identified as the primary challenges faced by SMEs in digital business environments. The study contributes to the growing literature on AI-assisted social commerce by providing empirical insights into how SMEs integrate digital technologies into their daily business practices and highlighting the importance of digital literacy, content creation capabilities, and AI awareness in supporting successful digital transformation.

Keywords: Artificial Intelligence; Digital Transformation; SMEs; Social Commerce; TikTok Marketing.

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1. Introduction

Small and Medium-sized Enterprises (SMEs) play a crucial role in economic development worldwide. According to the World Bank (2024), SMEs account for approximately 90% of businesses globally and provide around 50% of total employment. In developing countries, SMEs contribute significantly to job creation, poverty reduction, and economic growth. Therefore, maintaining SME competitiveness and sustainability has become an important concern for policymakers and researchers (World bank, 2024).

The rapid development of digital technologies has significantly transformed business practices across industries. Digital transformation enables organizations to integrate digital technologies into business processes, customer interactions, and value creation activities, thereby improving efficiency and competitiveness (Verhoef et al., 2019; Vial, 2019). Digital

transformation is increasingly recognized as a strategic necessity for SMEs seeking to maintain competitiveness in the digital economy (Morakanyane, Grace, & O'Reilly, 2017; OECD, 2023). However, many SMEs continue to face challenges in adopting and utilizing digital technologies effectively due to limited digital capabilities and technological skills.

Previous studies suggest that digital transformation positively contributes to SME performance through innovation and business model development (Merín-rodrig & Alegre, 2024). By utilizing digital technologies, SMEs can improve operational efficiency, strengthen customer relationships, and expand market opportunities. Consequently, digital transformation has become an important strategy for enhancing business sustainability and competitiveness in increasingly dynamic markets.

One of the most prominent manifestations of digital transformation is the emergence of social commerce. Social commerce refers to the integration of social media platforms and commercial activities, enabling businesses to market products, interact with customers, and facilitate transactions through digital channels (Hajli, 2015). Platforms such as TikTok, Instagram, WhatsApp Business, and Shopee have become important components of SMEs' digital marketing strategies. Through social commerce, SMEs can establish stronger relationships with customers while simultaneously increasing business visibility at relatively low costs (Lin, Chen, & Liu, 2017; Lina & Suwarni, 2022).

In addition to social commerce, artificial intelligence (AI) technologies have become increasingly embedded in everyday business applications. AI-assisted tools such as chatbots, recommendation systems, automatic caption generation, and content creation applications are now widely accessible to SMEs (Basri, 2020). These technologies enable business owners to automate certain tasks, improve customer interactions, and increase marketing effectiveness without requiring extensive technical expertise. Consequently, AI is becoming an important enabler of digital transformation among SMEs (Singh, 2026).

In Indonesia, SMEs play a vital role in economic growth and employment generation. The increasing adoption of digital platforms among Indonesian SMEs indicates a growing willingness to embrace digital transformation. Previous studies have examined social commerce adoption, technology acceptance, and the impact of digital technologies on SME performance (Arista, Tjahjanto, Ernawati, Purabaya, & Abdullah, 2023; Noviaristanti, Yunita, & Triono, 2023). However, existing studies primarily employ quantitative approaches and focus on adoption determinants or performance outcomes.

Although previous studies have examined social commerce adoption, digital transformation, and AI implementation among SMEs, most studies focus on technology acceptance, adoption factors, or business performance using quantitative approaches. Limited research has explored how SME owners practically utilize AI-assisted features in their daily commerce activities. Furthermore, evidence from local contexts such as Kudus, Indonesia remains scarce. Therefore, this study aims to explore AI-assisted social commerce practices among SMEs in Kudus and understand how these technologies support their digital business activities.

2. Literature Review

Social Commerce

Social commerce refers to the integration of social media platforms and commercial activities that facilitate product promotion, customer interaction, and online transactions. Unlike traditional e-commerce, social commerce emphasizes social interaction and user-generated content as important factors influencing consumer purchasing decisions. Through social commerce platforms, businesses can communicate directly with customers while simultaneously building trust and engagement (Hajli, 2015).

