THE INFLUENCE OF FLASH SALES AND AI-POWERED PRODUCT REVIEWS ON PURCHASE INTENTION OF AMAZON PRODUCTS IN INDONESIA

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Abstract

This study aims to examine the influence of flash sales and AI-powered product reviews on purchase intention toward Amazon products in Indonesia. A quantitative approach was used, with data collected through a questionnaire distributed to 100 respondents. The data were analyzed using SmartPLS 4 to assess validity, reliability, and both direct and indirect relationships among variables. The results show that flash sales do not have a significant direct effect on purchase intention. In contrast, AI-powered product reviews have a positive and significant influence on purchase intention. Furthermore, flash sales have a significant indirect effect on purchase intention when mediated by AI-powered product reviews. These findings suggest that the integration of AI technology in product reviews can enhance the effectiveness of promotional strategies like flash sales in driving consumer purchase intention.

Keywords: Flash Sale, AI-Powered Product Review, Purchase Intention, E-Commerce, Amazon

Introduction

The rapid growth of e-commerce has transformed consumer shopping behavior by offering convenience, variety, and accessibility. Platforms like Amazon lead the market through continuous innovation, particularly with features such as flash sales and AI-powered product reviews, which are designed to enhance the customer experience and influence purchase decisions. While flash sales create urgency and trigger impulse buying through time-limited discounts, AI-powered reviews provide personalized, reliable summaries of customer feedback, helping users make informed decisions and increasing trust in the platform.

Amazon's dominance in the global e-commerce market is reflected in its significantly higher net sales compared to competitors like Alibaba, Taobao, Shopee, and others. This success is driven by its advanced technological infrastructure and customer-centric innovations. In Indonesia, although local platforms remain dominant, features like flash sales and AI reviews on Amazon are increasingly attracting interest from consumers, especially those seeking high-quality international products.

Given the growing influence of global e-commerce platforms in Indonesia, this study aims to analyze the effect of Amazon's flash sales and AI-powered product reviews on Indonesian consumers' purchase intention. The research seeks to provide insights into how modern digital marketing strategies impact consumer behavior in emerging markets.

Literature Review

The grand theory in this study is Consumer Behavior, which examines how individuals acquire and use goods or services through decision-making and physical activities. It involves understanding the factors that influence consumers' choices to ensure efficient purchasing. According to (Kotler & Keller, 2009), consumer behavior studies how people and organizations decide to select, buy, use, or dispose of products to meet their needs and desires. This theory helps predict consumer preferences based on their traits and behaviors.

in this research the middle theory is technology acceptance model (TAM) and theory of planned behavior (TPB). The Technology Acceptance Model (TAM) explains individuals' acceptance of technology based on perceived usefulness and ease of use, both of which influence behavioral intention. This suggests that AI-powered product reviews could positively affect purchase intention. The Theory of Planned Behavior (TPB) focuses on how behavioral intention, influenced mainly by social influence, predicts individual behavior. This implies that flash sales may positively impact purchase intention through social and behavioral cues.

There's 3 variables in this research : flash sale (X), AI powered product review (Z) and purchase intention (Y). Flash sales are short-term promotions offering significant discounts for a limited time, creating urgency and encouraging impulse buying. They are effective in boosting sales and consumer engagement. Flash sales can be evaluated based on four indicators: promotional frequency, quality of promotion, promotion time, and promotional accuracy. AI-powered reviews use algorithms and machine learning to analyze and summarize customer feedback, helping consumers make quick and informed decisions. Indicators include sentiment accuracy, summary review, product rating value, and decision-making efficiency. This tool enhances trust and shopping convenience by simplifying review information. Purchase intention refers to a consumer's likelihood of buying a product, influenced by factors like brand preference, pricing, and satisfaction. It can be measured through three key indicators: transactional interest (willingness to buy), referential interest (willingness to recommend), and preferential interest (brand loyalty).

Flash sales and AI-powered product reviews both play a significant role in influencing consumer purchase intention. Flash sales, through limited-time offers and discounts, create a sense of urgency and

FOMO (Fear of Missing Out), prompting consumers to make quick, impulsive buying decisions. Studies have shown that platforms like Shopee and TikTok Marketplace effectively use flash sales to increase consumer interest and drive sales. On the other hand, AI-powered product reviews contribute by providing clear, concise summaries of customer feedback, helping consumers quickly understand product quality, build trust, and reduce hesitation. When combined, these two strategies become even more effective during time-sensitive flash sales, AI-generated reviews enable faster and more informed decision-making, ultimately boosting purchase intention and enhancing the overall efficiency of marketing efforts in e-commerce platforms.

