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## FACTORS AFFECTING INTENTION TO MAKE PURCHASING THROUGH E-COMMERCE IN INDONESIA

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## **ABSTRAK**

Electronic commerce, or "e-commerce," is the term used to describe all sales and purchases made using electronic media, mostly websites and applications. With the growth of digital interactions, it is more important than ever to understand the subtleties of e-commerce purchasings. With an emphasis on Indonesia, where online purchase is becoming more and more popular, this study attempts to pinpoint the critical factors that affect customers' decision to interact with ecommerce platforms. This study looks at the variables impacting customer behaviour in the platforms using a quantitative research methodology. The results, which cover social risk, financial risk, product risk, and social impact, are important components. When it comes to purchasing, trust is an important consideration, especially in a market where worries about online fraud are prevalent. Furthermore, studies show that an easy-to-use interface increases the probability that customers will make a purchase since it promotes trust and contentment. The variety of products offered and the allure of pricing packages impact customer decisions as well, highlighting the necessity for e-commerce suppliers to adopt a holistic strategy. The research provides an overview of Indonesia's e-commerce scene and makes suggestions for merchants looking to improve consumer happiness and build a strong online presence.

## **Keywords:**

Ecommerce, Purchase Intention, User Behaviour, Mobile Applications, Websites

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## INTRODUCTION

## Research Background

With 213 million users as of January 2023, Indonesia has seen a sharp rise in internet usage due to the country's growing reliance on technology (Jameaba, 2024). The proliferation of e-commerce platforms, each with pros and cons of its own, such Shopee, Tokopedia, Lazada, BliBli, and Bukalapak, is mostly to blame for this rise. Indonesia is predicted to have 133.39 million internet users by 2021, ranking among the world's biggest online marketplaces. Ages 25 to 34 make up the bulk of users (Ikhsan, 2020).

Since 2013, the adoption of e-commerce transactions has been the subject of at least 600 research, making it an intriguing issue. To keep consumers, firms must take into account the elements that influence their purchase decisions (Sriwahyuni & Hamid, 2023). The purpose of this study is to comprehend the variables that affect Indonesian consumers' usage of e-commerce platforms, such as effort expectation, financial risk, security risk, and product risk (Salim et al., 2023).

The desire to purchase, the information sought, and the frequency of purchases made by internet consumers are all significantly influenced by financial risk (Abdullah, 2021). This risk involves the potential for financial loss as a result of subpar product performance or an unjustified pricing (Guci, 2024). Customers are more inclined to make an online purchase if they think there aren't enough security tools accessible, such as trustworthy product information, streamlined transaction and delivery procedures, and professional customer support. Online fraud and hacking are security risks that put user and transaction security at risk (Varma et al., 2020). On the other hand, product risk refers to the potential for financial loss in the event that a product does not meet consumer criteria for quality and performance (Kamalul Ariffin et al., 2018). When comparing delivered items to those that are presented online, customers may be able to recognize a product risk based on differences in color, form, or appearance (Das & Kunja, 2024). These factors have the power to significantly reduce online customers' confidence and inclination to buy (Cho & Sagynov, 2015).

#### **Research Purposes**

Considering the issues discussed in the previous part, this study characterizes the problem as follows. Social influence, effort expectations, financial risk, product risk, and security risk are all factors that affect how interested a community is in e-commerce. As shown in the problem description above, the aim of this study is to investigate the ways in which the community's interest in e-commerce is influenced by financial risk, security risk, product risk, and social influence.

Just two of the many benefits of the research are academic and practical. The academic value of this study lies in the suggestions it offers for future studies examining factors related to an individual's interest in e-commerce. The study's useful addition, however, is that it provides e-commerce companies with a sound framework for examining and understanding the variables that affect customers' excitement for e-commerce.

Several constraints were implemented during the study's execution to ensure that the discussion would remain focused on the research issue. Among the study's shortcomings include its concentration on the Jakartan community and the online marketplaces Shopee, Tokopedia, Lazada, Blibli, and Bukalapak. It is also necessary for participants to have utilized one or more of these platforms.