The rapid growth of social media has accelerated the adoption of social commerce among SMEs. Platforms such as TikTok, Instagram, Facebook, and WhatsApp Business have become strategic channels for marketing and customer engagement. Previous studies suggest that social commerce enables SMEs to expand market reach, improve brand visibility, and strengthen customer relationships at relatively low operational costs (Zhang & Benyoucef, 2016).

In developing countries such as Indonesia, social commerce has become increasingly important for SMEs seeking to compete in digital markets. The accessibility of social media platforms allows small businesses to promote products and interact with consumers without substantial investments in digital infrastructure. Consequently, social commerce is recognized

as an important driver of SME growth and competitiveness in the digital economy (Arista et al., 2023).

AI-Assisted Technologies in SMEs

Artificial intelligence (AI) refers to technologies that enable systems to perform tasks that typically require human intelligence, such as learning, problem-solving, and decision-making. Recent technological developments have made AI increasingly accessible to businesses of various sizes, including SMEs. Rather than implementing complex AI systems, many SMEs utilize AI-assisted features embedded within commonly used digital applications (Dwivedi et al., 2021).

Examples of AI-assisted technologies include chatbots, recommendation systems, automatic caption generation, content creation tools, and personalized advertising features. These technologies help businesses automate repetitive tasks, improve customer communication, and enhance marketing effectiveness. Previous studies have shown that AI-assisted marketing tools contribute positively to business performance by increasing efficiency and supporting promotional activities (Basri, 2020).

Despite the increasing availability of AI-assisted technologies, the level of AI awareness among SME owners often remains limited. Many business owners benefit from AI-enabled features without fully recognizing the role of artificial intelligence in these applications. As a result, understanding how SMEs utilize AI-assisted tools in their daily business activities has become an important research area within the broader context of digital transformation (Nofirda & Hastuti, 2025).

SMEs and Digital Transformation

Digital transformation refers to the integration of digital technologies into organizational processes, business models, and customer interactions. It involves fundamental changes in the way businesses create value, communicate with customers, and manage operations. For SMEs, digital transformation provides opportunities to improve competitiveness and respond more effectively to changing market conditions (Vial, 2019).

The adoption of digital platforms, online marketplaces, social media, and AI-assisted tools has become an important aspect of SME digital transformation. These technologies enable businesses to reach wider markets, improve operational efficiency, and strengthen customer engagement. Previous studies indicate that SMEs that successfully embrace digital transformation are more likely to achieve sustainable business growth and competitive advantages (Verhoef et al., 2019).

Although previous research has extensively examined social commerce adoption, digital technology acceptance, and AI implementation among SMEs, most studies focus on quantitative measurements of adoption factors and business performance outcomes. Limited research has explored how SMEs practically utilize AI-assisted features in their daily social commerce activities, particularly in local contexts such as Kudus, Indonesia. Therefore, this study seeks to fill this gap by investigating AI-assisted social commerce practices among SMEs and examining their role in supporting digital transformation processes (Quintero Sepúlveda & Zúñiga Collazos, 2025).

3. Proposed Method

This study employed a qualitative exploratory approach to investigate AI-assisted social commerce practices among Small and Medium-sized Enterprises (SMEs) in Kudus, Indonesia. A qualitative approach was considered appropriate because the study aimed to gain an in-depth understanding of how SME owners utilize digital platforms and AI-assisted features in their daily business activities. According to Creswell and Creswell (2018), qualitative research is suitable for exploring participants' experiences, perceptions, and behaviors within a particular context.

