

## THE IMPACT OF BRAND IMAGE AND SELF-CONCEPT ON MOBILE PHONE PURCHASE DECISION

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### Abstract

This research is motivated by the rapid development of technology, which has led to the emergence of various new products, particularly in the mobile phone category, intensifying market competition. Mobile phones have become essential items in daily life, making it increasingly difficult for mobile phone brands to stand out. As a result, companies strive to attract consumers by leveraging product features. The aim of this study is to determine the effect of brand image and self-concept on purchasing decisions. Data was collected using a questionnaire with purposive sampling technique on 89 respondents who use mobile phones. The population consists of male and female students at Universitas 45 Surabaya. The independent variables in this study are brand image, self-concept, and purchase decision. Hypothesis testing using multiple regression analysis shows that both independent variables significantly influence the dependent variable (purchase decision). The R-value of 0.718 indicates a strong relationship, close to 1, and the coefficient of determination ( $R^2$ ) is 0.515.

## INTRODUCTION

### Background

In this era of globalization, economic and technological growth has advanced significantly. This is evident in the increasing number of producers involved in fulfilling consumer needs and desires, making it essential for every company to prioritize customer orientation as the main goal.

Starting with the invention of the telephone by Alexander Graham Bell in 1876, combined with the wireless communication technology discovered by Nikolai Tesla in 1880 and introduced by Guglielmo Marconi, these innovations marked the beginning of digital wireless and cellular technology developments. Since the 1940s, the mobile phone technology era has been a catalyst for the ongoing development of communication technology up to the present day. With the rapid growth of wireless technology, including AMPS (Advanced Mobile Phone System), GSM (Global System for Mobile Communications), and CDMA (Code Division Multiple Access), the number of mobile phone owners has increased dramatically. Mobile phones have evolved from simple communication tools to sophisticated devices with additional features such as digital cameras, music players, high-resolution color LCD screens, making them intelligent gadgets that reflect the remarkable growth of cellular technology.

Self-concept refers to an individual's perception or feelings about themselves (Hawkins and Mothersbaugh, 2010; 62). It reflects a person's attitude toward themselves. On the other hand, a brand is a name, term, symbol, design, or a

combination of these elements intended to identify a product or service from one seller or group of sellers and differentiate it from competitors (Kotler, 2005; 82) in Marketing Management.

Based on the above description, I am interested in conducting research and presenting it in the form of a thesis titled "The Impact of Brand Image and Self-Concept on Mobile Phone Purchase Decisions by Students at Universitas 45 Surabaya".

## LITERATURE REVIEW

### Theoretical Foundation

#### Marketing

The concept of marketing is used for exchange or trade, which is an activity that can determine the success of achieving a company's predetermined goals. The goal of marketing activities is to increase sales that generate profits by satisfying consumer desires and needs. Companies aim to continuously meet consumer desires and needs for products or services with the goal of obtaining profit from these exchanges. Philip Kotler and Keller in their book "Marketing Management" (2008; 5) define marketing as a societal process through which individuals and groups obtain what they need and want by creating, offering, and freely exchanging products and services of value with others.

According to Kotler and Keller (2008; 5), marketing management is the art and science of selecting target markets and acquiring, retaining, and growing customers by creating, delivering, and communicating superior customer value. Marketing management is defined as the process of planning,

implementing, and evaluating concepts, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.

Here is another definition of marketing from Basu Swastha and Handoko (2008; 3):

Rangkuti (2009; 38) defines marketing as "the process of planning and executing the concept, pricing, promotion, and distribution of goods and services to create exchanges that satisfy individual and organizational goals."

### **Brand**

Historical evidence shows that brands in the form of identity marks have been used for thousands of years, as evidenced by writings and images on the walls of tombs in ancient Egypt, showing that livestock at that time were branded or marked as early as 2000 BC. The word "brand" in English comes from the Old Norse word "brandr," which means "to burn," referring to the identification of livestock (Tjiptono, 2005; 27). At that time, livestock owners used special "marks" to identify their animals and distinguish them from others. Through these marks, consumers could easily identify quality livestock from reputable breeders.

A brand is a name, term, symbol, design, or a combination of all these elements that identifies the producer or seller of a product or service (Kotler and Armstrong, 2008; 275). The meaning and role of brands in business are very important, according to Kotler (2005; 82), who defines a brand as a name, term, symbol, or design, or a combination of these, intended to

identify a product or service produced by a seller or group of sellers and distinguish it from competitors.