#### **METHOD**

#### **Research Framework**

The conceptual framework is the most crucial part of doing research since it serves as a foundation or point of reference for the duration of the process. References from theories and literature relevant to the study issue are reviewed in order to carry out this investigation. Next, based on the collected data, the conceptual framework is created, as seen in figure below.

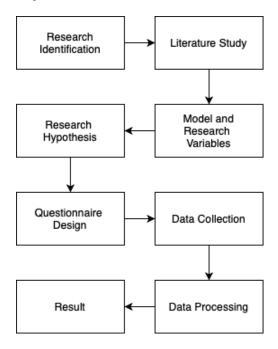


Figure 1. Research Framework

This study gathers factors, theories, and literature to investigate the unequal interest in e-commerce. A model that takes into account financial, security, social, product, and effort aspects is developed to forecast user interest. Users of mobile devices fill out a questionnaire that is designed to gather data, which is then analysed using partial least squares to provide suggestions.

#### Research Model

The research model is constructed with reference to the previously described journals and the findings of prior investigations in the chapter before it. After then, it is modified by considering factors that are connected to each other and by considering the customer concerns that were discussed before. User interest in e-commerce, financial risk, security risk, product risk, social influence, and effort expectation are the six factors included in this study. The following is the research model that was developed for this study:

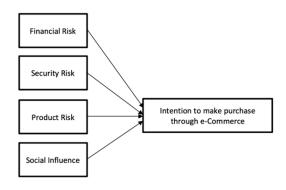


Figure 2. Research Model

## **Research Model**

Table 2. Research Model

Variables	Indicator	Reference
Financial Risk	I usually overspend. I might be charged too much. The product might not be worth what I paid. Online shopping can be expensive, and I don't trust the company I'm buying from.	(Ikhsan, 2020)
Security Risk	I believe that the information on my credit or debit card is not safe.	(Ikhsan, 2020)
Product Risk	I can't seem to locate the desired item. It's possible that a product I buy won't be precisely the quality I expected. It's possible the size description is inaccurate. I find it challenging to evaluate the quality of a comparable product. I can't test the product online.	(Ikhsan, 2020)
Social Influence	My behavior is influenced by people who believe I should shop online.  Some of my closest friends and family believe that I should shop online.  Using internet shopping channels has been made easier for me by people who are very close to me.	(Sriwahyuni & Hamid, 2023).

	My close friends and family were generally in favor of using internet shopping channels.	
Intention to Make Purchasing Through E- commerce	In the future, I plan to make a purchase or purchases using online shopping channels. I anticipate using online shopping channels to make a purchase or purchases in the future.	(Abdullah, 2021)

#### **Research Hypothesis**

This research will examine the influence between variables and then produce 4 hypotheses, as follows:

- a. **Hypothesis** 1:**H0**:**β1**=**0**, Financial risk does not affect intention to make purchase through E-Commerce. **Hypothesis** 1:**β1**=**0**, Financial risk has negative affect intention to make purchase through E-Commerce
- b. **Hypothesis 2**: **H0**:β2=0, Security risk does not affect intention to make purchase through E-Commerce. **Hypothesis 2**: **H1**:β2=0/, Security risk has negative affect intention to make purchase through E-Commerce.
- c. Hypothesis 3: H0: $\beta$ 3=0, Product risk does not affect intention to make purchase through E-Commerce. Hypothesis 3: H1: $\beta$ 3 $\neq$ 0, Product risk has negative affect intention to make purchase through E-Commerce.
- d. Hypothesis 4: H0:β4=0, Social influence does not affect intention to make purchase through E-Commerce.
   Hypothesis 4: H1:β4≠0, Social influence has negative affect intention to make purchase through E-Commerce.

#### **Population and Sample**

The population refers to the full collection of things that the author will use to collect data for a statistical research and can be a group of persons, whereas a sample is a subset of the population that the author will use to represent all of the data [8]. The research subjects in this study are all Jakartans who have installed e-commerce applications on their mobile devices; the author chose this demographic based on the population and sample that would be studied.

