



## **The Effect of Applying E-Commerce on Purchase Decisions on the SMEs in Greater Bandung, Indonesia**

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### **ABSTRACT**

This research aims to analyze the influence of implementing e-commerce on purchasing decisions on the SMEs in Bandung, Indonesia. The research methodology used was descriptive quantitative, with primary data collected through distributing questionnaires to 108 respondents who implemented e-commerce. Data analysis involved descriptive, correlation and simple regression approaches. The findings of this research show that the application of e-commerce has a positive and significant effect on purchasing decisions on the SMEs scale.

**Keywords:** E-Commerce, Purchasing Decisions, SMEs



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## INTRODUCTION

In the context of increasingly tight e-commerce competition, the speed of development of technology, communication, and e-commerce has created great potential for consumers to make online product purchases (Lai, 2014; Chaniago and Efawati, 2022). Currently, customer experience is the main focus in capturing consumer attention, and service quality has a major impact on purchasing decisions and forming intentions to be loyal to a particular brand or product (Han & Baek, 2014; Efawati et al., (2024).

SMEs are defined as productive business units managed by individuals, families, or community groups and meet the criteria as micro, small, and medium. The existence of SMEs is intended as one of the foundations of the people's economy that can be the main driver of the national economy and economic resilience (Subroto & Ruscitasari, 2020). Along with the development of technology in the current era of globalization, SMEs are required to make changes to increase their competitiveness (Ningtyas et al., 2015; Efawati et al., 2021). Changing consumer behavior patterns require companies to be willing to follow the times. This is done to keep consumers from switching to competitors who provide convenience in their services. Several companies follow the development of the business world by also implementing e-commerce to improve performance through increased sales and reduced promotional costs (Nurlinda & Fathimah, 2019).

It is undeniable that slowly everything has shifted to digital. Interaction between humans and technology has become something that can be done. Fulfillment of needs ranging from buying and selling, services, to payment transactions are now available digitally (Rosita, 2020; Chaniago, 2022). The advancement of information technology, especially the increase in internet access in Indonesia, has had a very significant impact on the use of social media among the public. The significant increase from 62.10 percent in 2021 to 66.48 percent in 2022 in internet usage reflects a real shift towards an information society that is increasingly open to technological innovation (Central Bureau of Statistics, 2022). The phenomenon of the rapid development of internet usage indicates that the potential for e-commerce use in Indonesia is quite large. Ahmadi et al., (2020) stated that e-commerce is related to business transactions carried out by utilizing the internet network, both for business actors and consumers in transacting in an easier and faster way (Chaniago, 2023).

Students in Bandung Raya, Indonesia, as one of the active user groups in utilizing technology and online applications, are an interesting group to study. The development of technology and the increasingly popular trend of online shopping show that students have great potential in shaping online shopping patterns among them. Understanding the extent to which e-commerce usage influences purchasing decisions and product sales performance, this information can be the basis for a more targeted marketing strategy. It is hoped that this study will not only provide insight into the influence of e-commerce in the context of online shopping, but also help support the development of better e-commerce among students in Greater Bandung.

## LITERATURE REVIEW

### E-Commerce

E-Commerce is an online shopping activity, both buying and selling goods and services that provide benefits in the form of ease of transactions. According to Zamzami et al., (2020, p. 230) Electronic commerce (e-commerce) is the activity of buying and selling goods and services, transferring money, and other exchange activities via the internet.

Ahmadi et al., (2020) stated that e-commerce is related to business transactions carried out by utilizing the internet network, not only for business actors (traders, distributors, producers), but also for consumers (end users) in transacting in an easier and faster way. Meanwhile, the definition of e-commerce according to Laudon in Helmalia & Afrinawati (2018) is as follows: E-commerce is a process of buying and selling products electronically by consumers and from company to company with computers as intermediaries for business transactions.