According to Kotler and Armstrong (2003; 359), a brand is a product that has been enhanced with other dimensions that differentiate it from similar products designed to meet the same needs. These differences can be emotional and intangible, relating to what is expected to be represented by the brand.

According to the Trademark Law No. 15 of 2001, Article 1, Paragraph 1, a brand is "a sign in the form of a picture, name, word, letter, number, color arrangement, or a combination of these elements, which has distinguishing power and is used in trade or services."

To establish a brand policy, a company needs a brand strategy. According to Kotler (2008; 280), there are five brand strategy options, including:

1. New brand
2. Line extension
3. Brand extension
4. Brand mix

### **Brand Image**

Brand image is the perception and belief held by consumers, as reflected in the associations that occur in consumer memory (Kotler and Keller, 2007; 346). Brand image has three components: corporate image, user image, and product image. Brand image represents the overall perception of the brand, formed by past information and experiences with the brand. Consumers who have a positive image of a brand are more likely to make a purchase (Setiadi, 2003; 180).

Purpose of Brand Image

Brand image in consumers' minds can be created for several benefits, including:

1. A good image can serve as a goal in marketing strategy.
2. An image can be used as a basis for competition.
3. Brand image can help renew a brand's sales.

### Brand Image Indicators

Brand image is the perception and belief stored in consumers' minds, reflected as associations in their memory (Kotler, 2007; 346). According to Shimp in Radji (2009; 2), brand image is measured by:

1. Attributes
2. Benefits
3. Overall evaluation

### Self-Concept

John C. Mowen in his book "Consumer Behavior" (2002; 271) defines self-concept as "the totality of thoughts and

feelings an individual has about themselves as an object."

A person's self-concept describes how they view themselves. It is closely related to their character or personality traits (Ujang Sumarwan, 2011; 62).

Other factors that influence consumer behavior include self-concept. Self-concept is how an individual sees themselves, while simultaneously having an image of others (Basu Swastha and Irawan, 2008; 112).

Self-concept is defined as the total thoughts and feelings an individual has about themselves as an object (Supranto J and Nandan Likmakrisna, 2007; 139).

Hawkins and Mothersbaugh (2010; 65) categorize self-concept into four parts: actual self-concept vs. ideal self-concept, and personal self-concept vs. ideal self-concept, as shown in the table below.

**Self-concept Classification Table**

Dimensions of self-concept	Actual Self Concept	Ideal Self Concept
<i>Private Self</i>	How I actually see myself	How should I see myself
<i>Sosial Self</i>	How other people see me	How should other people see me

These four dimensions can be explained as follows.

1. *Actual self-concept*
2. *Ideal self-concept*
3. *Private self-concept*
4. *Social self-concept*

According to Rosenberg (1979) in Erna Perrinadewi's book, self-concept has four dimensions:

1. *The actual self*, which refers to how a person perceives themselves.

2. *The ideal self*, which refers to how a person wishes to be.

3. *The social self*, which refers to how a person wants to be perceived by others.

4. *The situational self*, which refers to how a person wants to act in different situations.

### **Purchase Decision**

#### **Definition of Purchase Decision**

Kotler (2005:201) states that understanding buyers is based on the stimulus-response model. The characteristics and decision-making process of buyers will result in a specific purchase decision.

Mahmud Machfoedz (2010:44) explains that decision-making is a process of assessing and selecting from various alternatives according to specific interests by determining the most beneficial option. This evaluation process usually begins with identifying the main problem that affects the goal, structuring, analyzing, and selecting among the alternatives, and making the best possible decision. The final step of the process is an evaluation system to determine the effectiveness of the decision made.

According to Basu Swasta and T. Hani Handoko (2008:110), "A purchase decision is a process in an actual purchase, whether to buy or not."

6.

Setiadi (2003:16) states that complex decision-making often involves multiple decisions. A decision involves choosing between two or more alternative actions or behaviors. Every decision requires a choice among several different behaviors.