Because it is difficult to collect data on how the public uses mobile e-commerce applications, the author multiplies the total number of indicators by five in order to determine the sample size. A minimum sample size of  $21 \times 5 = 105$  people in Jakarta using mobile e-commerce applications is required for this research, as there are 21 indicators in total.

#### **Collection Method**

As part of the data gathering procedure, inhabitants of DKI Jakarta who have e-commerce programs installed on their mobile devices and utilize social media platforms like Instagram and WhatsApp will be randomly provided a link to an online questionnaire via Google Form. A questionnaire consists of a set of questions about research to which participants must reply [5]. The indicators of the variables discussed in the previous subsection 3.3 are used to build the questionnaire's questions. Variable measurements are performed utilizing a Likert scale that has five potential answers, as shown in Table 3 below.

Table 3. Likert Scale				
Response	Code	Scale		
Strongly Disagree	SD	1		
Disagree	D	2		
Neutral	N	3		
Agree	A	4		
Strongly Agree	SA	5		

# Research Analysis Method Validity and Reliability

Validity testing is used to determine the correctness of the research instrument (questionnaire). The process of establishing validity is called construct validity, and it involves comparing the overall scores of all items—question or not—with the scores obtained for each individual item. It is required that there be a statistically significant association between the item scores and the total scores. Partial least squares items are validated using the factor loadings approach; if the loading value of each indication is more than 0.7, the item is considered legitimate (Mustaqim et al., 2018).

When the same phenomena and measuring instrument are tested again, reliability testing is carried out to assess the consistency of the measurement findings (bt Mohd & Zaaba, 2019). When an instrument is considered dependable, it is considered trustworthy enough to be utilized for data collection. The reliability of the data will be assessed in this study using Cronbach's alpha and composite reliability; if both values are over 0.6, the data are considered trustworthy (Saeed, 2023).

## **Data Analysis Method**

This study uses partial least squares (PLS-SEM) as a data analysis approach in place of OLS regression, canonical correlation, or covariance-based structural equation modeling (SEM) of independent and response variable systems. PLS is also known as "component based SEM," "composite-based SEM," and "variance-based SEM." Path coefficients can be displayed in standard or non-standard form, and averaging the values for a given segment throughout the course of the process might be helpful to researchers.

If the researcher concludes that there is no problem with unobserved heterogeneity and that there is no significance in the route coefficient differences, with entropy less than 0.5, then the standard global PLS method is employed. In order to get relevant findings from an experiment or survey, hypothesis testing is a statistical process that is used to determine the outcomes (Al-Adwan et al., 2023). In statistical value-based hypothesis testing, the alpha value at a 5% significance level is 1.96. If the estimated t-value is smaller than the t-table (indicating that the regression coefficient is significant), the alternative hypothesis proposed in this study is accepted at a 5% significance level and the null hypothesis is rejected.

- a. Research hypotheses are rejected in this approach if the t-statistic value is less than 1.96 (t-statistics < 1.96).
- b. Research hypotheses are not rejected in this model if the t-statistic value is more than 1.96 (t-statistics > 1.96).

In addition to t-tests, hypothesis testing may also be seen using p-value testing by bootstrapping. If the p-value is smaller than the error rate, or alpha, the hypothesis is accepted.

## RESULTS AND DISCUSSIONS

#### **Processing Data Results**

DKI Jakarta provided a sample of 111 participants based on their answers to the screening questions. There are other variables broken down by age and employment in addition to the names of the respondents. **Age** 

There were six respondents who were under 21 years old, 85 respondents who were between 21 and 25 years old, 13 respondents who were between 26 and 30 years old, and 7 respondents who were beyond 30. The table below provides a comprehensive summary of the calculations made by the respondents:

**Table 4.** Respondents Based on Age

Age	Frequency	Percentage
< 21 years old	6	5.4%
21 – 25 years old	85	76.6%
26 – 30 years old	13	11.7%
> 30 years old	7	6.3%
Total	111	100%

#### Job

This includes the number of respondents with an undergraduate degree, 10 graduate students, 91 working individuals, and 4 self-employed individuals. Table 5 provides the following comprehensive summary of responder calculations:

**Table 5.** Respondents Based on Job

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Job	Frequency	Percentage				
High School Student	0	0%				

Undergraduate Student	6	5.4%
Graduate Student	10	9%
Employee	91	82%
Entrepreneur	4	3.6%
Total	110	100%

## Research Data Analysis Convergent Validity

Convergent validity and average variance extracted (AVE) make up the validity test in this study. If an indication has a loading factor more than 0.7 in the direction of the desired construct, it is deemed legitimate. The research's outer loading findings, which were evaluated for this study's validity utilizing SmartPLS software, are as follows:

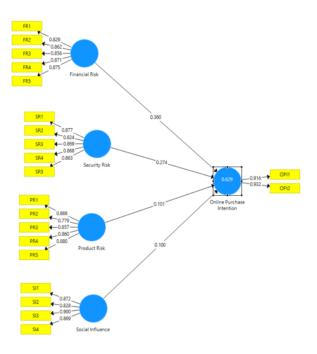


Figure 3. Convergent Validity

The convergent validity test findings may be tabulated and interpreted as follows based on the preceding figure:

<b>Table 6.</b> Convergent Validity				
Loading	Standard	Result		
Factor				
Success				
0.829	$\geq$ 0.70	Valid		
0.862	≥ 0.70	Valid		
0.856	≥ 0.70	Valid		
0.871	≥ 0.70	Valid		
0.875	≥ 0.70	Valid		
0.877	≥ 0.70	Valid		
0.824	$\geq$ 0.70	Valid		
0.869	$\geq$ 0.70	Valid		
0.868	$\geq$ 0.70	Valid		
0.863	≥ 0.70	Valid		
0.866	≥ 0.70	Valid		
	0.829 0.862 0.871 0.875 0.877 0.824 0.869 0.868 0.863	$\begin{array}{c c} \textbf{Loading} \\ \textbf{Factor} \\ \textbf{Success} \\ \hline \\ 0.829 & \geq 0.70 \\ 0.862 & \geq 0.70 \\ 0.856 & \geq 0.70 \\ 0.871 & \geq 0.70 \\ 0.875 & \geq 0.70 \\ \hline \\ 0.877 & \geq 0.70 \\ \hline \\ 0.824 & \geq 0.70 \\ 0.869 & \geq 0.70 \\ 0.868 & \geq 0.70 \\ 0.863 & \geq 0.70 \\ \hline \\ 0.863 & \geq 0.70 \\ \hline \\ \hline \end{array}$		

PR2	0.779	≥ 0.70	Valid
PR3	0.857	≥ 0.70	Valid
PR4	0.860	≥ 0.70	Valid
PR5	0.880	≥ 0.70	Valid
Social			
Influence			
SI1	0.872	≥ 0.70	Valid
SI2	0.828	≥ 0.70	Valid
SI3	0.900	≥ 0.70	Valid
SI4	0.869	≥ 0.70	Valid
Ecommerce			
Purchase			
Intention			
EPI1	0.916	<u>≥</u> 0.70	Valid
EPI2	0.932	≥ 0.70	Valid

The table indicates that every indication satisfies the loading factor criteria, hence enabling the reliability validity testing to go to the AVE testing phase. The company's trustworthiness is indicated by FR5, social impact is indicated by SI3, online product use is indicated by PR5, security is indicated by SR1, social influence is indicated by EPD1, and future e-commerce purchases are indicated by EPD1. These are the strongest indications.

## **Average Variance Extracted**

After eliminating the indication from the adoption of e-wallet variable with the code AoE3, the AVE testing, which was based on information from 111 respondents' questionnaire replies, revealed that all variables were deemed legitimate because their values were all > 0.50. Refer to Table 7 below for a more thorough explanation.