The participants were selected using purposive sampling. The selection criteria included SME owners operating in Kudus who actively utilized digital platforms such as TikTok, Instagram, WhatsApp, Shopee, GoFood, or GrabFood to support their business operations. A total of eight SME owners participated in this study, representing various business sectors including fashion, culinary, skincare, garment production, and hijab retail. Data were collected through semi-structured interviews, allowing participants to share their experiences regarding social commerce utilization, AI-assisted technologies, perceived benefits, and challenges encountered in digital business environments. Semi-structured interviews were chosen

because they provide flexibility for participants to express their perspectives while enabling the researcher to explore topics relevant to the research objectives (Creswell, 2018).t

Table 1. Participant Profile

Participant	Business Type	Main Platform	AI Feature Used
P1	Fashion	TikTok, Shopee	AI Content Ideas
P2	Fashion	TikTok	TikTok Recommendation Features
P3	Fashion	WhatsApp Status	AI Content Ideas
P4	Culinary	ShopeeFood, GoFood, GrabFood	Not Identified
P5	Homemade Culinary	WhatsApp, Instagram	Canva
P6	Skincare Store	TikTok	Automatic Caption
P7	Garment Business	TikTok, Shopee	Canva
P8	Hijab Store	TikTok	AI Content Ideas

The collected data were analyzed using thematic analysis following the framework proposed by Braun and Clarke (Braun & Clarke, 2006). The analysis process consisted of data familiarization, coding, theme development, theme review, and interpretation. Interview transcripts were examined to identify recurring patterns related to social commerce practices, AI-assisted technology utilization, AI awareness, and digital business challenges. The identified themes were subsequently interpreted and discussed in relation to existing literature on social commerce, artificial intelligence, and digital transformation among SMEs. The overall research procedure is illustrated in Figure 1.

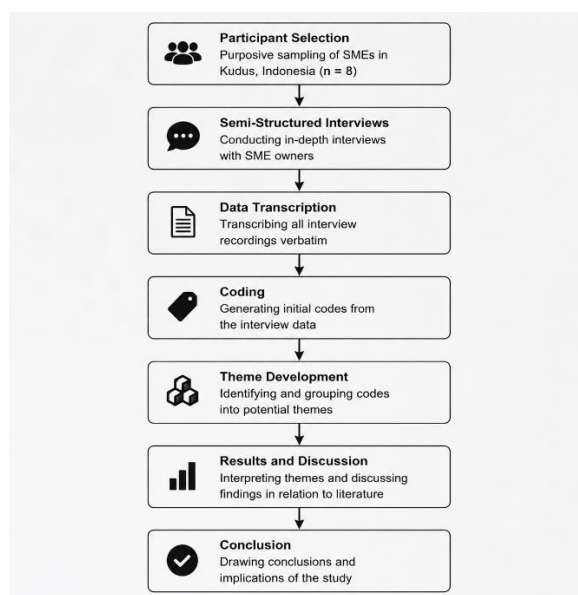


Figure 1. Research Prosedure

4. Results and Discussion

Social Commerce Adoption among SMEs

The findings indicate that all participating SMEs have adopted digital platforms to support their business activities. Although the level of digital adoption varies, all participants reported utilizing online channels for product promotion, customer communication, or sales transactions. The platforms used by participants include TikTok, Shopee, Instagram, WhatsApp, ShopeeFood, GoFood, and GrabFood. This finding suggests that digital technologies have become an essential component of SME business operations in Kudus.

Among the eight participants, five identified TikTok as their primary platform for marketing and customer engagement. Other participants relied on WhatsApp Status, Instagram, and online food delivery platforms to reach customers. The diversity of platform usage reflects differences in business characteristics and target markets. Fashion, skincare, and hijab businesses tended to prioritize visual-based platforms such as TikTok, whereas culinary businesses frequently utilized food delivery applications and messaging platforms.

One participant stated:

“Saya lebih sering menggunakan TikTok karena jangkauannya lebih luas dan banyak pelanggan mengetahui produk dari TikTok.” (P2)

This finding supports previous studies suggesting that social commerce platforms provide SMEs with opportunities to increase business visibility, strengthen customer relationships, and expand market reach through interactive digital environments (Hajli, 2015; Lina & Suwarni, 2022).

Dominance of TikTok in Social Commerce Activities

A notable finding of this study is the dominant role of TikTok in supporting social commerce activities among SMEs. Five participants reported using TikTok as their primary marketing platform, while several others utilized TikTok alongside Shopee and Instagram. Participants perceived TikTok as an effective channel for reaching wider audiences due to its recommendation algorithm and content-driven environment.