#### **Factors Influencing Purchase Decisions**

According to Kotler (2005:202), consumers do not make decisions in isolation from their surrounding environment. Most of these factors are beyond the marketer's control but must be taken into account. These factors include:

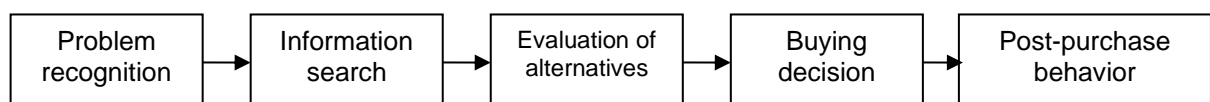
- a) Culture
- b) Reference Groups
- c) Family
- d) Roles and Status

#### **Purchase Decision-Making Process**

According to Kotler and Armstrong (2008:184), the purchase decision-making process consists of five stages:

1. Need Recognition
2. Information Search
3. Alternative Evaluation
4. Purchase Decision
5. Post-Purchase Behavior

#### **Diagram of the Purchase Decision-Making Process**



Source: Bilson Simamora, *Consumer Behavior Research Guide* (2008)

### **Roles in Purchase Decision-Making**

Theoretically, there are five roles a person plays in a purchase decision, including:

- a) Initiator : The person who first suggests or initiates the idea of purchasing a product.
- b) Influencer : The person who influences the decision-making process by providing opinions or recommendations.
- c) Decider : The person who has the authority to make the final purchase decision.
- d) Buyer: The person who actually makes the purchase transaction.
- e) Consumer: The person who ultimately uses or consumes the product.

Why is it important for companies to understand this? Because this information is crucial for product design, message development, and promotional budget allocation. For instance, if the husband is the primary decision-maker in purchasing a car, then advertisements or marketing approaches should be directed toward him. However, if the wife plays the role of the influencer, the car's design characteristics might be tailored to attract her attention. Therefore, understanding key participants and their roles in the purchasing decision process is essential.

### **Relationship Between Brand Image and Purchase Decision**

Wicaksono (2007:34) highlights the importance of brand image development in purchase decisions. A well-managed brand image will yield positive consequences, including:

1. Enhancing understanding of consumer behavior aspects in decision-making.
2. Enriching consumer orientation toward symbolic attributes beyond product functionality.
3. Increasing consumer trust in the product.
4. Strengthening sustainable competitive advantages, considering that technological innovations can be easily imitated by competitors.

Creating a lasting impression is one of the fundamental characteristics of modern marketing orientation, achieved by giving extra attention and establishing a strong brand. This results in the brand itself shaping the product's image in consumers' minds, ultimately serving as a key motivation for them when choosing a product.

### **Relationship Between Self-Concept and Purchase Decision**

Solomon (2009:120) states that consumer behavior is closely related to self-concept. The \*Self-Image Congruence Model\* suggests that consumers tend to use products whose attributes align with or support their self-concept. The decision-making process to purchase products that reflect one's self-concept is driven by cognitive reasoning. For example, a

consumer who perceives themselves as active and energetic is more likely to buy a vehicle that aligns with that perception.

Loudon and Della Bitta (1993:147) explain how the congruence between consumer behavior, self-concept, and product image is formed as follows:

1. Consumers develop their self-concept through psychological growth and social interactions. A well-defined self-concept gives them meaning, allowing them to define, protect, and enhance themselves.

### **Hypothesis**

Based on the analytical framework above, the hypotheses proposed in this study are:

1. Brand Image and Self-Concept partially influence the purchase decision of mobile phones among students at Universitas 45 Surabaya.
2. Brand Image and Self-Concept simultaneously influence the purchase decision of mobile phones among students at Universitas 45 Surabaya.
3. Self-Concept has a dominant influence on the purchase decision of mobile phones among students at Universitas 45 Surabaya.

Companies that have competence in the fields of marketing, manufacturing and innovation can make it as a source to achieve competitive advantage (Daengs GS, et al. 2020:1419). The research design is a plan to determine the resources and data that will be used to be processed in order to answer the

2. Consumers perceive products and brands as having symbolic meanings or images.

3. Using products with symbolic meanings helps consumers define and reinforce their self-concept both for themselves and others.

4. Consumer behavior is motivated by the desire to develop their self-concept through the consumption of symbolically meaningful products.

5. Consumers prefer products that are perceived as having an image consistent with their self-concept.

research question. (Asep Iwa Soemantri, 2020:5). Standard of the company demands regarding the results or output produced are intended to develop the company. (Istanti, Enny, 2021:560). Time management skills can facilitate the implementation of the work and plans outlined. (Rina Dewi, et al. 2020:14). Saat mengumpulkan sumber data, peneliti mengumpulkan sumber data berupa data mentah. Metode survei adalah metode pengumpulan data primer dengan menggunakan pertanyaan tertulis (Kumala Dewi, Indri et al, 2022 : 29).

