



Research Article

Consumer Perceptions of Transaction Security in Digital Marketplaces

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Abstract : This study aims to explore consumer perceptions regarding transaction security on digital marketplaces and to evaluate the impact of community-based educational interventions. A descriptive qualitative method was employed, involving in-depth interviews with ten active marketplace users in Tasikmalaya City. The findings revealed that consumers' sense of security is shaped by personal experience, understanding of platform security features, and digital literacy. Prior to the intervention, most participants expressed high concern over data breaches and fraud, often opting for cash-on-delivery (COD) as a form of protection. Following a series of community education sessions—comprised of discussions and safe transaction simulations—significant changes were observed in consumer attitudes and behavior. Participants became more aware of the importance of verifying sellers, reading reviews, and using secure payment methods. The study concludes that localized community education effectively enhances awareness and trust among consumers, especially in areas where digital literacy remains limited.

Keywords: consumer perception, transaction security, digital marketplace, community service, digital literacy

1. Introduction

The Indonesian economy has undergone a substantial digital transformation over the past five years, particularly in the e-commerce sector, which has emerged as the primary catalyst for the nation's commercial activity. Fenomena ini dipicu dan dipelihara oleh penetrasi sains dan seni informatika dan industri hiburan (TIK) ke satu segmen pasar, disertai pula dengan makin bergantungnya struktur konsumisme publik atas sistem e-commerce (Jayathilaka & Udara, 2024). The digital marketplaces Tokopedia, Shopee, and Lazada have emerged as the primary conduits through which consumers procure their daily necessities, encompassing a wide range of products, from essential commodities to consumer goods. Notwithstanding the convenience and efficiency afforded by digital transactions, significant challenges persist, particularly with respect to consumer concerns regarding data security and the potential for fraudulent financial transactions (LingXiao & Ali, 2025).

This problem is even more critical when related to service activity partners, such as groups of micro-entrepreneurs and local consumers in West Java who have adopted the marketplace platform as their main marketing channel. Although MSMEs have received basic digital training, consumers still have doubts about making online transactions because they do not fully understand security issues (Hutauruk et al., 2025). For example, one of the partners in Tasikmalaya City reported a decline in transactions after consumers encountered phishing cases on e-commerce buyer accounts that lacked double protection features. This

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suggests a gap between technology utilization and consumer readiness to safely interact in the digital realm.

According to the extant literature, consumer perceptions of digital transaction security have been demonstrated to exert a significant influence on purchasing decisions (see Islam, 2024). However, the majority of extant research concentrates on technical aspects or quantitative models of consumer behavior. Only a limited number of studies have explored consumer perceptions qualitatively through a direct approach to the marketplace user community. For instance, a study by Mursidi et al. (2024) demonstrates that perceived security plays a mediating role between service quality and consumer satisfaction. However, it should be noted that the study was conducted on an urban Gen Y population with high access to digital literacy. Concurrently, within the context of this service, the marketplace user community continues to harbor reservations regarding the utilization of digital payment methods, primarily due to concerns surrounding data leakage.

In addition, the discrepancy is highlighted in a study by Jayathilaka and Udara (2024), which underscores the significance of cyber-trust in developing countries. Nevertheless, a paucity of e-commerce platforms furnishes users with sufficient education regarding the safeguarding of data and the identification of risks associated with digital transactions. The present study is of a microscopic nature and has not yet addressed the local community or the general public within the context of the marketplace at the city or district level. In fact, the approach utilized in the study by LingXiao & Ali (2025) was a survey based on the high-tech industry in metropolitan cities. This approach did not address the issue of direct intervention in communities with a low digital literacy rate.

A study was conducted by Hutauruk et al. (2025) that focused on the Indonesian marketplace. However, the emphasis of the study was on the digital marketing aspect of businesses, rather than on the consumers' perceptions, who were considered partners in the study's service. To date, no research has been conducted on the direct perceptions of local consumers regarding the security of digital transactions in the context of community empowerment and education based on community service.

2. Literature Review

2.1. Digital Marketplace

A digital marketplace is defined as an e-commerce business model that facilitates interactions between sellers and buyers within a unified digital platform, such as Tokopedia, Shopee, and Lazada. This model enables businesses, including MSMEs, to offer products without the necessity of developing their own digital infrastructure (Hutauruk et al., 2025). The proliferation of marketplaces can be attributed to their capacity to facilitate transactions with efficiency, integrate logistics systems, and offer a variety of payment options. However, this convenience must be balanced with a robust security system, as the increasing number of online activities also increases the risk of digital fraud and personal data leakage (Islam, 2024).

