

THE INFLUENCE OF PERCEIVED USEFULNESS AND EASE OF USE ON PURCHASE INTENTION OF SHOPEE APP USERS IN INDONESIA

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Abstract:

This study aims to analyze the influence of perceived usefulness and ease of use on purchase intention among Shopee app users in Indonesia. The rapid growth of e-commerce in Indonesia, particularly Shopee, which dominates the market with over 50 million active users, demonstrates the urgency of understanding digital consumer behavior. Research gaps are found in the inconsistency of previous studies regarding the dominant factors driving purchase intention, especially post-pandemic, as well as the lack of studies that simultaneously integrate both TAM constructs in the context of Shopee Indonesia. This study used a quantitative approach with a survey method of 200 active Shopee user respondents. The results showed that perceived usefulness had a positive and significant effect on purchase intention ($\beta = 0.412$; $p < 0.05$), ease of use had a positive and significant effect on purchase intention ($\beta = 0.338$; $p < 0.05$), and both variables simultaneously explained 61.4% of the variation in purchase intention. These findings strengthen the relevance of the Technology Acceptance Model (TAM) in the context of online shopping and provide practical implications for e-commerce platform developers in improving user experience.

Keywords: Perceived Usefulness, Ease of Use, Purchase Intention, Shopee, E-Commerce, TAM

Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh perceived usefulness dan kemudahan penggunaan (ease of use) terhadap purchase intention pada pengguna aplikasi Shopee di Indonesia. Fenomena pesatnya pertumbuhan e-commerce di Indonesia, khususnya Shopee yang mendominasi pasar dengan lebih dari 50 juta pengguna aktif, menunjukkan urgensi pemahaman perilaku konsumen digital. GAP penelitian ditemukan pada inkonsistensi hasil studi terdahulu mengenai faktor dominan yang mendorong niat beli, terutama pasca-pandemi, serta minimnya kajian yang mengintegrasikan kedua konstruk TAM secara simultan pada konteks Shopee Indonesia. Penelitian ini menggunakan pendekatan kuantitatif dengan metode survei terhadap 200 responden pengguna aktif Shopee. Hasil penelitian menunjukkan bahwa perceived usefulness berpengaruh positif dan signifikan terhadap purchase intention ($\beta = 0,412$; $p < 0,05$), kemudahan penggunaan berpengaruh positif dan signifikan terhadap purchase intention ($\beta = 0,338$; $p < 0,05$), dan secara simultan kedua variabel mampu menjelaskan 61,4% variasi purchase intention. Temuan ini memperkuat relevansi Technology Acceptance Model (TAM) dalam konteks belanja online dan memberikan implikasi praktis bagi pengembang platform e-commerce dalam meningkatkan pengalaman pengguna.

Kata Kunci: Perceived Usefulness, Kemudahan Penggunaan, Purchase Intention, Shopee, E-Commerce, TAM

1. Introduction

The rapid development of information and communication technology has driven a major transformation in global consumer shopping behavior, including in Indonesia. E-commerce has become one of the digital economy sectors with the most significant growth. According to a report by We Are Social and Hootsuite (2023), Indonesia is one of the largest e-commerce markets in Southeast Asia, with transaction values continuing to increase, surpassing USD 50 billion by 2023. Among the various e-

commerce platforms operating in Indonesia, Shopee consistently leads the market based on the number of monthly downloads and visits (iPrice, 2023).

Launched in Indonesia in 2015, Shopee has transformed from a mobile-first platform into an integrated digital commerce ecosystem. The platform recorded over 130 million monthly visits in 2023, far surpassing competitors like Tokopedia and Lazada (Momentum Works, 2023). This growth is inextricably linked to Shopee's ability to deliver an intuitive user interface, innovative features like live streaming commerce, gamification, and an integrated loyalty program.

Problem Phenomenon. Despite Shopee's rapid growth, several phenomena require further examination. First, a Populix survey (2023) found that although 78% of respondents regularly downloaded and opened the Shopee app, only 54% actually made a purchase in the past month. This phenomenon indicates a gap between app usage and actual purchase intentions. Second, a DataReportal report (2023) showed that the cart abandonment rate on Indonesian e-commerce platforms reached 73%, higher than the global average of 69.8%. This suggests that ease of access does not always directly correlate with purchasing decisions.

