

An Analysis of the Determinants of Purchase Decisions on Shopee: A Multiple Linear Regression Approach

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Abstract

This study aims to analyze the factors influencing purchasing decisions on the Shopee e-commerce platform using multiple linear regression methods. The variables studied include product discounts, free shipping, live streaming features, and buyer ratings/reviews. Data were collected through interviews, questionnaires, and documentation from a sample of Shopee user students at STIKI Malang. The analysis results indicate that all the independent variables have a significant influence on consumer purchasing decisions. This research is expected to provide insights for e-commerce platform developers in enhancing their marketing strategies and services and to serve as a reference for future studies in the same field.

1. Introduction

The purpose of this study is to analyze the factors influencing purchase decisions on the Shopee e-commerce platform using the multiple linear regression method. This research is motivated by the shift in consumer behavior from offline to online shopping activities, coupled with the increasing use of e-commerce platforms. Understanding the factors that influence online purchase decisions has therefore become essential.

Advancements in technology and high internet penetration have fundamentally transformed how consumers shop. E-commerce platforms like Shopee have gained significant popularity, providing consumers with convenience, promotions, and interactive features. Investigating the influence of specific factors such as product discounts, free shipping, live streaming, and buyer ratings on purchase decisions is crucial to understanding current consumer behavior.

This study aims to complement and extend previous research that has explored the effects of trust, ease of use, and information quality on online purchase decisions. By focusing on variables directly relevant to Shopee and the current online consumer environment, and employing multiple linear regression for data analysis, this research seeks to provide empirical insights that contribute to the advancement of e-commerce knowledge. The study also emphasizes the practical implications for e-commerce businesses in developing effective marketing strategies and enhancing the shopping experience.

1.1 Literature Review

Several studies have highlighted the factors affecting online purchase decisions in e-commerce environments. Product discounts are known to attract consumer attention and stimulate purchase behavior by providing perceived economic benefits (Fahlevi & Anthony, 2022). Free shipping has similarly been shown to reduce purchase hesitation by lowering transaction costs and increasing the convenience of online shopping (Nurvita & Budiarti, 2019).

Live streaming as a sales and marketing tool has emerged as a new trend in e-commerce, offering interactive product demonstrations and real-time engagement with potential buyers. Previous research suggests that live streaming can positively influence purchase intentions by enhancing consumer trust and providing immediate responses to questions or concerns (Manaar, Setiawan, & Khaira, 2023).

Buyer ratings and reviews also serve as critical social proof mechanisms that affect consumer decision-making. Positive ratings and detailed reviews can significantly boost consumer confidence in product quality and seller reliability, thereby increasing purchase likelihood (Raman et al., 2020).

By integrating these variables—product discounts, free shipping, live streaming, and buyer ratings—this study aims to provide a comprehensive understanding of their collective influence on purchase decisions on Shopee. Using multiple linear regression analysis allows the identification of both individual and simultaneous impacts of these factors, offering practical insights for e-commerce platform managers and marketers to enhance consumer engagement and sales performance.

2. Research Methods

This study employs a structured research methodology to analyze the factors influencing purchase decisions on the Shopee e-commerce platform among students at STIKI Malang. The methodology is designed to provide clear and replicable procedures for collecting and analyzing data.

1. Respondent Characteristics

The respondents in this study were Shopee users who are students at STIKI Malang. A total of 100 students were selected as the sample using purposive sampling, which involves selecting participants based on specific criteria relevant to the research objectives.

2. Data Collection

The primary data collected focused on the influence of product discounts, free shipping, buyer ratings, and live streaming features on purchase decisions. Data were gathered through structured questionnaires distributed to the respondents. Additionally, interviews were conducted to obtain supplementary qualitative information that could provide deeper insights into the respondents' purchasing behavior.

3. Data Validity Testing

To ensure that the research instruments (questionnaires) accurately measure the intended variables, validity tests were conducted. The validity testing involved factor analysis and Pearson correlation tests to confirm that each questionnaire item was relevant and appropriately measured the constructs under investigation.

4. Data Analysis

Collected data were analyzed using multiple linear regression to examine the effect of independent variables on the dependent variable (purchase decision). This analysis aimed to determine the magnitude and significance of the influence of each factor on Shopee purchase decisions, both individually and collectively.

5. Research Location and Duration

The study was conducted at STIKI Malang, with the research timeline aligned with the academic schedule and the availability of respondents.

6. Additional Considerations

Although the main focus of this study is on the selected independent variables, external factors such as customer service quality and delivery speed were also acknowledged as potential influences on purchase decisions.

By clearly outlining the characteristics of respondents, data collection procedures, validity testing, and data analysis methods, this research methodology provides a solid foundation for understanding the determinants of purchase decisions on the Shopee platform and offers a framework for future studies.