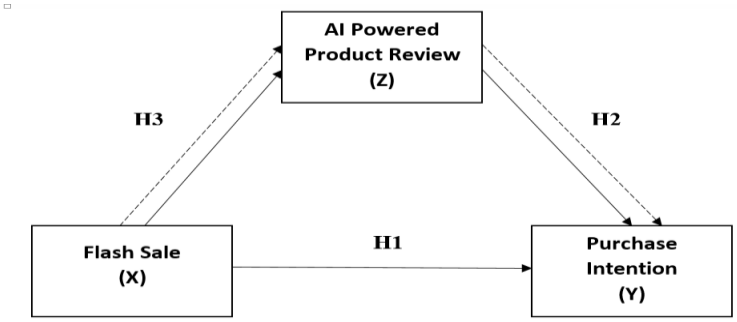

Figure 1. Analytical framework

H1 : Flash sale (X) has a positive and significant effect on Purchase intention (Y).
H2 : AI Powered product review (Z) have a positive and significant effect on purchase intention (Y)
H3 : Flash sales (X) positively and significantly influence purchase intention (Y), with AI-powered product reviews (Z) acting as a mediating variable.

Methods

This study employs a quantitative research approach to objectively measure the impact of flash sales and AI-powered product reviews on Indonesian consumers' purchase intention toward Amazon products. Primary data were collected through questionnaires distributed to respondents who had experience or interest in shopping on international e-commerce platforms, especially Amazon. Using a purposive sampling method and Lemeshow's formula, 96 qualified respondents were determined as the minimum sample size. The questionnaire utilized a Likert scale to quantify responses, and the data were analyzed using Partial Least Squares (PLS) via SmartPLS software. The research model includes three variables: flash sale (independent), purchase intention (dependent), and AI-powered product review (intervening), with each operationalized through specific indicators. To support and validate the findings, secondary data such as academic literature, journal articles, and official sales data were also used.

Data analysis included descriptive statistics to classify variable scores and inferential statistics using PLS to evaluate the outer model (validity and reliability) and inner model (causal relationships). Evaluation of the model involved testing convergent validity, discriminant validity, and composite reliability for reflective indicators. The structural model was assessed using R-square values, which indicate the strength of relationships between variables. Bootstrapping with 5,000 samples was performed for hypothesis testing, using one-tailed significance levels to determine the statistical significance of the path coefficients. This comprehensive methodology ensures the robustness, validity, and reliability of the research findings.

Results and Discussion

This research surveyed 100 Indonesian respondents to analyze the influence of flash sales and AI-powered product reviews on Amazon purchase intention. The majority of respondents were female (65%), aged 18–24 years old (96%), and predominantly students (81%). In terms of domicile, most participants were from DKI Jakarta (24%), followed by West Java (21%) and Jambi (11%), with others spread across various provinces. Regarding monthly income, the largest group (46%) reported earning between Rp 2,000,000 and Rp 5,000,000, while 30% earned below Rp 2,000,000. This demographic reflects a young, tech-savvy population with varying income levels, making them a relevant target group for studying online consumer behavior.

The descriptive analysis shows that respondents have a positive perception of both flash sales and AI-powered product reviews on Amazon. Flash sale indicators scored mostly high, with the highest scores for promotion timing and clarity. AI reviews also scored moderate to high, especially for summarizing key features and saving time, though they were less effective in speeding up decision-making. Purchase intention scored moderate to high, with strong willingness to recommend Amazon but lower brand loyalty likely due to the popularity and convenience of local platforms.

Outer model

The outer model evaluation was conducted using SmartPLS 3, assessing convergent validity, discriminant validity, and composite reliability.

Table 1. Outer Loadings

Variable	Indicator	Outer Loadings	Description
Flash Sale (X)	X1	0.880	Valid
	X2	0.852	Valid
	X3	0.890	Valid
	X4	0.911	Valid
	X5	0.943	Valid
	X7	0.924	Valid
	X8	0.938	Valid
Ai Powered Product Review (Z)	Z1	0.938	Valid
	Z2	0.935	Valid
	Z3	0.850	Valid
	Z4	0.931	Valid
	Z5	0.945	Valid
	Z6	0.945	Valid
	Z7	0.877	Valid
	Z8	0.904	Valid
Purchase Intention (Y)	Y1	0.933	Valid
	Y2	0.928	Valid
	Y5	0.915	Valid
	Y6	0.948	Valid
	Y7	0.931	Valid

After removing indicators with loading factors below 0.70, the remaining indicators for all variables Flash Sale, AI-Powered Product Review, and Purchase Intention showed loading values above 0.70, confirming good convergent validity. The AVE values for all constructs were also above 0.50, meeting the threshold.

Table 2. AVE

Variables	Average Variance Extracted (AVE)	Description
X	0.821	Valid
Y	0.867	Valid
Z	0.839	Valid

The method for testing discriminant validity is by examining the cross-loading values between the indicators and their respective constructs, where the cross-loading should be greater than 0.70 within the same variable.