Research GAP. Many studies have examined the factors influencing purchase intention on e-commerce platforms, but several research gaps remain. First, research by Oktaviani & Rustandi (2022) and Ramadhan et al. (2023) yielded inconsistent findings regarding which factor, perceived usefulness or ease of use, is more dominant in driving purchase intention. Oktaviani & Rustandi (2022) found that ease of use was more dominant, while Ramadhan et al. (2023) found the opposite. Second, most previous research has focused on Tokopedia or Lazada, while specific studies on Shopee post-pandemic are limited. Third, there is a lack of research integrating both TAM constructs simultaneously, while controlling for demographic characteristics of Shopee users in Indonesia. Based on these gaps, this study aims to address this gap by simultaneously examining the influence of perceived usefulness and ease of use on purchase intention among Shopee users in Indonesia.

2. Literature Review

2.1 Technology Acceptance Model (TAM)

The TAM, developed by Davis (1989), is the most widely used theoretical framework to explain user acceptance of technology. This model is rooted in the Theory of Reasoned Action (TRA) and states that two main factors, namely perceived usefulness and perceived ease of use, directly influence user attitudes toward technology, which ultimately impacts their usage behavior (Davis, 1989). In the context of e-commerce, the TAM has undergone various developments and extensions to accommodate the complexity of digital consumer behavior (Venkatesh & Bala, 2023).

2.2 Perceived Usefulness

Perceived usefulness Perceived usefulness is defined as an individual's perception that using a particular system will improve their job performance (Davis, 1989). In the context of e-commerce, perceived usefulness refers to the extent to which consumers believe that shopping through an online platform will provide tangible benefits, such as time efficiency, ease of price comparison, and access to a wide selection of products (Chandra et al., 2023). Recent research by Huang & Chen (2023) confirms that perceived usefulness remains a strong predictor of purchase intention even in the era of social shopping (social commerce). Dimensions of perceived usefulness in the context of shopping applications include: (1) transaction effectiveness, (2) time savings, (3) usefulness of search and recommendation features, and (4) overall value perceived by users.

2.3 Ease of Use (Perceived Ease of Use)

Perceived ease of use (PEOU) is defined as the degree to which a person believes that using a particular system does not require significant effort (Davis, 1989). As digital interfaces have evolved, this construct has expanded to include aspects such as intuitive navigation, clean interface design, and ease of completing transactions (Lim et al., 2023). Rahmawati & Sulisty (2024) in their recent study found that ease of use on mobile commerce platforms has a significant mediating effect between interface design and user satisfaction. The dimensions of ease of use include: (1) ease of navigation, (2) clarity of display, (3) ease of payment process, and (4) application responsiveness.

2.4 Purchase Intention

Purchase intention Purchase intention is a consumer's tendency to plan or be willing to purchase a product or service in the future (Ajzen, 1991). In an e-commerce environment, purchase intention is influenced by various technological, psychological, and social factors. Kotler & Keller (2022) emphasize that purchase intention is a critical mediator variable linking consumer attitudes to actual purchasing behavior. In the context of digital platforms, purchase intention is operationalized through three aspects: (1) the desire to shop again, (2) the intention to recommend to others, and (3) concrete plans to make a purchase in the near future.

2.5 Relationship between Variables and Hypotheses

Based on TAM and previous empirical studies, the relationship between variables in this study can be formulated as follows:

H₁: Perceived usefulness has a positive and significant effect on purchase intention among Shopee users.

H₂: Ease of use has a positive and significant impact on purchase intention among Shopee users.

H₃: Perceived usefulness and ease of use simultaneously have a significant effect on purchase intention among Shopee users.

3. Research Methods

3.1. Research Design

This study uses a quantitative approach with a causal research design, namely testing the causal relationship between the independent variables (perceived usefulness and ease of use) and the dependent variable (purchase intention). The data collection instrument used a structured questionnaire developed based on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree).