2.2. Consumer Perceptions

Consumer perceptions of digital services, including marketplaces, are influenced by personal experience, brand image, ease of use, and security and privacy aspects. LingXiao & Ali (2025) posit that perceived security is a primary factor in the formation of customer trust and loyalty. When consumers feel secure, they are more likely to make repeat purchases and recommend the platform to others. Conversely, negative perceptions of security have been shown to have a significant negative impact on purchase intention.

2.3. Digital Transaction Security

Digital transaction security encompasses the protection of user information, authentication, data integrity, and prevention mechanisms against cyber-attacks. In the context of e-commerce, security encompasses the protection of credit card data, transaction encryption, and the prevention of phishing and malware. Jayathilaka and Udara (2024) posited that consumers in developing countries continue to express significant concerns regarding transaction security, a phenomenon attributable to the heterogeneity of digital literacy skills. In Indonesia, this concern arises especially when users are asked to enter debit/credit card data or use digital wallets.

2.4. The Role of Trust and Privacy in E-Commerce

Trust constitutes a pivotal psychological component in the context of online transactions. In the absence of physical interaction, consumers must repose their trust in the system's capacity to execute transactions in a fair and secure manner. As Mursidi et al. (2024) have indicated, privacy and risk perception are salient variables that exert a significant influence on purchase intentions in the context of e-commerce. In the case of young users (Gen Y and Z), despite their increased familiarity with technology, they continue to prioritize platform privacy policies and transparency in personal data management.

3. Research Methods

The present study is of the investigative nature, and its approach is of the empirical variety. This research employs a descriptive qualitative approach with the objective of providing a comprehensive account of consumer perceptions regarding transaction security in the context of digital marketplaces. This approach is regarded as the most suitable, as the objective of the research is to comprehend the subjective significance and actual experiences of consumers, rather than to quantitatively validate hypotheses (Creswell & Poth, 2018).

The subjects of this study are active users of digital marketplaces such as Shopee, Tokopedia, and Lazada, who are students at STIM Sukma Medan. The selection of informants was executed through the implementation of a purposive sampling technique, with the following criteria being taken into consideration:

The subject in question was between the ages of 18 and 22. It is evident that the subject has executed a minimum of three transactions via the designated marketplace.

The subject has expressed their willingness to participate in an in-depth interview. It has been asserted that concerns regarding the security of transactions have been expressed. The number of informants is targeted at 10-15 people until the data reaches saturation point.

4. Results and Discussion

Results

These results corroborate the findings of LingXiao & Ali (2025), which demonstrated that perceived security is a salient factor in e-commerce adoption. In contrast to the extant literature, which has historically prioritized the technological dimensions of this phenomenon, this study places significant emphasis on the social and psychological dimensions of consumers.

This finding corroborates the assertion of Mursidi et al. (2024) that perceived security can influence consumer satisfaction. However, the findings of this study indicate that consumers with low literacy levels tend to adopt risk-averse behaviors, such as choosing COD or exclusively patronizing well-known stores. This underscores the significance of community-based education that is customized to align with the local level of understanding.

The following is a summary of the informant's profile:

Code	Age	Gender	Marketplace Used	History of Security Issues
11	18	Female	Shopee, TikTok Shop	Ever been cheated by a fake seller
12	18	Male	Tokopedia, Bukalapak	Account was logged in from an unknown device
13	19	Female	Shopee	Afraid of credit card leakage, only use COD
14	19	Male	Shopee, Lazada	Ever got a fake product
15	20	Female	Tokopedia	Hesitant to pay via bank transfer
16	20	Male	Shopee	Feel safe if using e-wallet
17	21	Female	Shopee, TikTok Shop	Often check reviews before buying
18	21	Male	Tokopedia, Shopee	Afraid of account being hacked
19	22	Female	Shopee	Had a wrong payment to a fake account
110	22	Male	Lazada	More trust marketplace than social media

Discussion

This research makes different contributions from five previous studies:

1. LingXiao & Ali (2025) examined consumer perceptions of digital security features in China, but used a quantitative approach and was limited to large cities. This research is different because it explores consumer experiences qualitatively and is based on local communities.
2. Jayathilaka & Udara (2024) raised the importance of trust in digital transactions in Sri Lanka, but did not touch on the context of community service and public education. Instead, this study highlights the importance of community training as a practical solution.
3. Islam (2024) focuses on payment systems and customer loyalty, while this study reviews the psychological and emotional aspects of consumers towards security.
4. Mursidi et al. (2024) discussed Gen Y and digital satisfaction, but did not address security perceptions among adults with non-technical backgrounds.
5. Hutauruk et al. (2025) did highlight transaction security, but more from the side of digital businesses. This study provides a point of view from the side of direct consumers who are end users.

