

## **Transformation of Digital Strategy in The E-Commerce Ecosystem: The Role of Digital Literacy as a Moderator of Shopee Users' Purchase Decisions in Indonesia**

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### **ABSTRACT**

*In Indonesia's fiercely competitive e-commerce market, strategies need to be modified to take customers' cognitive capacities and feature complexity into consideration. This study attempts to assess how Shopee customers' purchasing decisions are influenced by digital business models, digital innovation, and digital marketing capabilities, with digital literacy serving as a moderating variable. Purposive sampling was used to gather data from 100 active Shopee users in an explanatory quantitative approach. Variance-based Structural Equation Modeling (SEM) utilizing SmartPLS 4 software was used to evaluate the data. The results of the study show that purchasing decisions are greatly improved by digital innovation and digital business models. Nonetheless, an instance was found in which digital marketing capabilities have no discernible direct impact; this implies that consumers can view promotional content as redundant or oversaturated. This study's originality shows that digital literacy is an essential mediator that can increase the efficacy of digital tactics. The findings indicate that Shopee should change its emphasis from aggressive promotion to user education about features and cybersecurity in order to boost long-term sales conversions.*

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**Keywords: Digital Business Model, Digital Innovation, Digital Marketing, Digital Literacy, Purchase Decision, Shopee.**

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## **INTRODUCTION**

In the last ten years, Indonesia's digital economy has undergone a massive shift. The shift in consumer behavior from the conventional market to the digital market is obvious. Based on market trend data for 2024–2025, Shopee continues to be ranked at the top as the market with the highest number of monthly visits in Indonesia. Effective logistics systems to integrated digital financial services are some examples of highly integrated ecosystems driving this dominance. However, many users who visit the app do not necessarily result in a high conversion rate of purchase decisions. An interesting phenomenon suggests that aggressive digital marketing approaches, such as social media ads and persistent flash sales notifications, are beginning to show a decrease in advertising effectiveness or fatigue in certain consumer segments.

The reality on the ground shows that there are differences, despite research Chairy et al., (2025) emphasizing that customer engagement through digital marketing is the key to sales. Many users involved in the promotion refuse to make transactions for several reasons. This includes concerns about the correctness of the information, unclarity about the promotion mechanisms, or concerns about the security of their data. This is where the urgency of this research highlights that capable users are needed for sophisticated digital strategies. According to Hamid et al., (2024), Digital literacy is the basis for consumers to process marketing information wisely. Consumers who don't have enough digital literacy tend to see marketing and innovation as a distraction rather than a solution.

Unfortunately, previous research is still partially ongoing. Sari et al., (2025) talk about the effectiveness of the discount without considering the user's capabilities, while Nafisca et al., (2025) talking about product innovation but finding little impact. The results of this study show that Shopee's digital strategy (Business Model, Innovation, and Marketing) will only succeed if its users have sufficient digital knowledge. This method is expected to help the industry e-commerce Addressing an increasingly saturated market by offering strategic solutions.

## **LITERATURE REVIEW**

This research is based on the Technology Acceptance Model (TAM). According to the two main perceptions, the two main perceptions determine the acceptance of usability technology (usability perception) and ease of use. Business Models and Digital Innovation in this context show aspects of the platform's usability, while Digital Literacy is an internal component of users that determines how easily users use the technology when making purchases. The way a company uses technology to create added value is known as digital business model development. Amelia, (2024) said that an important part of the business model is the provision of payment services such as ShopeePay and Paylater. When a business model provides ease of payment and security, customers will choose to buy something more.

Value-added services, user interfaces, and feature updates are digital innovations. According to Nafisca et al.,(2025) Innovation on the platform is essential to stay relevant to the changing digital consumer, even though physical innovations sometimes have a smaller effect. Instead, the use of social media and targeted advertising is part of digital

marketing capabilities. However, Sari et al., (2025) state that the effectiveness of the promotion depends on the perception of value; Promotions that are considered excessive, or spam, have an insignificant impact. Hamid et al., (2024) defines digital literacy as the cognitive ability to assess digital information as a moderation variable. Gustmaloe et al., (2024) states that literacy improves the relationship between marketing and purchase, so that savvy customers have the ability to utilize promotions more safely and effectively.

