

# The Influence of Digital Logistics and Digital Marketing on Purchasing Decision (Case Study of Skin1004 Brand in Indonesia Market)

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**Abstract.** Companies need to keep up with technology to stay ahead of market competition and know what influences purchasing decisions to increase revenue. This study aims to research the influence of Digital Logistics and Digital Marketing concepts with dimensions of interactive, intensive program, site design, and cost on purchasing decisions. The object of this study is consumers of Skin1004 products who make transactions through Shopee skin1004officialstore using a descriptive quantitative approach. The sample used in this study was 141 respondents taken with the non-probability sampling technique, purposive sampling. Data analysis using Structural Equation Model (SEM) with Partial Least Square (PLS) analysis through SmartPLS 4.0 application. The results showed a significant and positive influence of Digital Logistics, Site Design, and Intensive Program on Purchasing Decision. While the Cost and Interactive variables have no influence on the purchase decision of Skin1004 products.

**Keywords:** Digital Logistics, Digital Marketing, Purchase Decision, PLS-SEM.

## 1 Introduction

In modernity era, companies need to keep up with emerging technologies in order to excel in market competition. One of them is by transforming towards digitalization. The advantage of using digitization technology for a company is the faster exchange of information and processes in business. The speed of service and service offered is part of the reason a consumer shops at a certain place [1]. This will lead to customer satisfaction and one of the reasons for purchasing decisions.

Digital Logistics is a series of Logistics activities that include the process of planning, implementing, and controlling the efficient and effective flow of goods or services and related information from the point of origin to the point of use to meet customer needs which are transformed into digital format [2]. There are several technologies needed by manufacturing companies or warehouse teams such as Artificial Intelligence (AI), Internet of Things (IoT), and

Wearable Technology (WT). These technologies can reduce the possibility of human error and speed up access to information between buyers and sellers.

Marketing activities that use the internet and technology to expand and improve traditional marketing functions are the definition of Digital Marketing [3]. Companies use digital media to increase brand awareness and make audiences aware of the presence of products or services from the brand. In this study, the author will research the factors between Digital Logistics and/or Digital Marketing that positively influence purchasing decisions, in order to increase the revenue of Skin1004 brand company in the Indonesian market. Skin1004 brand has opened markets in several countries in Asia, such as Singapore, Malaysia, Thailand, Japan, Philippines, and Vietnam. In Indonesia, Skin1004 has implemented several strategies from digitizing Logistics and marketing. Digital Logistics that have been used by Skin1004 at this time such as the latest product stock updates through the website of the warehouse and direct delivery status notifications provided by the marketplace.

However, there are often problems in shipping such as the product received by the customer is not according to the order, the goods are received in damaged condition, or the order received by the customer does not match the estimated delivery date. While the marketing digitization system used by Skin1004 at this time is by selling online in e-commerce such as Shopee, Tokopedia, and Lazada; Actively engaging with customers through social media such as Instagram, Facebook, and Twitter; Digital Advertising; and hiring Key Opinion Leader (KOL) for Skin1004 product endorsements. Brands spend a lot on digital marketing activities such as using the services of digital marketing company, endorsing influencers who have millions of followers, creating campaigns with offline events, and paying for advertising on social media. It is possible that the impact received on brand revenue from these activities is only felt in a short period.

Relevant data is needed to determine which strategic decisions need to be improved so that the costs incurred can be used effectively and efficiently and increase brand revenue in the Indonesian market. Therefore, the author states the title of the study as 'The Influence of Digital Logistics and Digital Marketing on Purchasing Decisions in the Indonesian Market (Case Study of Skin1004 Brand in Indonesia Market)'

## **2 Research Methods**

The type of study for this research is a quantitative approach because this study's purpose is to test hypotheses related to a phenomenon by knowing the relationship between Digital Logistics and Digital Marketing that influences purchasing decisions for Skin1004 products in Indonesia. Using questionnaires as the primary data collection method. The questionnaire in this study will use a closed-question model and a Likert scale. The questionnaire is distributed using Google Form as the media and distributed to buyers who will be sampled through Instagram direct message.

Samples were taken from the Indonesian population using a non-probability sampling technique, purposive sampling. Because the subject is based on the characteristics which Shopee e-commerce users, have purchased Skin1004 products through Shopee at least twice transactions, and the product purchase period is less than 1 year. In determining the number of

samples, researchers used the Slovin formula [4] which obtained 141 respondents taken from the buyer population at Shopee skin1004officialstore in the year 2022.

The analysis will be carried out with PLS-SEM (Partial Least Square – Structural Equation Modeling) method using SmartPLS 4.0 application. The difference in covariance base SEM generally uses causality or theory to test, while PLS base SEM is a predictive model. The stages in SEM-PLS are testing measurement models (outer model) and structural models (inner model).