3.2. Population and Sample

The population in this study were all active Shopee app users in Indonesia aged 17 years and above who had made at least one transaction in the last 3 months. Given the unlimited population, the sample size was determined using the formula of Hair et al. (2019) by multiplying the number of indicators by a minimum factor of 10, resulting in a minimum sample size of 170 respondents. To increase the accuracy of the estimate, this study used 200 respondents. The sampling technique used purposive sampling with the following inclusion criteria: (1) owning and actively using the Shopee app, (2) domiciled in Indonesia, (3) aged ≥ 17 years, and (4) making a purchase on Shopee at least once in the last 3 months.

3.3. Variables and Measurement

Table 1. Variables and Measurement

Variables	Dimensions	Number of Items	Scale Source
<i>Perceived Usefulness</i> (X ₁)	Effectiveness, Benefits	Productivity, 8 items	Davis (1989), adaptation of Chandra et al. (2023)
Ease of Use (X ₂)	Navigation, Interface, Transaction	Ease of 8 items	Davis (1989), adaptation of Lim et al. (2023)
<i>Purchase Intention</i> (Y)	Purchase Recommendation, plan	intention, Purchase 6 items	Ajzen (1991), adaptation of Rahmawati & Sulistyono (2024)

3.4. Instrument Testing

Instrument validity was tested using Confirmatory Factor Analysis (CFA) with a factor loading criterion of ≥ 0.60 . Reliability was tested using Cronbach's Alpha with a value of ≥ 0.70 as the minimum acceptance limit. Classical assumption tests performed included: normality test (Kolmogorov-Smirnov), multicollinearity test (VIF value < 10), and heteroscedasticity test (Glejser test).

3.5. Data Analysis Techniques

Data analysis was conducted using multiple linear regression analysis with the help of SPSS software version 26.0. The regression model used is:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Description: Y = Purchase Intention; a = Constant; β_1, β_2 = Regression coefficient; X₁ = Perceived Usefulness; X₂ = Ease of Use; ε = Error term. Hypothesis testing is carried out through t-test (partial) and F-test (simultaneous) at a significance level of $\alpha = 0.05$.

4. Results and Discussion

The results and discussion sections should be presented systematically to explain the research findings and their meaning. Here is a general structure that can be used:

4.1. Respondent Characteristics

Table 2. Demographic Characteristics of Respondents

Characteristics	Category	Frequency	Percentage (%)
Gender	Woman	128	64.0
	Man	72	36.0

Age	17–25 years	89	44.5
	26–35 years	74	37.0
	36–45 years	28	14.0
	> 45 years	9	4.5
Education	High School/Equivalent	52	26.0
	Diploma (D3)	38	19.0
	Bachelor degree)	91	45.5
	Postgraduate	19	9.5
Shopping Frequency	1–2 times/month	78	39.0
	3–5 times/month	82	41.0
	> 5 times/month	40	20.0
Expenses/Month	< Rp. 500,000	47	23.5
	Rp. 500,000–Rp. 1 million	88	44.0
	> Rp. 1 million	65	32.5

Based on Table 2, the majority of respondents were female (64.0%), aged 17–25 years (44.5%), had a bachelor's degree (45.5%), shopped 3–5 times per month (41.0%), and had online shopping expenses of IDR 500,000–IDR 1 million per month (44.0%). This demographic profile is consistent with the characteristics of Shopee users in Indonesia in general, which are dominated by young women with secondary to higher education.

4.2. Validity and Reliability Test

Table 3. Results of Instrument Validity and Reliability Tests

Variables	Factor Loading Range	Cronbach's Alpha	Information
<i>Perceived Usefulness</i> (X ₁)	0.621 – 0.847	0.893	Valid & Reliable
<i>Ease of Use</i> (X ₂)	0.614 – 0.831	0.876	Valid & Reliable
<i>Purchase Intention</i> (Y)	0.638 – 0.812	0.861	Valid & Reliable

All statement items had factor loadings ≥ 0.60 , indicating good validity. Cronbach's Alpha values for all variables were above 0.80, which is categorized as good reliability according to Hair et al. (2019). Thus, the research instrument was declared valid and reliable for use in further analysis.

