



Proceeding – ICOBIS
INTERNATIONAL CONFERENCE ON GLOBAL INNOVATION AND TRENDS IN ECONOMICS
(ICOBIS)

Examining the Effect of AI-Driven Recommendation Ease and Consumer Privacy Perception on TikTok Shop Repurchase Intentions in Tegal

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Abstract –

This study aims to analyze the influence of Artificial Intelligence (AI)-driven recommendation ease and consumer privacy perception on repurchase intentions within the TikTok Shop application in Tegal City and Tegal Regency. Employing a quantitative approach, the research utilized a survey method with purposive sampling, involving 100 TikTok Shop users who had previously made purchases through the platform. Data were collected via questionnaires and analyzed using SPSS version 22, encompassing validity and reliability tests, classical assumption tests, multiple linear regression, t-tests, F-tests, and the coefficient of determination. The findings reveal that AI recommendation ease does not exert a significant effect on repurchase intention, showing a significance value of 0.069 (>0.05) and a regression coefficient of 0.175. Conversely, consumer privacy perception demonstrates a positive and significant effect on repurchase intention, with a significance value of 0.000 (<0.05) and a coefficient of 0.503. Simultaneously, both independent variables significantly influence repurchase intention, supported by an F-value of 26.448 and a significance value of 0.000. Furthermore, the coefficient of determination (R^2) of 0.353 indicates that 35.3% of the variance in repurchase intention is explained by these two variables, while the remaining 64.7% is attributed to external factors outside the model. These findings highlight the critical importance of robust privacy protection, data transparency, and the continuous enhancement of AI recommendation systems in the social commerce sector.

Keywords – *Artificial Intelligence Recommendations; Consumer Privacy Perception; Repurchase Intention; Social Commerce; TikTok Shop*

I. INTRODUCTION

Digital transformation has significantly accelerated the growth of social commerce in Indonesia, integrating social media features directly with retail transactions. In this ecosystem, consumers not only receive product information but also actively interact with content, sellers, and other users before making purchasing decisions. TikTok Shop serves as a prime example of social commerce, embedding video content, social engagement, and shopping mechanisms into a single integrated platform. Previous studies indicate that social aspects, trust, and consumer satisfaction heavily influence purchasing behaviors within TikTok Shop (Prestiyasih & Hati, 2025; Zhang et al., 2022).

The evolution of social commerce is increasingly intertwined with Artificial Intelligence (AI), particularly through automated product recommendation systems. These recommendation engines assist users in discovering products based on personal preferences, streamlining the shopping experience. Within the framework of the Technology Acceptance Model (TAM), perceived ease of use refers to the degree to which a user believes that utilizing a particular system would be free of effort (Davis, 1989; Venkatesh & Davis, 2000). When technologies like AI-driven recommendations are perceived as easy to use and navigate, user acceptance and continuous engagement tend to rise (Chen & Lin, 2018).

However, AI-driven personalization relies heavily on the collection and processing of user data. Recommendation systems require behavioral data to generate accurate, tailored product suggestions. Consequently, consumer privacy perception emerges as a critical factor involving data security, confidentiality, control, transparency, and trust in platform management (Malhotra et al., 2004; Dinev & Hart, 2006). Prior research demonstrates that robust privacy protection mechanisms are vital for building consumer trust in digital services (Bansal et al., 2015; Culnan & Armstrong, 1999), while privacy concerns can significantly hinder digital transactions (Smith et al., 2011).

Repurchase intention reflects a consumer's psychological readiness and behavioral tendency to re-engage in purchasing activities through the same digital platform (Tsai & Huang, 2007; Oliver, 1999). Within the context of TikTok Shop, the ease of use of AI recommendations is expected to simplify product discovery, while consumer privacy perception establishes feelings of safety and institutional trust. Both factors are presumed to critically drive consumer repurchase intentions (Bhattacharjee, 2001; Pavlou, 2003).

Although technological adoption and privacy dimensions have been extensively researched separately, studies integrating AI-driven recommendation ease and consumer privacy perception to explain repurchase intentions on TikTok Shop remain limited, particularly within the specific regional context of Tegal City and Tegal Regency. Therefore, this study aims to examine the effect of AI-driven recommendation ease on repurchase intention, analyze the influence of consumer privacy perception on repurchase intention, and evaluate the simultaneous impact of both variables on TikTok Shop users in Tegal.

II. METHOD

This study employed a quantitative approach utilizing a survey method with a causal-associative design. The research was directed to examine the cause-and-effect relationships among AI-driven recommendation ease (X_1), consumer privacy perception (X_2), and repurchase intention (Y). The population of this study consisted of TikTok Shop users in Tegal City and Tegal Regency who had previously made purchases through the platform and had received product recommendations from the AI system. The sampling technique employed was purposive sampling. Based on the final data utilized in the statistical analysis, the study involved 100 respondents. Data were collected via questionnaires using a five-point Likert scale ranging from strongly disagree to strongly agree, supported by a comprehensive literature review. The research instrument measured five indicators for AI recommendation ease, five indicators for consumer privacy perception, and five indicators for repurchase intention. Data analysis was performed using SPSS version 22. The analytical stages encompassed validity tests, reliability tests, classical assumption tests, multiple linear regression analysis, t-tests, F-tests, and the coefficient of determination (R^2). The regression equation derived from the data processing results was utilized to explain the individual and joint effects of each independent variable on the dependent variable.