### 3 Results and Discussion

#### 3.1 Descriptive Statistical Analysis

The outer model test took a sample with a total of 141 respondents used in this research. Each respondent who has filled out the questionnaire is identified by gender and age; this aims to find out the general characteristics of the respondents.

##### Respondent's Gender

From the distribution of the questionnaire carried out, the following are the results of the total respondents based on gender:

**Table 1.** Respondent's Gender.

Category	Frequency	Percentage
Male	12	9%
Female	129	91%
Total	141	100%

Based on Table 1, from a total of 141 respondents, it is known that female is more dominant with a percentage of 91% compared to male with a percentage of 9%. It can be concluded that the use of Skin1004 skincare products is more predominantly owned by women and does not rule out men as target consumers in terms of caring for skin.

##### Respondent's Age Range

Here are the results of the number of respondents by age:

**Table 2.** Respondent's Age Distribution.

Category (Years old)	Frequency	Percentage
17-25	97	69%
26-35	40	28%
36-45	3	2%
> 45	1	1%
Total	141	100%

It can be seen from table 2 that the age of 17-25 years is more dominant with a percentage of 69%, compared to the age of 26-35 years with a percentage of 28%, the age of 36-45

years with a percentage of 2% and the least at the age of over 45 years with a percentage of 1%.

### 3.2 Outer Model Evaluation Convergent Validity Test

A convergent validity test is performed to see the correlation between its construct indicators. The number of loading factor  $> 0,5$  is considered significant [5]. SmartPLS 4.0 output for outerloading in this study can be seen in the Table 3 as follows:

**Table 3.** Loading Factors.

Variable	Indicator	Outer Loadings	Status
(Digital Logistics)	LD1	0,763	Valid
	LD2	0,779	Valid
	LD3	0,712	Valid
	LD4	0,514	Valid
	LD5	0,756	Valid
	LD6	0,723	Valid
(Interactive)	IF1	0,904	Valid
	IF2	0,900	Valid
(Intensive Program)	PI1	0,873	Valid
	PI2	0,825	Valid
(Site Design)	DS1	0,892	Valid
	DS[2	0,902	Valid
(Cost)	BY1	0,946	Valid
	BY2	0,936	Valid
(Purchase Decision)	KP1	0,790	Valid
	KP2	0,779	Valid
	KP3	0,658	Valid
	KP4	0,724	Valid
	KP5	0,729	Valid
	KP6	0,672	Valid
	KP7	0,769	Valid
	KP8	0,754	Valid
	KP9	0,813	Valid
	KP10	0,810	Valid

The entire item is valid because all constructs of Digital Logistics, Digital Marketing and Purchasing Decisions have a loading factor value above 0,5 and no indicators need to be removed.

### Discriminant Validity Test

The discriminant validity test can be seen by the Cross Loading method and the square root value of average variance extracted (AVE). Cross Loading values show the correlation of indicators with their construct variables that are higher than other constructs will be concluded as valid. Table 4 shows the AVE value of each latent variable and is said to be valid when the AVE value is greater than 0,50, This shows that latent variables have relationships that correspond to their respective indicators. Another method used is the square root of AVE [5]. Value discriminant validity will be said to be sufficient if a

construct has a square root value of AVE greater than the value of Latent Variable Correlation as shown in Table 5.

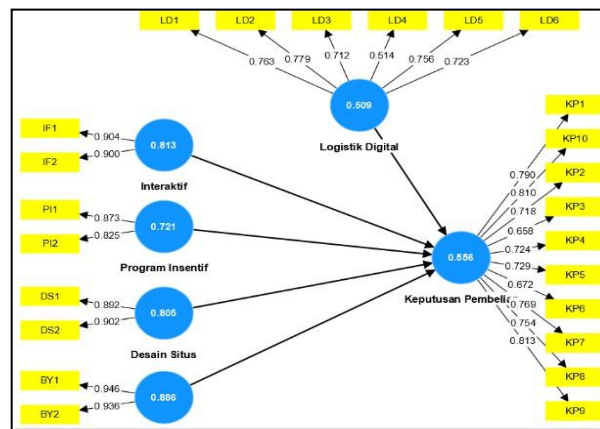
**Table 4.** AVE.

Variable	AVE	Status
Cost	0,886	Valid
Site Design	0,805	Valid
Interactive	0,813	Valid
Purchase Decision	0,556	Valid
Digital Logistics	0,509	Valid
Intensive Program	0,721	Valid

**Table 5.** Square Root of AVE.

Variable	BY	DS	DS	KP	LD	PI
Cost	<b>0,941</b>					
Site Design	0,646	<b>0,897</b>				
Interactive	0,609	0,679	<b>0,902</b>			
Purchase Decision	0,633	0,693	0,622	<b>0,746</b>		
Digital Logistics	0,644	0,596	0,717	0,662	<b>0,713</b>	
Intensive Program	0,600	0,694	0,690	0,666	0,631	<b>0,849</b>

it can be concluded that the construct is good, as well as other AVE root values. The conclusion of all validity tests conducted is valid with the provisions of the Loading Factor



**Fig 1.** Outer Model.

> 0,50 and AVE > 0,50. Figure 1 shows a structural model tested using PLS Algorithm.