Table 3. Cross-Loading

	X	Y	Z
X1	0.880	0.841	0.823
X2	0.852	0.813	0.877
X3	0.890	0.783	0.801
X4	0.911	0.797	0.822
X5	0.943	0.866	0.880
X7	0.924	0.901	0.908
X8	0.938	0.896	0.898
Y1	0.882	0.933	0.945
Y2	0.865	0.929	0.868
Y5	0.885	0.915	0.883
Y6	0.859	0.948	0.904
Y7	0.846	0.931	0.874
Z1	0.893	0.887	0.938
Z2	0.879	0.897	0.935
Z3	0.802	0.822	0.850
Z4	0.881	0.930	0.931
Z5	0.882	0.933	0.945
Z6	0.912	0.888	0.945
Z7	0.852	0.813	0.877
Z8	0.853	0.871	0.904

The indicators in this research demonstrate good discriminant validity, as each indicator loads higher on its intended variable than on others. This confirms that all indicators effectively represent their respective constructs.

Table 4. Cronbach's Alpha and Composite Realibility

	Cronbach's alpha	Composite reliability (rho_a)
X	0.963	0.965
Y	0.962	0.962
Z	0.972	0.973

The composite reliability and Cronbach's Alpha results show that all variables are reliable, with values exceeding the 0.70 threshold, confirming the consistency and dependability of the measurement tools used in the study.

Inner model

In assessing the inner model using PLS, it can be done by examining the R-Square value for the dependent constructs

Table 5. R-square

Variabel	R-Square	R-Square Adjusted
Purchase Intention (Y)	0.928	0.927
AI Powered Product Review (Z)	0.901	0.900

The R-square results show that flash sale (X) and AI-powered product review (Z) explain 92.8% of the variance in purchase intention (Y), indicating a strong influence on consumer intention. Additionally, flash sale (X) explains 90.1% of the variance in AI-powered product review (Z), also reflecting a strong effect.

Bootstrapping is used to test hypotheses by comparing p-values with a significance level of 0.05. A relationship is considered statistically significant if the p-value ≤ 0.05 or if the t-value exceeds 1.645 in a one-tailed test

Table 6. Direct Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Flash Sale (X) -> Purchase Intention (Y)	0.193	0.191	0.124	1.560	0.059
AI Powered Product Review (Z) -> Purchase Intention (Y)	0.778	0.780	0.123	6.348	0.000

Table 7. Indirect Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Flash Sale (X) ->AI Powered Product Review (Z) -> Purchase Intention (Y)	0.739	0.740	0.117	6.307	0.000

This research investigated the influence of flash sales and AI-powered product reviews on the purchase intention of Amazon products in Indonesia using SmartPLS 4. The findings reveal that flash sales alone do not significantly increase purchase intention, possibly due to low urgency, limited familiarity with Amazon, or consumer preference for local platforms.

In contrast, AI-powered product reviews have a strong and significant positive effect on purchase intention. These reviews help consumers by providing clear and concise summaries, making decision-making easier and enhancing confidence during the shopping process.

Importantly, when AI-powered reviews act as a mediating factor (Martaleni et al., 2022), flash sales become significantly more effective. The combination of time-limited offers with informative AI content encourages quicker, more confident purchases, highlighting the value of integrating AI-driven reviews (Muzumdar, 2021) into flash sale strategies

Conclusion

Flash sales do not significantly influence purchase intention. The direct impact of flash sales on consumer purchase decisions was found to be statistically insignificant, suggesting that flash sales alone are not enough to drive purchases on Amazon among Indonesian consumers. AI-powered product reviews significantly influence purchase intention. These reviews provide clear, concise summaries that enhance consumer trust and reduce decision-making time, making them a key driver of purchase intention in online shopping. Flash sales significantly influence purchase intention when mediated by AI-powered product reviews. While

ineffective on their own, flash sales become impactful when supported by AI-generated reviews, which help consumers feel more confident and informed, thereby increasing the effectiveness of the promotion.

References

Ajayi, V. O. (2023). A Review on Primary Sources of Data and Secondary Sources of Data. European Journal ofEducation and Pedagogy.

Kotler & Keller. (2009). Manajemen Pemasaran. Penerbit Erlangga.

Mansyur, M. U., Hariadi, B., & Andayani, W. (2018). A Behavioral Study on Middle-Class Consumers in Adopting M-Commerce in East Java. Jurnal Economia, 14(2), 113–125. https://doi.org/10.21831/economia.v14i2.19547

Martaleni, M., Hendrasto, F., Hidayat, N., Alfandy Dzikri, A., & Nyoman Kerti Yasa, N. (2022). Flash sale and online impulse buying: Mediation effect of emotions. Innovative Marketing, 18(2), 49–59. https://doi.org/10.21511/im.18(2).2022.05

Muzumdar, P. (2021). Impact of review valence and perceived uncertainty on purchase of time-constrained and discounted search goods (Version 1). arXiv. https://doi.org/10.48550/ARXIV.2110.09313

Nilsson, M., Dzebo, A., Savvidou, G., & Axelsson, K. (2020). A bridging framework for studying transition pathways – From systems models to local action in the Swedish heating domain. Technological Forecasting and Social Change, 151, 119260. https://doi.org/10.1016/j.techfore.2018.04.003

Pillarisetty, R., & Mishra, P. (2022). A Review of AI (Artificial Intelligence) Tools and Customer Experience in Online Fashion Retail: International Journal of E-Business Research, 18(2), 1–12. https://doi.org/10.4018/IJEBR.294111