As such, this study fills an important research gap in the literature, namely how digital security perceptions are socially, emotionally and experientially shaped among local Indonesian marketplace consumers.

This study makes a distinct contribution to the literature by situating consumer perceptions of transaction security within the social and community context of Indonesian marketplace users. Unlike prior research that emphasized technical safeguards or quantitative modeling, our findings demonstrate that consumer trust is shaped experientially through personal encounters with fraud, peer influence, and localized education. This perspective is critical in developing economies, where digital literacy gaps remain wide and consumers often rely on heuristics rather than technical knowledge.

Recent studies highlight that privacy and data protection remain central to consumer trust in e-commerce. Otieno (2025) found that concerns over personal data misuse are the most significant barrier to online shopping adoption in emerging markets. Similarly, Quintus et al. (2024) showed that trust formation differs between advanced and developing economies, with consumers in the latter relying more on community reputation and peer experiences than platform assurances. These findings resonate with our study, which revealed that Indonesian consumers often depend on community education sessions and peer validation to mitigate fraud risks.

Another contribution lies in addressing fraud literacy and vulnerability to scams. Pitchan et al. (2025) emphasized that digital literacy significantly reduces susceptibility to online fraud, while Kipngetich (2025) noted that online scams are evolving rapidly, requiring continuous consumer education. Our findings corroborate these insights, showing that community-based interventions improved consumer awareness of secure payment methods, seller verification, and fraud detection practices. This underscores the importance of embedding fraud literacy into local education initiatives.

The psychological dimension of consumer trust is equally important. Chaudhry (2025) demonstrated that psychological triggers such as urgency and scarcity often override rational security considerations in online shopping. In our study, participants initially relied on emotional heuristics, such as fear of hacking or fraud, but community interventions helped recalibrate these perceptions toward more rational, informed behaviors. This supports the argument that consumer psychology must be integrated into digital security strategies.

Community education has emerged as a powerful tool for enhancing transaction security. Salam et al. (2023) found that targeted educational programs in Indonesian schools significantly improved students' awareness of online fraud risks. Rahiem (2021) similarly reported that national-level cyber security awareness campaigns among students enhanced vigilance in protecting personal data. Our findings extend this evidence by showing that localized, participatory education initiatives can bridge the gap between technical security features and consumer understanding, thereby fostering trust and resilience in digital marketplaces.

Finally, the broader implications of this research lie in its contribution to policy and practice. As Otieno (2025) and Kipngetich (2025) argue, regulatory frameworks alone are insufficient without grassroots-level consumer empowerment. Our study demonstrates that community-driven education not only enhances consumer trust but also strengthens the resilience of local marketplaces, supporting sustainable digital transformation in Indonesia. By situating consumer perceptions within their social and experiential contexts, this research fills a critical gap in the literature and provides actionable insights for policymakers, educators, and marketplace operators.

5. Conclusions

The implementation of this activity shows that consumer perceptions of transaction security in digital marketplaces are still strongly influenced by the level of digital literacy, personal experience, and exposure to online safety education. Based on data before the implementation of the activity, the majority of partner consumers admitted to feeling anxious when transacting, especially regarding the misuse of personal data and the potential for fraud by

fake sellers. Some informants even avoid digital payment methods and prefer cash on delivery (COD) as a form of self-protection, although it is less practical.

After the educational activities and community mentoring, including simulations of safe transaction methods and discussion sessions on consumer experiences, there was an increased understanding of security features such as two-step verification (OTP), seller validation, and the importance of product reviews. Partners began to show behavioral changes, such as getting used to checking store reputation before buying, not just clicking on promotional links, and starting to use secure payment methods such as e-wallets.

Thus, it can be concluded that this activity successfully increased local consumers' awareness and ability to deal with digital transaction risks, and strengthened their understanding of their active role in maintaining personal safety when shopping online.

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