### Reliability Test

Data obtained from questionnaires as a measuring tool for a variable must be tested for reliability. The method used to measure reliability are Composite Reliability and Cronbach's Alpha values as shown in Table 6 below.

**Table 6.** Cronbach's Alpha and Composite Reliability.

Variable	Composite Reliability	Cronbach's alpha	Reliable > 0,6 (Heir,2010)
Cost	0,871	0,875	Reliable
Site Design	0,758	0,759	Reliable
Interactive	0,771	0,771	Reliable
Purchase Decision	0,911	0,917	Reliable
Digital Logistics	0,802	0,810	Reliable
Intensive Program	0,615	0,624	Reliable

The indicator of a variable can be said to have a good reliability when the values of Cronbach's Alpha and Composite Reliability are above 0,7 but the value of 0,6 is still acceptable [6]. So, it can be concluded that the indicators mentioned are able to measure variables consistently and has good reliability according to the criteria set by experts.

### 3.3 Inner Model Evaluation

After testing the measurement model, the next stage is to evaluate the structural model with the R-Square method. The interpretation of the R-Square value will be said to be good/strong when the value is more than 0,67; medium/moderate at a value of more than 0,33; and weak at a value of more than 0,19 [7]. The test output of structural models on SmartPLS can be seen in table 7 as follow.

**Table 7.** R-Square.

	R-square	R-square adjusted
Purchase Decision	0,610	0,596

The R-Square value in the Purchase Decision variable is 0,610 which can be categorized as medium or moderate. The conclusion that can be drawn is that the variables of Digital Logistics and Digital Marketing are able to explain or predict 61.0% of Purchasing Decisions while the remaining 39.0% are influenced by other variables outside this study.

### 3.4 Hypothesis Test

The results of the hypothesis test from SmartPLS conducted can be seen in the Table 8 below.

**Table 8.** Total Effects.

<b>Variable</b>	<b>Original sample (O)</b>	<b>T statistics ((O/STDEV))</b>	<b>P values</b>
Cost -> Purchase Decision	0,150	1,668	0,095
Site Design -> Purchase Decision	0,301	3,346	0,001
Interactive -> Purchase Decision	0,001	0,009	0,992
Digital Logistics -> Purchase Decision	0,257	2,477	0,013
Intensive Program -> Purchase Decision	0,203	2,333	0,020

Based on Table 8 above, the variable will have a significant effect if the T-Statistics value  $> 1,96$  and the P-Values  $< 0,05$  [5]. From these tests, the following conclusions can be drawn asbelow:

**H1: Digital Logistics has a positive and significant impact on purchasing decisions**

Digital Logistics variables have a positive and significant effect on Purchasing Decisions with a T-Statistics value of 2,477 above the T-Table value of 1,96 and a P-Values of 0,013 below 0,05. The relationship is said to be positive when the Original Sample (O) value is positive which is 0,257. So that the results show a positive and significant influence on both variables or **H1 is accepted.**

This is in line with previous research by [8] where E-Logistics variables have an influence on customer decisions. Meanwhile, when compared to [10] research, today's Digital Logistics variables have different values offered by companies, so digital Logistics factors can influence purchasing decisions.

The possibility of more value offered by Skin1004 is in the warehouse system that can see the actual and up-to-date number of product stock through the website so that it can monitor product stock that will run out, avoid the number of products that do not match the number of products sold at Shopee, and automation of packaging process.

**H2: Interactive has a positive and significant impact on purchasing decisions**

Interactive Variables do not have a positive and significant effect on Purchasing Decisions with T-Statistics values of 0,009 below the T-Table value of 1,96 and P-Values of 0,992 above 0,05. So the results do not show any positive and significant influence on the two variables or H2 is rejected.

This is not in line with previous research from [9] where Interactive variables affect purchasing decisions, even though the form of Interactive efforts carried out by Algren Indonesia is almost the same as that carried out by Skin1004. Brands can respond to questions and complaints quickly and responsively on the Shopee and Instagram platforms Skin1004. This can be seen from the percentage of chats replied to on Shopee skin1004officialstore which is always above 90%. However, this study shows that Interactive variables do not affect the purchase decisions of Skin1004 customers. This result occurs because the data from respondents that have been collected do not succeed in supporting the hypothesis and the possibility of the sample drawn is small so it cannot test the hypothesis properly.