Participants highlighted that TikTok enables businesses to promote products through short-form videos, live streaming, and customer interactions. These features allow SMEs to communicate product information more effectively compared to conventional promotional methods. In addition, TikTok provides opportunities for businesses to gain visibility without substantial advertising expenditures.

The findings suggest that TikTok functions not only as a social networking platform but also as a strategic business tool. SMEs increasingly rely on TikTok to attract new customers, build brand awareness, and maintain engagement with existing customers. This result is consistent with social commerce literature emphasizing the role of social interaction and content sharing in influencing consumer behavior and purchasing decisions (Zhang & Benyoucef, 2016).

AI-Assisted Content Creation and Customer Interaction

The interviews revealed that several participants had incorporated AI-assisted features into their daily business activities. Although the level of AI utilization differed among participants, various AI-supported tools were identified, including chatbots, automatic caption generation, Canva-based design assistance, and AI-generated promotional ideas.

One participant explained:

“Biasanya saya mencari ide promosi dari AI lalu saya kembangkan sendiri sesuai kebutuhan produk.” (P3)

Another participant reported:

“Saya menggunakan automatic caption agar proses editing lebih cepat.” (P6)

These findings demonstrate that AI-assisted technologies are primarily utilized as supportive tools rather than as replacements for human creativity. Participants often used AI-generated outputs as initial references before modifying and adapting them according to their business needs. AI-assisted tools were perceived as valuable because they reduced the time required to create marketing content while maintaining productivity.

The findings align with previous studies indicating that SMEs tend to adopt practical and accessible AI applications embedded within existing digital platforms rather than implementing sophisticated AI systems (Basri, 2020; Dwivedi et al., 2021). As a result, AI technologies are increasingly integrated into everyday business practices among SMEs.

AI Utilization Exceeds AI Awareness

One of the most significant findings of this study is the discrepancy between AI utilization and AI awareness among SME owners. Several participants reported that they were unfamiliar with the concept of artificial intelligence despite actively using applications and features that incorporate AI technologies.

One participant stated:

“Kalau AI saya kurang paham, tapi saya memang menggunakan aplikasi untuk membantu promosi.” (P4)

This statement illustrates that many SMEs benefit from AI-assisted technologies without explicitly recognizing them as artificial intelligence applications. Participants generally focused on the practical benefits of digital tools, such as convenience, speed, and efficiency, rather than the technological mechanisms underlying the applications.

The findings suggest that AI adoption among SMEs often occurs indirectly through commonly used digital platforms. Consequently, the actual utilization of AI-assisted technologies may be more widespread than AI awareness among business owners. This finding contributes to the growing discussion on digital transformation by highlighting the distinction between technology awareness and technology utilization.

Furthermore, the findings imply that digital literacy programs should not only promote technology adoption but also improve SMEs’ understanding of AI and its potential business applications. Increased awareness may enable SME owners to utilize AI technologies more strategically and effectively.

Digital Competition and Content Creation Challenges

Despite the benefits associated with social commerce and AI-assisted technologies, participants identified digital competition as the most significant challenge in their business activities. Most participants emphasized the importance of producing attractive and engaging content to maintain visibility on digital platforms.

One participant explained:

“Kalau kontennya kurang menarik, produk juga sulit dilihat orang.” (P8)

Another participant stated:

“Persaingan sekarang ketat sekali. Harus sering bikin konten supaya tetap terlihat oleh pelanggan.” (P1)

These responses indicate that success in social commerce environments depends not only on technology adoption but also on the ability to continuously create relevant and engaging content. Participants perceived that content quality significantly influences audience reach, customer engagement, and sales performance.

In addition, several participants reported difficulties in understanding platform algorithms and predicting content performance. As competition increases, SMEs are required to invest more time and effort in content creation and digital marketing activities. Therefore, content development capabilities have become an important component of digital competitiveness.

Overall, the findings suggest that while digital platforms and AI-assisted tools provide substantial opportunities for SMEs, businesses must also develop digital marketing skills and content creation competencies to remain competitive in rapidly evolving online environments.