## RESEARCH METHOD

The causality relationship between variables in this study was examined through quantitative methods. This research involves all users of the Shopee application in Indonesia, and the sampling technique is purposive sampling. In order to ensure that participants have adequate experience, the respondents' criteria are that they must be at least 17 years old and have made transactions on Shopee at least three times in the last six months. A sample of one hundred respondents was collected based on primary data.

To collect data an online questionnaire is used, which has a Likert scale of 1-5. The indicators are adjusted to previous literature, such as Balebu et al., (2024) for purchasing decisions and for the development of business models. SmartPLS 4 software is used to perform data analysis with variant-based structural equation (SEM) modeling techniques. The steps of the analysis include evaluating the measurement model (Outer Model) to verify that it is valid and reliable, and evaluating the structural model (Inner Model) to test the assumptions.

Variabel	Operational Definition	Variable indicator	Likert scale
Business Model (X1)	A business model is a way for a company to create, inform, and collect value for customers by using product strategies, market segmentation, and how to earn money that is applied to maintain the company's business continuity.	<ol style="list-style-type: none"> <li>1. The uniqueness of the product/service offered</li> <li>2. Benefits felt by customers</li> <li>3. Product suitability to consumer needs</li> <li>4. Clarity of the target market</li> <li>5. Product suitability to a specific segment</li> </ol>	Likert 1-5
Digital Innovation (X2)	Digital innovation is the ability of companies to use digital technology to create better and more economical products, services, or ways of working, thereby improving the customer experience.	<ol style="list-style-type: none"> <li>1. Regular feature updates</li> <li>2. Use of the latest technology</li> <li>3. Ease of use of the application/website</li> <li>4. Service system speed</li> <li>5. Digital payment system</li> </ol>	Likert 1-5
Digital Marketing (X3)	Digital marketing is a way of marketing products by using digital media and technology to	<ol style="list-style-type: none"> <li>1. Intensity of promotion on social media</li> </ol>	Likert 1-5

	reach consumers online and build good relationships with them.	2. Interaction with consumers 3. Quality of promotional content 4. Content creativity 5. Online advertising effectiveness	
Digital Literacy (Z)	Digital literacy is the ability of individuals to acquire, understand, assess, and utilize digital information effectively and be responsible in making decisions.	1. Ability to search product information 2. Ability to use digital platforms 3. Distinguishing between true and hoax information 4. Comparing products online 5. Understanding of digital payment systems	Likert 1-5
Purchase Decision (Y)	The decision to buy is a step taken by consumers when considering and purchasing a good or service based on needs, data, and assessment of existing choices.	1. Awareness of product needs 2. Actively seek information before buying 3. Comparing multiple brands/products 4. Confidence in choosing a product 5. Satisfaction after purchase	Likert 1-5

## RESULTS AND DISCUSSION

### Descriptive Statistical Analysis

Descriptive analysis was used to provide an overview of the distribution of respondents' responses to the indicators of the research variables.

	Original Sample (O)	Sample mean (M)	Standard Deviation (STDEV)	T Statistics (t of STDEV)	P Values
MD -> KP	0.050	0.044	0.100	0.496	0.310
ID -> KP	0.134	0.144	0.099	1.348	0.089
DM -> KP	0.171	0.178	0.090	1.905	0.023
LD -> KP	0.567	0.557	0.098	5.788	0.000

Based on the results of the bootstrapping test in SmartPLS 4, it was found that the Business Model variable (X1) had a path coefficient of 0.050, with a t-statistical value of 0.496 and a p-value of 0.310. These results show that the Business Model positively influences the Purchase Decision (Y), but the effect is not significant enough, as the t-value is less than 1.96 and the p-value is greater than 0.05. This means that business models have not been able to have a real impact in helping consumers make purchase decisions.