III. RESULTS AND DISCUSSION

The data processing results confirm that the research instruments were successfully deployed to measure the three designated variables: AI-driven recommendation ease (X_1), consumer privacy perception (X_2), and repurchase intention (Y). Once the data fulfilled all instrument validation requirements and classical assumption tests, the analysis proceeded with multiple linear regression to evaluate the extent of the independent variables' impact on repurchase intention. Specifically, the findings reveal that AI recommendation ease does not exert a significant effect on repurchase intention, showing a significance value of 0.069 (>0.05) and a regression coefficient of 0.175. Conversely, consumer privacy perception demonstrates a positive and significant effect on repurchase intention, with a significance value of 0.000 (<0.05) and a coefficient of 0.503. Simultaneously, both independent variables significantly influence repurchase

intention, supported by an F-value of 26.448 and a significance value of 0.000. Furthermore, the coefficient of determination (R^2) of 0.353 indicates that 35.3% of the variance in repurchase intention is explained by these two variables, while the remaining 64.7% is attributed to external factors outside the model. These findings highlight the critical importance of robust privacy protection, data transparency, and the continuous enhancement of AI recommendation systems in the social commerce sector.

TABLE I. MULTIPLE LINEAR REGRESSION ANALYSIS RESULTS

Variabel	B	Beta	t	Sig.
Konstanta	10,342	-	3,409	0,001
Kemudahan Penggunaan Rekomendasi AI (X1)	0,175	0,186	1,839	0,069
Persepsi Privasi Konsumen (X2)	0,503	0,165	4,595	0,000

Based on Table 1, the multiple linear regression equation is expressed as $Y = 10.342 + 0.175X_1 + 0.503X_2$. The regression coefficient for AI recommendation ease is positive at 0.175, but its significance value of 0.069 exceeds the 0.05 threshold. Consequently, AI-driven recommendation ease does not exert a significant effect on repurchase intention. This finding indicates that the mere ease of utilizing recommendation features is not yet a primary driver compelling consumers to repurchase. These findings align with the research by Fibrian (2025), which demonstrated that perceived ease of use does not significantly affect repurchase intention. This suggests that system convenience alone is insufficient to drive repeat purchases. Users may find AI recommendations easy to navigate, yet their repurchase decisions ultimately rely on other determinants such as trust, satisfaction, recommendation relevance, pricing, promotions, or overall user experience. Conversely, consumer privacy perception demonstrates a positive regression coefficient of 0.503 with a significance value of 0.000, which is well below 0.05. This result indicates that consumer privacy perception exerts a positive and significant effect on repurchase intention. The stronger the consumers' confidence that their personal data is secure, confidential, controllable, transparently handled, and responsibly managed, the higher their tendency to engage in repeat purchases. This outcome reinforces the perspective that privacy is a critical dimension of consumer trust in digital environments. Bansal et al. (2015) emphasize the vital role of privacy assurance mechanisms in building consumer trust, while Al-Adwan et al. (2022) similarly support the notion that privacy aspects directly correlate with purchasing behavior. For platforms like TikTok Shop, these results highlight that personal data protection and data transparency must be positioned as core components of the customer experience rather than mere technical formalities.

TABLE II. SIMULTANEOUS TEST RESULTS AND COEFFICIENT OF DETERMINATION

Pengujian	Nilai	Sig.	Kesimpulan
Uji F	26,448	0,000	X1 dan X2 berpengaruh simultan terhadap Y
R^2	0,353	-	35,3% variasi Y dijelaskan oleh X1 dan X2

The simultaneous test yielded an F-statistic of 26.448 with a significance value of 0.000. This result demonstrates that AI-driven recommendation ease and consumer privacy perception simultaneously exert a significant effect on repurchase intention. Furthermore, the coefficient of determination (R^2) of 0.353 indicates that the research model explains 35.3% of the variance in repurchase intention, while the remaining 64.7% is attributed to external factors outside the model. These simultaneous findings reveal that although AI recommendation ease is not statistically significant on a partial basis, the variable remains an integral part of the model that achieves collective significance when considered alongside consumer privacy perception. This indicates that the shopping experience within social commerce is driven not solely by technological convenience, but equally by security assurance and consumer confidence in personal data governance. Consequently, the ongoing development of platforms like TikTok Shop must synergize technological usability, personalization quality, data security, and informational transparency to foster a more relevant and trustworthy user experience.

IV. CONCLUSIONS

Based on the research findings, AI-driven recommendation ease does not exert a significant effect on repurchase intention among TikTok Shop users in Tegal City and Tegal Regency. This is supported by a regression coefficient of 0.175 and a significance value of 0.069. This indicates that although AI recommendations are perceived as easy to use, this convenience alone is not yet a sufficiently strong driver to compel consumers to make repeat purchases. Conversely, consumer privacy perception demonstrates a positive and significant effect on repurchase intention, with a regression coefficient of 0.503 and a significance value of 0.000. The stronger consumers' perceptions

regarding data security, confidentiality, control, transparency, and personal data management, the higher their tendency to engage in repeat purchases. Simultaneously, AI-driven recommendation ease and consumer privacy perception significantly affect repurchase intention. The coefficient of determination (R^2) of 0.353 indicates that these two variables explain 35.3% of the variance in repurchase intention, while the remaining 64.7% is influenced by other factors outside the model. Therefore, TikTok Shop is recommended to simultaneously enhance the quality and relevance of AI recommendations while reinforcing personal data protection, privacy policy transparency, and user data control. Future researchers could incorporate additional variables such as trust, customer satisfaction, electronic service quality, user experience, perceived usefulness, pricing, promotions, and AI recommendation quality to capture the remaining unexplained variance in repurchase intention.

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