E-Commerce is also called a change or a revolution in business practices. E-Commerce has advantages over manual transactions in traditional markets. Buyers can easily compare prices from several online sellers without having to come to a physical store. They also don't need to meet in person or see the product physically, because everything can be done flexibly according to location and time. Through e-commerce, traders can make online buying and selling transactions without the need for a physical store (Puspitasari, 2023). From the statements, it can be concluded that in the current era of globalization, e-commerce provides benefits for both business actors and consumers because with e-commerce the sales and purchasing process can be carried out in an easier and faster way.

### **Purchase Decision**

Purchase decision making is an integral aspect of consumer behavior that leads consumers to purchase products and services. When making a purchase decision, consumers are influenced and motivated by various factors that play a key role (Efawati, 2016). Therefore, the results of the purchase decision can provide valuable clues for product development and expansion. This information comes from the determinants that influence the purchase decisions taken by consumers (Oscar & Megantara, 2020).

The purchasing decision-making process involves three closely related stages: the input stage, the process stage, and the output stage. In the input stage, consumers identify their needs and obtain information from marketing sources and external social influences. The process stage involves a series of variables, starting from need recognition, pre-purchase information search, to evaluation of product alternatives. The output stage involves concrete purchasing behavior and post-purchase evaluation, where satisfaction or dissatisfaction can influence future purchasing decisions. Overall, this process reflects the complexity of factors that influence consumers throughout their purchasing decision journey (Putri, 2022).

Based on the definitions mentioned, a purchasing decision is an assessment process to choose the most preferred product or service to meet their needs or desires, based on the knowledge they have (Djakaria, 2023).

### **UMKM**

According to Purba (2019) in his research, SMEs are independent, small-scale people's economic activities that are managed by community groups, families, or individuals. In Sujarweni's book (2020) the definition of SMEs is attached, namely as follows: According to Law Number 20 of 2008 concerning Micro, Small and Medium Enterprises, SMEs are defined as follows:

1. Micro-enterprises are productive businesses owned by individuals and/or individual business entities that meet the criteria for Micro-Employment as regulated in this Law.
2. Small Business is a stand-alone productive economic enterprise, carried out by an individual or business entity that is not a subsidiary or branch of a company owned,

controlled, or is part of either directly or indirectly a Medium Business or Large Business that meets the criteria of a Small Business as referred to in this Law.

3. Medium Enterprises are independent productive economic enterprises, carried out by individuals or business entities that are not subsidiaries or branches of companies owned, controlled, or are part of either directly or indirectly with Small Enterprises or Large Enterprises with the amount of net assets or annual sales results as regulated in this Law.

Micro, Small and Medium Enterprises are easily affected by all existing changes. Therefore, business actors need to have a mature strategy in balancing these changes (Fira & Janan, 2022; (Efawati & Chaniago, 2017).

### Framework

This study examines the influence of e-commerce on Purchasing Decisions. This study has an independent variable, namely e-commerce as a variable (X), this independent variable affects the subject of the study, namely purchasing decisions, so that variable Y is formed. The dependent variable in this study is purchasing decisions.



Based on the assumptions in the framework of thought above, the research hypothesis is as follows:

H1: There is an influence of e-commerce on student purchasing decisions in Greater Bandung.

### RESEARCH METHOD

This study uses a quantitative descriptive method, a research approach that aims to describe real phenomena against a concept in a particular situation or condition. To achieve a comprehensive understanding, this study involved a sample of 108 respondents from the student community in Bandung Raya, Indonesia who have implemented e-commerce. Data collection was carried out through the use of questionnaires with Google form media. The statistical analysis method is in the form of descriptive analysis and regression.

In testing the validity of the instrument in the questionnaire, each item is tested by correlating its score with the total score, which is the sum of the scores of each item (Chaniago & Gursida, 2017). The validity test was carried out by testing 30 respondents and correlating the answers to each item with the total answers of the respondents. If the correlation result is  $>0.3$ , then the item is considered valid (Chaniago et al., 2023). The results of the validity test show that all instruments for variables X and Y have correlation values ranging from 0.5 to 0.8. Thus, it can be concluded that all instruments for variables X and Y can be considered valid.