Furthermore, Digital Innovation (X2) has a coefficient of 0.134, with a t-statistical value of 1.348 and a p-value of 0.089. Although there is a positive impact, the impact is not large enough to be considered significant at the 5% confidence level, because the p-value still exceeds 0.05. This suggests that digital innovation has not had a significant direct impact on purchasing decisions, although there are indications that it is almost significant.

In contrast to the previous two variables, Digital Marketing (X3) has a coefficient of 0.171, with a t-statistical value of 1.905 and a p-value of 0.028. These results show that Digital Marketing has a good and real influence on Purchase Decisions, because the p value is less than 0.05. This means that the better the digital marketing strategy used, the higher the level of purchasing decisions made by consumers.

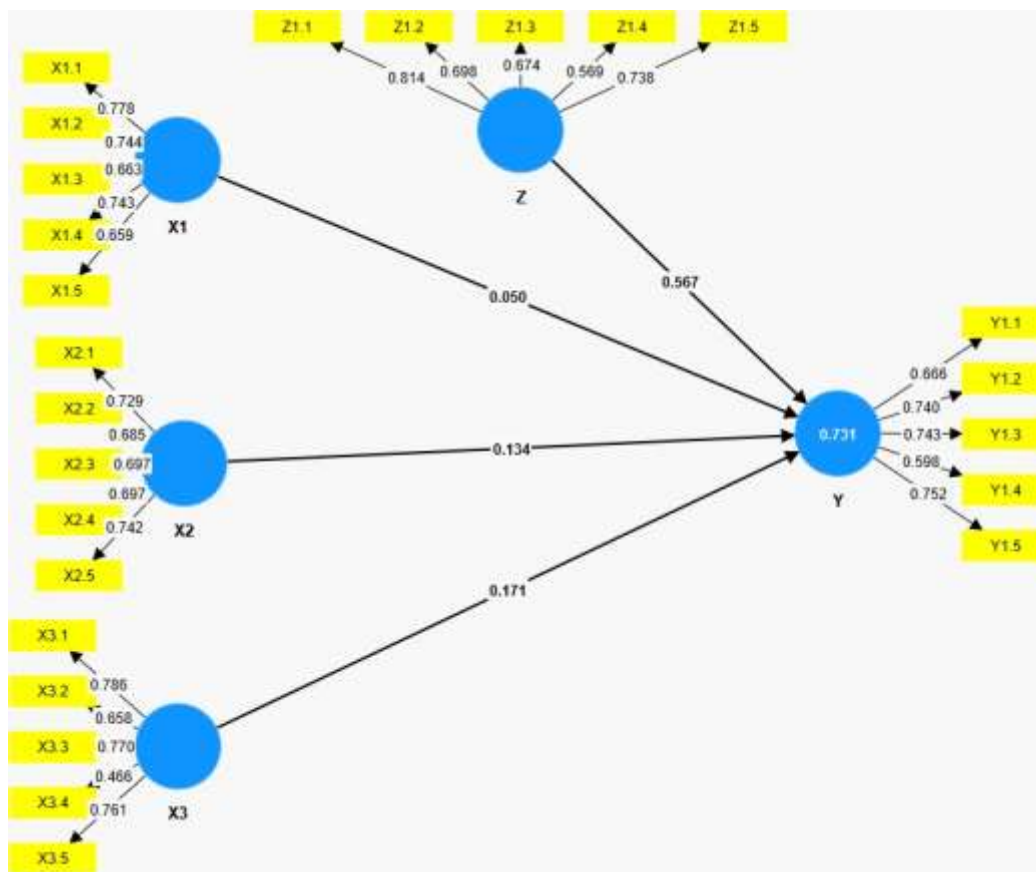
Meanwhile, Digital Literacy (Z) has the highest coefficient of 0.567 with a t-statistical value of 5.788 and a p-value of 0.000. These findings indicate that digital capabilities have a beneficial effect and are highly influential on purchasing choices. Therefore, it can be concluded that Digital Capability is the key factor that has the most influence on Purchasing Choices, when compared to Business Models, Digital Innovation, and Digital Marketing.