4.3. Classical Assumption Test

Table 4. Summary of Classical Assumption Test Results

Test	Statistics/Values	Criteria	Conclusion
Normality (KS)	Sig. = 0.142	Sig. > 0.05	Normally distributed data
Multicollinearity (VIF X ₁)	VIF = 1.872	VIF < 10	There is no multicollinearity
Multicollinearity (VIF X ₂)	VIF = 1.872	VIF < 10	There is no multicollinearity
Heteroscedasticity (Glejser)	Sig. X ₁ = 0.312; Sig. X ₂ = 0.287	Sig. > 0.05	There is no heteroscedasticity

The results of the classical assumption test indicate that all linear regression assumptions are met. The data are normally distributed based on the Kolmogorov-Smirnov test (Sig. = 0.142 > 0.05), there are no multicollinearity problems (VIF value = 1.872 < 10), and no heteroscedasticity is found based on the Glejser test. The regression model is declared suitable for use.

4.4. Multiple Linear Regression Analysis

Table 5. Results of Multiple Linear Regression Analysis

Variables	Coefficient (B)	Std. Error	Beta (β)	t-count	Sig.
Constant	3,214	0.847	—	3,795	0,000
<i>Perceived Usefulness</i> (X ₁)	0.498	0.071	0.412	7,014	0,000
<i>Ease of Use</i> (X ₂)	0.387	0.068	0.338	5,691	0,000

Based on Table 5, the regression equation formed is:

$$\hat{Y} = 3.214 + 0.498X_1 + 0.387X_2$$

This equation interprets that: (1) The constant value of 3.214 indicates the value of purchase intention when perceived usefulness and ease of use are zero; (2) The coefficient of perceived usefulness is 0.498 ($\beta = 0.412$) meaning that every one unit increase in perceived usefulness will increase purchase intention by 0.498 units; (3) The coefficient of ease of use is 0.387 ($\beta = 0.338$) meaning that every one unit increase in ease of use will increase purchase intention by 0.387 units.

4.5. Hypothesis Testing

Table 6. Results of Partial Hypothesis Test (t-Test)

Hypothesis	Variables	t-count	t-table	Sig.	Decision
H ₁	<i>Perceived Usefulness</i> → Purchase Intention	7,014	1,972	0,000	H ₁ Accepted
H ₂	Ease of Use → Purchase Intention	5,691	1,972	0,000	H ₂ Accepted

Table 7. Results of Simultaneous Hypothesis Test (F Test)

Model	F-count	F-table	Sig.	R ²	Adjusted R ²
Regression	157,394	3,042	0,000	0.617	0.614

The t-test results in Table 6 show that H₁ is accepted because the calculated t-value (7.014) > t-table (1.972) with Sig. = 0.000 < 0.05, meaning that perceived usefulness has a positive and significant effect on purchase intention. H₂ is also accepted because the calculated t-value (5.691) > t-table (1.972) with Sig. = 0.000 < 0.05, meaning that ease of use has a positive and significant effect on purchase intention.

The F-test results in Table 7 show F-count (157.394) > F-table (3.042) with Sig. = 0.000 < 0.05, so H₃ is accepted. The Adjusted R² value of 0.614 indicates that perceived usefulness and ease of use together explain 61.4% of the variation in purchase intention, while the remaining 38.6% is explained by other factors outside the research model.

4.6. Discussion

The Influence of Perceived Usefulness on Purchase Intention (H₁)

The results of this study confirm that perceived usefulness has a positive and significant effect on Shopee users' purchase intention ($\beta = 0.412$; $p < 0.05$). The larger beta coefficient compared to the ease of use variable indicates that perceived usefulness is a more dominant factor in driving purchase intention. This finding is consistent with research by Chandra et al. (2023) and Huang & Chen (2023), which found that when consumers perceive tangible benefits from using the platform—such as time efficiency, ease of price comparison, and access to a wider variety of products—they tend to have higher purchase intentions. This is relevant to the context of Shopee, which continues to innovate with features such as flash sales, live streaming commerce, and AI-based product recommendations that increase users' perceived usefulness.