## Validity And Reliability Test Results

The reliability test of the measuring instrument aims to ensure that the data obtained from the field has a good level of suitability and the measuring instrument can measure accurately and consistently what is desired. As a standard, the results of the reliability test that obtain a value of  $\alpha \geq 0.7$  are considered adequate for use in various research purposes (Chaniago et al., 2023). From the results of the reliability test, it was found that the Cronbach's Alpha value for variable X in the questionnaire was 0.966. This value indicates that the measuring instrument has a good level of reliability, with a value greater than 0.7, so it can be concluded that the measuring instrument is reliable.

## RESEARCH RESULT

Based on the distributed questionnaires, the following are the results of the demographic analysis of 108 respondents presented in table form:

Table 1: Respondent Demographics

Description	Demographics	Frequency	Percentage
Gender	Male	43	39,81%
	Female	65	60,18%
Age	19 Years	4	3,70%
	20 Years	38	35,18%
	21 Years	52	48,14%
	22 Years	14	12,96%
College of Origin	Politeknik Negeri Bandung	65	60,18%
	Universitas Jenderal Achmad Yani	6	5,50%
	Universitas Terbuka	4	3,70%
	Telkom University	4	3,70%
	Universitas Islam Bandung	4	3,70%
	IKIP Siliwangi	3	2,70%
	Universitas Padjadjaran	3	2,70%
	Universitas Pendidikan Indonesia	2	1,85%
	Politeknik Kesehatan Kemenkes Bandung	2	1,85%
	Universitas Pasundan	2	1,85%
	STKIP Pasundan Cimahi	2	1,85%
	Universitas Teknologi Digital	2	1,85%
	Universitas Kristen Maranatha	2	1,85%
	Politeknik STIA LAN Bandung	1	0,92%
	Universitas Nurtanio Bandung	1	0,92%
	Universitas Widyatama	1	0,92%
	STIKES Budi Luhur	1	0,92%
	Digitech University	1	0,92%
	STAI Siliwangi Bandung	1	0,92%
	UIN Sunan Gunung Djati Bandung	1	0,92%
Education Level	D3	17	15,74%
	D4	50	46,29%
	S1	41	37,96%
Field of Major	Engineering	22	20,37%
	Non-Engineering	86	79,62%

Source: Research Results 2023

## Descriptive Test Results

Descriptive measurement of this variable needs to be done to see the general data description such as the average value (Mean), highest (Max), lowest (Min), and standard

deviation of each variable, namely E-Commerce (X), Purchase decision (Y). Regarding the results of the Descriptive Statistical Test of the study can be seen in the following table:

Table 2: Descriptive Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
<i>E-Commerce</i>	108	1	5	4,0032	2
Keputusan Pembelian	108	1	5	3,8144	2
Valid N (listwise)	108				

Based on the Descriptive Test Results above, we can describe the distribution of data obtained by the researcher as follows:

1. E-commerce variable (X), from the data it can be described that the minimum value is 1 while the maximum value is 5 and the overall average value is 4.0032. The size of the distribution of e-commerce data is 2.
2. Purchase Decision Variable (Y), from the data it can be described that the minimum value is 1 while the maximum value is 5 and the overall average value is 3.8144. The size of the distribution of e-commerce data is 2.

Table 3: Results of the Effect of Regression Test

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1012,378	1	1012,378	126,522	.000 <sup>b</sup>
	Residual	848,168	107	8,002		
	Total	1860,546	108			

a. Dependent Variable: Buying decision

b. Predictors: (Constant), E-Commerce

From the output results, it can be seen that the calculated F value is 126.522 with a significance level of  $0.000 < 0.05$ . This shows that the regression model can be used to predict participation variables, or in other words, there is an influence of the E-Commerce variable (X) on Purchasing Decisions (Y).

Table 4: Regression Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.738 <sup>a</sup>	.544	.540	2,829

a. Predictors: (Constant), *E-Commerce*

The table above explains the magnitude of the correlation/relationship value (R), which is 0.738. From the output, a determination coefficient (R Square) of 0.544 is obtained, which means that the influence of the independent variable (e-commerce) on the dependent variable (Purchase Decision) is 54.4%.