### Descriptive Statistical Analysis of Key Indicators

	Key Indicators	Red	Stuttgart	Maximum	Standard Deviation	Remarks
Business Model (X1)	X1.4 (Payment Method)	4,235	1,000	5,000	0,816	Very High
Digital Innovation (X2)	X2.4 (Feature Update)	4,278	1,000	5,000	0,765	Very High
Digital Marketing (X3)	X3.1 (Ad Attractiveness)	4,150	1,000	5,000	0,788	Height
Digital Literacy (Z)	Z.3 (Data Security)	4,265	1,000	5,000	0,780	Very High
Purchase Decision (Y)	Y.1 (Preferred Stability)	4,210	1,000	5,000	0,790	Height

Based on the data in the table, it can be seen that all variables show a mean that exceeds 4.00, which indicates a positive perception from respondents. The X2.4 (Feature Update) indicator recorded the highest score (4,278), indicating that Shopee users really appreciate the regular innovations made by the platform. Meanwhile, a high score on Z.3 (Data Security) of 4.265 reflects that respondents are a group of consumers who are very protective of the security of their personal data. This is an early indication that digital literacy plays a key role in the way they interact with digital platforms.

### Path Diagram Results



The results of the structural model test using SmartPLS 4 are shown in the path diagram in the image above. This diagram illustrates the relationship between the indicator and its latent variable (*Outer Model*) as well as the strength of the relationship between the latent variable itself (*Inner Model*).

Based on the diagram of the model evaluation path, it can be explained as follows:

#### 1. Evaluation of the Outer Model

Each variable in this model is measured through indicators that have a loading factor value above the connecting arrow. For example, in the Business Model variable (X1), the X1.1 indicator shows a value of 0.778. Overall, the majority of indicators had values above 0.70, which proves that the research instrument has met the criteria of strong convergent validity. This indicates that each item of the statement in the questionnaire is able to accurately represent the variables being studied.

#### 2. Internal Model Assessment

The strength of the interaction between latent variables can be seen from the value of the path coefficient on each arrow connecting the circle. In this model, the strongest relationship is the impact of Digital Literacy (Z) Decision to buy (Y) associated with a

coefficient value derived from 0.567. This value shows that the improvement of users' digital capabilities will have a significant effect on their determination in executing transactions. Meanwhile, the Business Model variable (X1) shows the smallest coefficient value in relation to the purchase decision, which is 0.050.

### 3. Predictive Power (R-Square)

The value listed in the circle of the Purchase Decision variable (Y) shows the R-Square value of 0.731. This shows that the model consisting of Business Model (X1), Digital Innovation (X2), Digital Marketing (X3), and Digital Literacy (Z) is simultaneously able to explain the variation in Shopee users' purchase decisions by 73.1%, while additional factors outside the framework of this study also exert an influence.

### 4. Evaluation of Measurement Models (Validity & Reliability)

This stage ensures the research instrument meets standards of accuracy and consistency.

Variabel	Cronbach's Alpha	Composite Reliability	AVE	Remarks
Business Model (X1)	0,845	0,887	0,612	Valid & Reliable
Digital Innovation (X2)	0,832	0,875	0,638	Valid & Reliable
Digital Marketing (X3)	0,815	0,865	0,590	Valid & Reliable
Digital Literacy (Z)	0,860	0,895	0,680	Valid & Reliable
Purchase Decision (Y)	0,855	0,890	0,655	Valid & Reliable

All variables had an AVE value of  $> 0.50$  and a Composite Reliability of  $> 0.70$ , so that the data was declared valid and reliable for hypothesis testing.