### **RESEARCH METHODOLOGY**

#### **Population and Research Sample**

##### **Research Population**

According to Sugiyono (2009:72), "A population is a generalization area consisting of objects or subjects that have certain qualities and characteristics determined by the

researcher to be studied and then conclusions drawn." In this study, the research population refers to students at Universitas 45 Surabaya who are mobile phone users. Since the population in this study consists of all students at Universitas 45 Surabaya, which is very large, a sample was taken for the research.

### Research Sample

If the population size is large and it is impossible to conduct research on all members of the population, a sample can be taken from the population. Sugiyono (2009:81) states, "A sample is part of the total number and characteristics possessed by the population."

The sample size was determined using the Slovin formula (Husein Umar, 2004) as follows:

$$n = \frac{N}{1 + N(Moe)^2}$$

$$n = \frac{800}{1 + 800(0.1)^2}$$

Where:

n = Sample size

N = Population size

Moe = Margin of error, which is the maximum allowable error rate of 10%

### Research Variables and Operational Definitions

#### Research Variables

According to Sugiyono (2009:60), "A research variable is essentially anything that is determined by the researcher to

be studied in order to obtain information about it, and then conclusions are drawn." The variables used in this study are:

This research consists of two types of variables: independent variables and dependent variables. The variables used in this study are:

#### - Independent Variables (X):

Variables that influence the dependent variable, which include:

- Brand Image (X1)
- Self-Concept (X2)

- **Dependent Variable (Y) :** The variable whose size is determined by the independent variables. In this study, the dependent variable is *Purchase Decision*.

### Operational Definition of Variables/Indicators

An operational definition of a variable is an important element in research because it provides guidelines on how a variable can be measured or establishes measurement criteria for a variable.

The operational definition assigns meaning to a variable by specifying the actions or procedures necessary to measure it. The operational definition of these variables is then broken down into empirical indicators as follows:

#### Brand Image Variable (X1)

- Brand image is the perception and belief embedded in the consumer's



mind, reflecting associations retained in consumer memory (Kotler, 2007:346).

- According to Shimp in Radji (2009:2), brand image is measured by:

1. Attributes
2. Benefits
3. Overall evaluation

- Self-Concept Variable (X2)

Self-concept describes how individuals perceive themselves, which is closely related to their personality traits and characteristics (Ujang Sumarwan, 2011:62; Hawkins and Mothersbaugh, 2001).

- In this study, indicators used to measure self-concept include:

1. Actual self-concept
2. Ideal self-concept
3. Private self-concept
4. Social self-concept

### **Dependent Variable (Y): Purchase Decision**

The indicators used to assess the purchase decision process include:

1. Problem recognition
2. Information search
3. Alternative evaluation
4. Purchase decision

### **Types and Sources of Data**

#### **Types of Data**

This study uses *quantitative data*, which is obtained through questionnaires distributed to respondents.

#### **Sources of Data**

1. Primary Data
2. Secondary Data

#### **Data Collection Methods**

##### **Descriptive Analysis**

Descriptive analysis involves calculating the mean (average) and standard deviation. The mean is used to determine the average response from respondents regarding brand image, self-concept, and purchase decisions. The standard deviation is used to measure the variability of respondents' answers concerning each dimension and customer value in this study.

##### **Quantitative Analysis**

Quantitative analysis refers to an analysis that classifies data into numerical categories that can be calculated to produce solid quantitative interpretations (Sugiyono, 2009). The statistical calculations of scores or values are then analyzed using the SPSS (Statistical Package for Social Sciences) program to examine the relationship and influence between research variables.

The objective of this analysis is to test the validity of the hypotheses proposed in this study.

##### **Multiple Linear Regression Analysis**

This technique is used to determine the effect of two independent variables on a dependent variable. According to Moh. Nazir (2011:463), if the

parameters of a functional relationship between one dependent variable and more than one independent variable need to be estimated, multiple regression analysis is applied.

The general equation for multiple regression according to Sugiyono (2009) is:

$$Y = a + b_1 X_1 + b_2 X_2 + e$$

Where:

Y = Purchase Decision

a = Constant

b<sub>1</sub>, b<sub>2</sub> = Regression coefficients

X<sub>1</sub> = Brand Image

X<sub>2</sub> = Self-Concept

e = Error term

#### **The coefficient $\beta$ indicates:**

If  $\beta$  is positive (+), it signifies a direct relationship between the independent and dependent variables. An increase or decrease in the independent variable will be followed by an increase or decrease in the dependent variable.