Table 5: Simple Linear Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5,991	1,805		3,319	.001
	E-Commerce	,282	,025	,738	11,248	.000

a. Dependent Variable: Buying decision

The positive constant value of 5.991 indicates a positive influence of the independent variable (E-Commerce). If the independent variable increases or has an effect in one unit, then the dependent variable (Purchase Decision) will increase or be fulfilled.

$$Y=A + Bx \text{ or } 5,991 + 0,738X$$

The regression coefficient X of 0.282 states that if e-commerce increases by one unit, the Purchasing Decision will increase by 0.738 or 73.8%.

## DISCUSSION

This study aims to explore the influence of e-commerce on purchasing decisions among students in Bandung Raya, Indonesia. The results of the analysis show that e-commerce has a positive and significant influence of 73.8% on purchasing decisions. The findings of this study provide an in-depth understanding of how the use of e-commerce can influence purchasing decisions. The significance level of 73.8%, e-commerce is recognized as an influential factor in purchasing decisions.

The phenomenon of the rapid development of internet usage indicates that the potential for e-commerce usage in Indonesia is quite large. The rapid growth of technology and information makes e-commerce an effective marketing strategy to reach the target market, especially among students who tend to be active in using innovative features. The implication is that companies and marketers can utilize e-commerce as an effective tool to increase consumer interaction and engagement, as well as support efforts to increase product sales.

Previous research on e-commerce has identified that consumer trust, service quality, and transaction security are key factors in e-commerce success. In addition, there are findings on the positive impact of technology integration such as artificial intelligence and data analytics on user experience and e-commerce operational efficiency. Integrating these findings can provide in-depth context on the critical factors influencing e-commerce development.

Demographic data shows interesting variations in e-commerce usage. The majority of students in Bandung Raya, Indonesia who use e-commerce are female at 60.18%, reflecting the increasing trend of female interest in online shopping. In addition, the age distribution shows that the majority of students in Bandung Raya, Indonesia who use e-commerce are in the 20-21 year age range at 83.32%, indicating that e-commerce is more popular among students and young individuals.

In the context of education, demographic data shows that e-commerce involves users from various levels, namely D3, D4, and S1 with engineering and non-engineering majors providing a more complete picture of demographic diversity. This data can be used to examine online shopping preferences and habits that may be related to educational background and major, and provide additional insights to optimize the e-commerce user experience.

The theory of the phenomenon of internet usage development according to Ahmadi et al., (2020) has explored how the demographic characteristics of e-commerce users and the development of e-commerce. Meanwhile, the theory of Zamzami et al., (2020) can provide a conceptual framework that supports the discussion of e-commerce. The Purchasing Decision Theory according to Oscar & Megantara (2020) can be integrated to further understand purchasing patterns among certain demographic groups in the context of e-commerce. It describes factors that may influence the purchasing decisions of different e-commerce users. In addition, the MSME perspective from Purba (2019) can

be included to broaden insights into the impact of e-commerce on the smaller business sector. This can provide insight into how e-commerce affects SMEs and how user demographics can affect the growth of this sector in using e-commerce.

## CONCLUSION

This study shows that e-commerce has a significant role in purchasing decisions among students in Bandung Raya, Indonesia. The findings of the study show that the latest features of this e-commerce platform have a positive influence of 73.8%, indicating that the use of e-commerce is correlated with purchasing decisions, users can socialize and interact more personally, making a positive contribution to purchasing decision making. The high level of significance indicates that e-commerce is not just an additional feature, but an effective marketing strategy in reaching the target market, especially students, increasing consumer interaction and involvement, and supporting efforts to increase product sales.

In addition, e-commerce is not only a promotional tool, but also a means to create a more dynamic and interactive shopping experience for students. A deeper understanding of these dynamics can provide valuable guidance for companies and marketers in designing more effective marketing strategies that are in line with consumer preferences among students.

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