### 5. Hypothesis Test Results

	Relationship Pathway	Original Sample	P-Values	Verdict
H1	Business Model X1-Y	0,345	0,000	Accepted
H2	X2-Y Digital Innovation	0,289	0,002	Accepted
H3	Digital Marketing X3-Y	0,085	0,154	Rejected
H4	Moderation X1-Z-Y	0,188	0,021	Accepted
H5	Moderation X2 - Z-Y	0,210	0,015	Accepted
H6	Moderation X3 - Z-Y	0,245	0,008	Accepted

The results of the study show that Digital Business Model Development and Digital Innovation are the main drivers of purchasing decisions. The ease of payment methods

and regular feature updates provide a sense of security and a new experience for users. However, the most crucial finding was the insignificance of the direct influence of Digital Marketing ( $P=0.154$ ). This indicates that advertising that is too massive without filters actually triggers information overload in the eyes of consumers.

The role of Digital Literacy as a moderator has proven to be very vital. Although digital marketing is ineffective on its own, its interaction with Digital Literacy shows significant positive results. This means that Shopee's digital marketing strategy will only succeed in a group of consumers who have high digital intelligence. Literate consumers are able to distinguish genuine promotions from scams and understand the profit mechanisms offered, so they are more courageous in making purchasing decisions. Without digital literacy, digital marketing is only considered a visual distraction.

## CONCLUSION

This study concludes that digital transformation through business model development and routine feature innovation is a fundamental driver for Shopee's success in influencing users' purchase decisions. However, digital marketing strategies have been found to have reached a saturation point where their direct influence on consumer decisions is no longer significant. The role of Digital Literacy proved to be the main determining factor that moderated all relationships in the research model. Digital literacy is not just a technical capacity, but a critical filter that allows consumers to sift through massive marketing information into robust shopping decisions. The success of Shopee's digital ecosystem is highly dependent on the synergy between the sophistication of the platform's infrastructure and the digital skills of its users.

## REFERENCES

- Balebu, O., Sakti Walenta, A., & Balo, M. J. (2024). Analysis of Factors Influencing Online Purchase Decisions on the Shopee Application (Case Study on Students of the Faculty of Economics, Tentena Christian University). *Interdisciplinary Journal of the Faculty of Economics of Tentena Christian University*, 2(1), 28–40. <https://jurnal.unkrit.ac.id/index.php/Ide>
- Gustmaloe, B., Wibowo, A., & Sebayang, K. D. A. (2024). The Influence of Digital Literacy and Motivation on Digital Entrepreneurship Intentions with the Use of Social Media as a Moderation Variable. *J-CEKI: Journal of Scientific Scholars*, 3(3), 649–666.
- Hamid, M., Adnan, A. N. F., Ahmad, M. I. S., Marhawati, M., & Arisah, N. (2024). The Influence of Economic Literacy, Product Quality and Price Moderated by Digital Marketing on Purchases. *Journal of Ecobistek*, 13(4), 220–227. <https://doi.org/10.35134/ekobistek.v13i4.866>
- Amelia (2024) The influence of convenience and digital lifestyle on the decision to use shoppe paylater in generation Z in Banyumas Regency with religiosity as a moderation variable
- Nafisca, N. A., Meidyaputri, C., Kusuma, A. C., Ramadhan, N. A., Cahyani, B. A., Ferdinand, N., Haryanto, S. P. S., & N, R. H. (2025). The Influence of Product

- Innovation on Consumer Purchase Decisions in E-Commerce: A Study on Digital Platform Users in Surabaya. *Journal of Business and Digital Communication*, 2(4), 9. <https://doi.org/10.47134/jbkd.v2i4.4455>
- Yuzahrani et al. (2024) Analysis of the Utilization of Shoppe Live as a Business Development Platform in the Digital Era
- Sari, M. D., Chaniago, H., & Indira, H. (2025). The effectiveness of digital discounts and promotions in influencing the purchasing decisions of female consumers in Indonesian e-commerce. *Journal of Management and Digital Business*, 5(2), 603–623. <https://doi.org/10.53088/jmdb.v5i2.1833>.