Table 7. AVE Result					
Variable	AVE	Standard	Result		
	Score				
Financial	0.737		Valid		
Risk		$\geq$ 0.50			
Ecommerce	0.854		Valid		
Purchase					
Intention		$\geq$ 0.50			
Product	0.721		Valid		
Risk		$\geq 0.50$			
Security	0.740		Valid		
Risk		$\geq$ 0.50			
Social	0.753		Valid		
Influence		$\geq$ 0.50			

It is evident from the following table that every variable satisfies the AVE criteria, which permits the validity reliability testing to move on to the discriminant validity step.

#### **Discriminant Validity**

By employing cross-loading standardization, discriminant validity testing verifies the validity of variables by demonstrating stronger correlations with their own variables.

Table 9	R	Discri	minant	Validity	Result
Table	о.	DISCIL	mmanı	vanuni	/ IXESUIT

	THE CONTRACTOR OF THE CONTRACT				
	FR	EPI	PR	SR	SI
FR1	0.829	0.651	0.744	0.806	0.733
FR2	0.862	0.681	0.701	0.734	0.697
FR3	0.856	0.631	0.653	0.683	0.623
FR4	0.871	0.672	0.784	0.755	0.739
FR5	0.875	0.667	0.761	0.784	0.780
EPI1	0.660	0.916	0.648	0.666	0.639
EPI2	0.759	0.932	0.679	0.732	0.674
PR1	0.700	0.592	0.866	0.708	0.717
PR2	0.667	0.551	0.779	0.704	0.615

PR3	0.735	0.662	0.857	0.697	0.687
PR4	0.755	0.628	0.860	0.744	0.729
PR5	0.744	0.609	0.808	0.713	0.710
SI1	0.747	0.595	0.715	0.693	0.872
SI2	0.691	0.561	0.682	0.725	0.828
SI3	0.725	0.652	0.742	0.731	0.900
SI4	0.731	0.653	0.693	0.743	0.869
SR1	0.717	0.623	0.672	0.877	0.699
SR2	0.730	0.609	0.706	0.824	0.693
SR3	0.767	0.661	0.746	0.869	0.704
SR4	0.789	0.677	0.755	0.868	0.774
SR5	0.764	0.686	0.730	0.863	0.711

The correlation values between indicators and variables are higher than the correlation between indicators and other variables, as can be seen in the above table. This suggests that the indicators have satiated the discriminant validity requirements.

## **Reliability Analysis**

The following values of Cronbach's alpha and composite reliability can be used to perform a reliability test:

## **Cronbach's Alpha Testing**

Based on Cronbach's alpha test results, all variables are deemed trustworthy because their values are > 0.70. Refer to Table 9 below for a more thorough explanation.

Table 9. Cronbach's Alpha Result

Variable	CA	Limit	Result
	Score	Value	
Financial Risk	0.911	<u>&gt;</u>	Reliable
		0.50	
Ecommerce Purchase	0.830	<u>&gt;</u>	Reliable
Intention		0.50	
Product Risk	0.903	<u>&gt;</u>	Reliable
		0.50	
Security Risk	0.912	>	Reliable
·		0.50	
Social Influence	0.891	<u>&gt;</u>	Reliable
		0.50	

It is clear from the above table that all of the variables match the Cronbach's alpha requirements because each utilized variable's Cronbach's alpha values are more than 0.5.

## **Composite Reliability Testing**

Based on the composite reliability test findings, all variables are deemed trustworthy because their values are at least 0.70. Please see Table 10 below for an explanation that goes into further detail.

Table 10. Composite Reliability Results

Variable	CR	Limit	Results
	Score	Value	
Financial Risk	0.933	≥ 0.50	Reliable
Ecommerce	0.921	≥ 0.50	Reliable
<b>Purchase Intention</b>			
Product Risk	0.928	$\geq$ 0.50	Reliable
Security Risk	0.934	≥ 0.50	Reliable
Social Influence	0.924	≥ 0.50	Reliable

It is clear from the above table that all of the variables fulfil the standards for Composite Reliability because each utilized variable's Composite Reliability value is more than 0.5.

#### **Path Coefficient**

Because the numbers in the path coefficient tests are larger than 0 and getting close to +1, the findings show that all relationships between the variables are regarded as positive. Please see Table 11 below for an explanation that goes into further detail.