The Effect of Ease of Use on Purchase Intention (H₂)

Ease of use was shown to have a positive and significant effect on purchase intention ($\beta = 0.338$; $p < 0.05$). Although its influence was slightly lower than perceived usefulness, ease of use remains an important factor that cannot be ignored. This finding aligns with Lim et al. (2023) and Rahmawati & Sulistyono (2024), who emphasized that an intuitive interface and easy transaction process directly reduce consumers' psychological barriers to online shopping. The Shopee app, which offers simple navigation, diverse payment options, and a responsive interface, significantly contributes to the formation of users' purchase intentions.

Simultaneous Effect (H₃)

Simultaneously, the two variables explained 61.4% of the variation in purchase intention, a substantial level of explanation and indicating the high relevance of TAM in the context of e-commerce in Indonesia. The remaining 38.6% is likely influenced by other factors such as trust, perceived risk, social influence, and price promotions, which could be an agenda for further research.

5. Conclusion

Based on the results of the analysis and discussion, the following conclusions can be drawn:

1. Perceived usefulness has a positive and significant effect on the purchase intention of Shopee application users in Indonesia with a beta coefficient of 0.412, making it a more dominant variable in this research model.
2. Ease of use has a positive and significant effect on the purchase intention of Shopee application users in Indonesia with a beta coefficient of 0.338.
3. Simultaneously, perceived usefulness and ease of use have a significant influence on purchase intention and are able to explain 61.4% of the variation in purchase intention of Shopee app users in Indonesia.

Bibliography

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Chandra, S., Srivastava, S.C., & Theng, Y.L. (2023). Perceived usefulness and social influence in mobile commerce adoption: A multi-group analysis. *International Journal of Information Management*, 68, 102561. <https://doi.org/10.1016/j.jinfomgt.2022.102561>
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Huang, L., & Chen, K. (2023). Perceived usefulness and purchase intention in social commerce: The moderating role of social presence. *Journal of Retailing and Consumer Services*, 72, 103274. <https://doi.org/10.1016/j.jretconser.2023.103274>
- iPrice Group. (2023). Map of e-commerce Indonesia Q3 2023. Retrieved from <https://iprice.co.id/insights/mapofecommerce/>
- Kotler, P., & Keller, K. L. (2022). *Marketing management* (16th ed.). Pearson Education.
- Lim, W. M., Kumar, S., & Ali, F. (2023). Advancing knowledge through literature reviews: What, why, and how to contribute. *The Service Industries Journal*, 43(7–8), 471–513. <https://doi.org/10.1080/02642069.2022.2146304>
- Momentum Works. (2023). *E-commerce in Southeast Asia 2023*. Momentum Works Research Division.
- Oktaviani, R., & Rustandi, D. (2022). The effect of ease of use and perceived usefulness on purchase intention in the Tokopedia marketplace. *Journal of Business and Management*, 12(1), 45–58. <https://doi.org/10.26905/jbm.v12i1.7234>
- Populix. (2023). *Indonesian consumer online shopping trends 2023*. Populix Consumer Research Report.
- Rahmawati, D., & Sulistyono, H. (2024). Ease of use as a mediator between interface quality and user satisfaction of m-commerce in Indonesia. *Journal of Technology Management*, 23(1), 78–95. <https://doi.org/10.12695/jmt.2024.23.1.5>
- Ramadhan, A., Wijaya, T., & Susanto, H. (2023). Perceived usefulness, trust, and purchase intention on Shopee: Post-pandemic analysis. *Asian Journal of Business Research*, 13(2), 112–129. <https://doi.org/10.14707/ajbr.230112>
- Venkatesh, V., & Bala, H. (2023). Technology acceptance model 3 revisited: A two-decade retrospective and future directions. *Information Systems Research*, 34(3), 891–914. <https://doi.org/10.1287/isre.2022.1188>
- We Are Social & Hootsuite. (2023). *Digital 2023: Indonesia*. We Are Social Global Report. Retrieved from <https://datareportal.com/reports/digital-2023-indonesia>.