Skin1004 brand has quite a variety of products such as skin care groups needed for certain skin types, so there needs to be a clear explanation and direction from the Skin1004 admin so that customers can determine the right product according to their skin needs. Good interaction between admins and customers is necessary for customer concerns to be addressed accordingly.

### **H3: Intensive Programs have a positive and significant impact on purchasing decisions**

The Intensive Program variable has a positive and significant effect on Purchasing Decisions with a T-Statistics value of 2,333 above the T-Table value of 1,96 and a P-Values of 0,020 below 0,05. The relationship is said to be positive when the Original Sample (O) value is positive which is 0,203. So, the results show a positive and significant influence on both variables or **H3 is accepted**.

This is in line with previous research from [9] where the Intensive Program variable affects Purchasing Decisions with a probability value of 0,01. By looking at the t-statistic value of 2.333 which means that if the Intensive Program increases by one percent, the purchase decision of Skin1004 products also increases by 2.3%.

Various types of Intensive Programs are provided by Skin1004 such as Mega Sale promos on unique dates, giveaways, free additional products, and so on. Skin1004 also often creates programs by giving free products to skincare reviewers who have thousands of followers with the aim of the product being reviewed on social media and attracting enthusiasts from the reviewer's followers to buy Skin1004 products.

### **H4: Site Design has a positive and significant impact on purchasing decisions**

Site Design variables have a positive and significant effect on Purchase Decisions with T-Statistics values of 3.301 above T-Table values of 1.96 and P-Values of 0,001 below 0,05. The relationship is said to be positive when the Original Sample (O) value is positive 0,301. So that the results show a positive and significant influence on both variables or H4 is accepted.

This is in line with previous research from [9] where the Site Design variable affects Purchasing Decisions with a probability value of 0,01. By looking at the t-statistic value of 3.346 which means that if Site Design increases by one percent, the purchase decision of Skin1004 products also increases by 3.3%.

Skin1004 has very interesting social media content with a combination of colors, writing, and selected talents that can increase the audience's desire to have skin goals by buying Skin1004 products. In addition, the product display on Shopee skin1004officialstore has been arranged according to categories that can make it easier for customers to find the desired product.

### **H5: Cost has a positive and significant impact on purchasing decisions**

Cost variables do not have a positive and significant effect on Purchasing Decisions with a T- Statistics value of 1,668 below the T-Table value of 1,96 and a P-Value value of 0,095 above 0,05. The relationship is said to be positive when the Original Sample (O) value is positive which is 0,150. So the results show no positive and significant influence on both variables or **H5 is rejected**.

This is not in line with previous research from [9] where the Cost variable affects



purchasing decisions. So, it can be concluded that the cost has no influence on the decision to purchase Skin1004 products at Shopee. Just like the results of hypothesis 2, the data from respondents that have been collected do not succeed in supporting the hypothesis and the possibility of the sample drawn is small so it can not test the hypothesis properly.

With the ease of payment, it will increase the possibility of customers making transactions. For example, the cash-on-delivery (COD) payment system will make it easier for customers who do not have e-banking in online transactions because there is no need to leave the house to pay for orders. Therefore, brands need to expand payment methods that make it easier for customers to transact.

**Tabel 9.** Hypothesis Test Conclusion.

	<b>Hypothesis</b>	<b>P-Value</b>	<b>Result</b>
H1	Digital Logistics has a positive and significant impact on Purchase Decision	0,013	<b>Accepted</b>
H2	Interactive has a positive and significant impact on Purchase Decision	0,992	<b>Rejected</b>
H3	Intensive Program has a positive and significant impact on Purchase Decision	0,020	<b>Accepted</b>
H4	Site Design has a positive and significant impact on Purchase Decision	0,001	<b>Accepted</b>
H5	Cost has a positive and significant impact on purchasing decisions	0,095	<b>Rejected</b>

## 4 Conclusion and Recommendation

Based on the results of data analysis and discussion of research on the influence of Digital Logistics and Digital Marketing on the Purchasing Decision of Skin1004 products in the Indonesian market, the following conclusions can be drawn:

1. Digital Logistics variables have a significant and positive influence on the Purchasing Decision of Skin1004 products.
2. The concept of Digital Marketing explained by the variables Site Design and Intensive Program has a significant and positive influence on the Purchase Decision of Skin1004 products. While the variables Cost and Interactive do not have a significant and positive influence on purchasing decisions.

Advice for brand Skin1004, with the influence of Digital Logistics on customer Purchasing Decisions, so that brand can improve again in this aspect. Such as with automatic packaging of goods by a system to avoid product delivery errors. Then the company can maintain the Site Design and Intensive Program that has been done or even improve the two Digital Marketing such as by making intensive program innovations that are different from other brands.

This research uses respondents of buyers of Skin1004 products from Shopee e-commerce in 2022. Suggestions for future researchers to expand the sample area and e-commerce platforms used. As well as being able to expand the concept of Digital Logistics variables in the future.

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