3. Result and Discussion

This study aimed to examine the effects of free shipping promotions, product ratings, and Shopee Live on purchase decisions among Shopee users. The analysis was conducted using multiple linear regression to test both partial (individual) and simultaneous influences of the independent variables on purchase decisions.

1. Partial Hypothesis Testing

Partial hypothesis testing was conducted to determine the individual significance of each independent variable on the dependent variable, measured using the t-test. The criteria used were: if the absolute t statistic ($|t| \geq t_{table}$) or the probability value ≤ 0.05 ($\alpha = 5\%$), then the independent variable significantly affects the dependent variable.

- **Free Shipping Promotion**
The effect of free shipping promotions on purchase decisions resulted in a t statistic of 3.080 and a probability value of 0.003. Since $|t| > t_{table}$ (1.984) and the probability value < 0.05 , free shipping promotion has a significant positive effect on purchase decisions. This finding aligns with Marpaung and Lubis (2022), who reported that free shipping promotions significantly influenced purchase decisions on TikTok Shop among students. Free shipping enhances product attractiveness, increases consumer awareness, facilitates purchase decisions, and strengthens competitive positioning (Febria, Setiawan, & Sulaeman, 2022).
- **Product Rating**
The t statistic for product ratings was 4.294 with a probability value of 0.000, indicating a significant positive effect on purchase decisions. This is consistent with prior research by Zed, Ratnaningsih, & Kartini (2023), which demonstrated that online customer ratings positively influence purchase intentions. High product ratings increase consumer trust and reduce uncertainty, thereby positively affecting purchasing behavior.
- **Shopee Live**
The t statistic for Shopee Live was 5.546 with a probability value of 0.000. However, the analysis indicates that the effect is not significant in this study context, which suggests that Shopee Live may not substantially influence purchase decisions among the sampled students. Previous studies have shown mixed results: Rahmawati et al. (2021) found no significant effect, while Suhyar & Pratminingsih (2023) reported a positive influence of live streaming selling on consumer purchase intentions. These discrepancies may result from differences in sample characteristics, research methods, or market contexts. Further research is needed to clarify the role of Shopee Live in influencing purchase behavior.

Simultaneous Hypothesis Testing

Simultaneous hypothesis testing assessed the combined effect of free shipping promotions, product ratings, and Shopee Live on purchase decisions. The F statistic was 42.210 with a probability value of 0.000, indicating a significant simultaneous effect. This means that together, these three variables significantly influence consumer purchase decisions, confirming that the multiple linear regression model is suitable for predicting purchase behavior.

These results are consistent with findings from Arwana & Purnomo (2024), who reported that combined marketing strategies involving live streaming selling, discounts, free shipping, and cash-on-delivery significantly affected purchase decisions for beauty products on Shopee, demonstrating the importance of integrated marketing efforts in e-commerce platforms.

The analysis indicates that free shipping promotions and product ratings are key determinants of purchase decisions. Free shipping reduces consumer transaction costs and serves as a strong incentive, while product ratings enhance consumer trust and confidence. Although Shopee Live did not show a significant effect in this

study, it may still hold potential as part of integrated promotional strategies in other contexts or demographic segments.

Overall, the study confirms that marketing strategies in e-commerce must consider both economic incentives (such as free shipping) and social proof factors (such as ratings) to effectively influence consumer purchasing behavior. Businesses should design targeted campaigns that leverage these influential factors to optimize purchase decisions and enhance platform engagement.

4. Conclusions

This study concludes that several factors significantly influence consumer purchase decisions on the Shopee e-commerce platform. Based on data collected from 100 respondents, free shipping promotions were found to have the strongest impact, with 95% of respondents agreeing that such promotions strongly affect their purchasing decisions. This finding aligns with previous studies indicating that incentives like promotional offers can increase consumer purchase intention.

Additionally, product reviews and ratings also showed a significant effect, with 90% of respondents acknowledging that positive reviews and high ratings play an important role in their decision-making process. Conversely, the live streaming feature did not demonstrate a significant impact, as only 85% of respondents considered it influential in their purchase decisions. This suggests a need for further evaluation and enhancement of the live streaming feature to make it more effective in capturing consumer attention.

The strength of this research lies in its quantitative approach, allowing for objective and systematic data analysis. However, limitations exist, such as the relatively small sample size of 100 respondents, which may not fully represent the student population at STIKI Malang. Future research is recommended to increase the sample size and consider additional variables, such as demographic factors or more in-depth consumer behavior metrics.

Overall, this study provides valuable insights for e-commerce businesses in developing more effective marketing strategies and opens opportunities for further research to deepen the understanding of consumer behavior in the digital era.

5. References

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