Table 11. Path Coefficient

Indicator Code	Path	Result
	Coefficient	
<b>Ecommerce Purchase</b>		
Intention		
Financial Risk	-0.360	Negative
Security Risk	-0.274	Negative
Product Risk	-0.101	Negative
Social Influence	0.100	Negative

The chart demonstrates how social influence can boost ecommerce purchase decision, but financial risk, security risk, product risk, and social influence all have a negative impact. Consequently, there will be a decline in ecommerce purchase decision when financial risk is reduced, security risk is increased, and product risk is increased.

#### **Coefficient Determination**

The determination of the coefficient is shown in table 12 below.

Table 12. Coefficient Determination

Tuble 12. Coefficient Betermination			
Dependent	Coefficient	Result	
Variable	<b>Determination</b>		
Ecommerce	0.629	High	
Purchase Intention			

With an R-Square score of 0.629, the variable Ecommerce Purchase Decision shows a good degree of prediction accuracy. This indicates that 62.9% of ecommerce purchase decision can be described by the variables that make up online purchase intention, with other variables beyond the purview of this study accounting for the remaining 37.1%.

## **Hypothesis Testing**

As indicated in Table 13 below, hypothesis testing may be carried out by looking at the t-statistics with a critical value of  $\geq 1.96$  and the p-value with a critical value of  $\geq 0.05$ .

Table 13. Hypothesis Testing

Hypothesis	T	P-	Result
	<b>Statistics</b>	Value	
Ecommerce			
Purchase			
Intention			
Financial Risk	2.717	0.007	Accepted
Security Risk	2.318	0.418	Rejected
Product Risk	0.810	0.026	Accepted
Social Influence	0.799	0.425	Rejected

There are four relationships or hypotheses that have been examined, and the following results are shown based on the results of the hypothesis testing in Table 13:

- a. With a t-statistics value > 1.96 and a p-value < 0.05, the link between the Financial Risk variable and the Ecommerce Purchase Decision variable for H1 is deemed significant and acceptable.
- b. Because the association between the Security Risk and Ecommerce Purchase Decision variables for H2 has a t-statistics value < 1.96 and a p-value > 0.05, it is deemed not significant and is disregarded.
- c. H3's t-statistics value > 1.96 and p-value < 0.05 indicate that the link between the Product Risk variable and the Ecommerce Purchase Decision variable is significant and acceptable.
- d. Given that the t-statistics value for H4 is less than 1.96 and the p-value is more than 0.05, the association between the Social Influence and Ecommerce Purchase Decision variables is deemed not significant and is rejected.

#### Discussion

The study discovered that ecommerce purchase intention is significantly influenced by financial risk, security risk, product risk, and social influence. A person's desire to buy is influenced more by security risk than by financial risk. Product risk makes people less likely to buy, whereas social influence makes people more likely to do so. These results provide credence to the hypothesis that ecommerce purchase intention is influenced by financial risk, security risk, product risk, and social impact (Affia et al., 2020).

#### **Managerial Implication**

Companies should manage financial risk, security risk, product risk, and social impact in order to enhance ecommerce purchase intention. These variables include extra expense, customer confidence, and value provided. Businesses may increase customer e-commerce purchasing intention by enhancing these metrics. Managing personal data, website security, and communication during problems are all part of mitigating security risk. Product risk management include taking care of quality alignment, size specifications, and product similarity. It is also possible to reduce social impact by taking into account all of the factors that make up the social influence variable, including the consumer environment and preferences.

#### CONCLUSION

Financial Risk: People in Jakarta who have used e-commerce programs on their mobile phones or other devices have found that e-commerce purchases are significantly affected by financial risk. E-commerce purchase intention in Jakarta among those who have used e-commerce applications on their mobile phones or other devices are not significantly affected by security risk. People in Jakarta who have utilized e-commerce programs on their mobile phones or other devices have found that product risk has a major effect on their intention to purchase goods online. Social Influence had no discernible affect on Jakartans' decisions to make e-commerce purchases after using e-commerce apps on their smartphones or other devices.

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