If  $\beta$  is negative (-), it indicates an inverse relationship between the independent and dependent variables. An increase in the independent variable will be followed by a decrease in the dependent variable, and vice versa.

#### **Validity Test**

The validity test aims to measure whether a questionnaire is valid. A questionnaire is considered valid if its questions effectively measure what they intend to measure (Ghozali, 2005:82). Validity is tested by correlating item scores with the total

score of the construct or variable. The validity is determined by comparing the calculated r-value with the r-table for a degree of freedom (df) = n-2, where (n) is the sample size. If r calculated > r table and the value is positive, the question or indicator is deemed valid (Ghozali, 2005).

#### **Reliability Test**

A reliability test is used to measure the consistency of a questionnaire, which serves as an indicator of a variable or construct. A questionnaire is considered reliable if an individual's responses remain consistent over time (Ghozali, 2006).

Reliability in this study is measured using the *SPSS statistical tool*, specifically with the *Cronbach Alpha test*. A construct or variable is deemed reliable if its Cronbach Alpha value exceeds 0.60 (Nunnally, 1967 in Ghozali, 2006).

#### **Hypothesis Testing**

To determine whether there is an influence of independent variables on the dependent variable, hypothesis testing is conducted in this study. The hypothesis testing method used includes partial testing using the t-test, simultaneous testing using the F-test, and the determination coefficient test (R<sup>2</sup>).

#### **Individual Parameter Significance Test (t-Test)**

The t-test essentially indicates how far an individual independent variable influences variations in the dependent variable (Ghozali, 2005: 84). This test aims to examine the effect of independent variables (brand image, self-concept) on the dependent variable (purchase decision) separately or partially.

The hypotheses used in this test are:

1.  $H_0: \beta_0 = 0$ , the independent variables (brand image and self-concept) have no significant influence on the dependent variable (purchase decision).
2.  $H_1: \beta_1 \neq 0$ , the independent variables (brand image and self-concept) have a significant influence on the dependent variable (purchase decision).

Decision-making criteria (Ghozali, 2005: 85):

1. By comparing the calculated t-value with the t-table value:
  - If  $t_{\text{table}} > t_{\text{calculated}}$ , then  $H_0$  is accepted, and  $H_1$  is rejected.
  - If  $t_{\text{table}} < t_{\text{calculated}}$ , then  $H_0$  is rejected, and  $H_1$  is accepted.
  - With a significance level of 95% ( $\alpha = 5\%$ ).
2. Using the significance probability value:
  - If the significance probability value  $> 0.05$ , then  $H_0$  is accepted, and  $H_1$  is rejected.
  - If the significance probability value  $< 0.05$ , then  $H_0$  is rejected, and  $H_1$  is accepted.

### **Simultaneous Significance Test (F-Test)**

The F-test essentially shows whether all independent variables included in the model collectively influence the dependent variable (Ghozali, 2005: 84). In this study, simultaneous hypothesis testing aims to measure the influence of independent variables, namely brand image and self-concept of mobile phone users among students, on the purchase decision as the dependent variable. The F-test can be conducted using the Durbin-Watson (DW) test, where the test results are determined based on the Durbin-Watson (DW) value.

The hypotheses used in this study are:

- $H_0: \beta_1 = \beta_2 = \beta_3 = 0$ , the independent variables (brand image and self-concept) collectively have no significant influence on the dependent variable (purchase decision).
- $H_1: \beta_1, \beta_2, \beta_3 \neq 0$ , the independent variables (brand image and self-concept) collectively have a significant influence on the dependent variable (purchase decision).

Decision-making criteria (Ghozali, 2005: 84):

- If  $F_{\text{table}} > F_{\text{calculated}}$ , then  $H_0$  is accepted, and  $H_1$  is rejected.
- If  $F_{\text{table}} < F_{\text{calculated}}$ , then  $H_0$  is rejected, and  $H_1$  is accepted.