Table 2. Coding and Theme Development

Theme	Evidence from Participants
Social Commerce Adoption	Participants utilized TikTok, Shopee, Instagram, WhatsApp, ShopeeFood, GoFood, and GrabFood.
TikTok Dominance	Five participants identified TikTok as their primary marketing platform.
AI-Assisted Content Creation	Participants used chatbots, Canva, automatic captions, and AI-generated content ideas.
Digital Competition Challenges	Participants reported difficulties in creating engaging content and competing in digital environments.

5. Comparison

The findings of this study are generally consistent with previous research on social commerce adoption among SMEs. Similar to the findings of Hajli (2015) and Lina and Suwarni (2022), SMEs in Kudus utilize social media platforms to enhance customer engagement and expand market reach. The dominance of TikTok identified in this study further supports the growing importance of social commerce platforms in facilitating digital business activities.

However, this study reveals a distinctive finding regarding AI utilization among SMEs. Previous studies primarily focus on AI adoption, technology acceptance, and organizational readiness (Chatterjee, Chaudhuri, Vrontis, Thrassou, & Ghosh, 2021; Dwivedi et al., 2021). In contrast, the present study found that many SME owners actively use AI-assisted features such as automatic captions, chatbots, and AI-generated content ideas without explicitly recognizing them as artificial intelligence technologies. This suggests that AI utilization may be more widespread than AI awareness among SMEs.

Furthermore, while previous studies often emphasize technological infrastructure and organizational capabilities as determinants of digital transformation (Verhoef et al., 2019; Vial, 2019), participants in this study identified content creation and digital competition as their primary challenges. This indicates that, for small businesses, the success of digital transformation depends not only on technology adoption but also on the ability to produce engaging content and maintain visibility within highly competitive digital environments.

Table 3. Comparison Between Previous and Current Findings

Aspect	Previous Studies	Current Study
Social Commerce	Improves customer engagement and purchasing intention (Hajli, 2015).	SMEs use TikTok, Shopee, Instagram, and WhatsApp for promotion and sales.
AI Adoption	Focuses on adoption intention and readiness (Dwivedi et al., 2021).	SMEs use AI-assisted tools even without recognizing them as AI.
Digital Transformation	Emphasizes technology integration (Vial, 2019).	Highlights practical challenges in content creation and digital competition.
SME Challenges	Technology and resource constraints.	Difficulty creating viral and engaging content.
Main Contribution	Adoption factors and performance outcomes.	AI utilization exceeds AI awareness among SMEs.

6. Conclusions

This study explored AI-assisted social commerce practices among SMEs in Kudus, Indonesia through a qualitative approach involving eight SME owners from various business sectors. The findings indicate that digital platforms have become essential tools for business promotion, customer engagement, and market expansion. Among the platforms utilized by participants, TikTok emerged as the dominant social commerce platform due to its ability to support content-based marketing, live selling activities, and broader audience reach. In addition, SMEs also utilized platforms such as Shopee, Instagram, WhatsApp, ShopeeFood, GoFood, and GrabFood to support their business operations.

The study further revealed that participants utilized various AI-assisted features, including chatbots, automatic caption generation, Canva-based design assistance, and AI-generated promotional ideas. However, an important finding of this study is that many SME owners were unaware that the tools they used incorporated artificial intelligence technologies. This suggests that AI utilization among SMEs exceeds AI awareness, indicating that AI adoption often occurs indirectly through digital platforms and applications rather than through deliberate implementation of AI systems. Therefore, AI has become increasingly embedded in the everyday business practices of SMEs.

Despite the opportunities provided by social commerce and AI-assisted technologies, SMEs continue to face challenges related to digital competition and content creation. Participants emphasized the importance of producing engaging and relevant content to maintain visibility and competitiveness in digital environments. The findings contribute to the growing literature on social commerce, artificial intelligence, and digital transformation by providing empirical evidence from the local context of Kudus, Indonesia. Future research is encouraged to involve larger samples and broader geographical coverage to further examine the relationship between AI utilization, digital literacy, and SME performance.

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