### **Coefficient of Determination ( $R^2$ )**

The coefficient of determination ( $R^2$ ) essentially measures how well the model explains variations in the dependent variable. The value of the determination coefficient ranges

between zero and one. A low R<sup>2</sup> value means that the independent variables have very limited ability to explain the variations in the dependent variable. A value close to one means that the independent variables provide almost all the information needed to predict variations in the dependent variable (Ghozali, 2006: 83). Multicollinearity occurs when the R<sup>2</sup> value obtained from an empirical regression model is very

high, but individually, many independent variables do not significantly affect the dependent variable (Ghozali, 2006: 83).

### Terminology / Definition of Terms

1. Brand Image (X1)
2. Self-Concept (X2)
3. Purchase Decision (Y)

## RESEARCH RESULTS AND DISCUSSION

### Analysis Results

#### Validity and Reliability Testing

##### Validity Testing

Validity indicates the extent to which a measuring instrument accurately and precisely performs its measurement function. Validity testing can be conducted by examining the correlation between each item score in the questionnaire and the total score being

measured using the corrected item-total correlation in SPSS. If the significance value (p-value) > 0.05, then there is no significant correlation. However, if the significance value (p-value) < 0.05, then there is a significant correlation. This study uses SPSS 17 (Statistical Package for Social Science 17) as the analysis tool. The validity test results can be seen in the following table:

**Validity Test Results Table**

	Indicator	Corrected Item Total Correlation	Sig	Information
1.	Brand Image			
	- X1.1	0,757	0,00	Valid
	- X1.2	0,723	0,00	Valid
	- X1.3	0,617	0,00	Valid
	- X1.4	0,862	0,00	Valid
	- X1.5	0,583	0,00	Valid
	- X1.6	0,591	0,00	Valid
2	Self Concept			
	- X2.1	0,521	0,00	Valid
	- X2.2	0,667	0,00	Valid
	- X2.3	0,732	0,00	Valid
	- X2.4	0,522	0,00	Valid
	- X2.5	0,443	0,00	Valid
	- X2.6	0,640	0,00	Valid
	- X2.7	0,590	0,00	Valid
	- X2.8	0,703	0,00	Valid

	Indicator	Corrected Item Total Correlation	Sig	Information
4.	Buying decision			
	- Y1	0,716	0,00	Valid
	- Y2	0,544	0,00	Valid
	- Y3	0,631	0,00	Valid
	- Y4	0,672	0,00	Valid
	- Y5	0.667		

Source: SPSS 17 Output

From the table above, it can be seen that all statement items used to measure the variables in this study have a significant probability value below 0.05. According to Sugiyono (2009, p. 143), if the correlation value is below 0.05, the instrument item is considered valid. Therefore, it can be concluded that all four variables studied are deemed valid as they have a significant probability value below 0.05.

### Reliability Testing

The reliability test is used to determine the consistency of the measuring instrument, whether it can be relied upon for further use. The reliability test results in this study use the Cronbach's Alpha coefficient. According to Imam Ghozali (2006, p. 133), an instrument is considered reliable if it has a Cronbach's Alpha coefficient of 0.60 or higher. The results of the reliability test are presented in the table below:

**Table: Reliability Test Results**

Variabel	Cronbach's Alpha	Standard Cronbach's Alpha	Description
Brand Image	0,754	0,50	Reliabel
Self-Concept	0,639	0,50	Reliabel
Purchase Decision	0,781	0,50	Reliabel

Source: SPSS Output

The results of the reliability test show that all variables have a sufficiently high Alpha coefficient, above 0.50. This indicates that all variable measurement items from the questionnaire are reliable, meaning that the questionnaire used in this study is a reliable instrument.

### Multiple Linear Regression Analysis and Discussion

This analysis aims to test the variation of the regression model used to explain the independent variables (X) on the dependent variable (Y) by examining the significance of the regression coefficients.

The data analysis results using SPSS 17 (Statistical Package for Social Science

17) are summarized in the following table:

Table: Regression Calculation Results

Model	Unstandardized Coefficient		Standardized Coefficient	T <sub>Count</sub>	Sig.
	B	Std.Error	Beta		
1 (constant)	.866	,327		2,646	,010
Brand Image	.083	,070	.103	2,810	,041
Self-Concept	.745	,099	.659	7,512	,000
R = 0,718			F <sub>Count</sub> = 45,704		
R <sub>2</sub> = 0,515			Sig = 0,000		

Source: SPSS 17 Output

Based on the table above, the multiple linear regression equation is as follows:

$$Y = 0,866 + 0,083X_1 + 0,745X_2 + 0,485$$

The standardized regression equation is as follows:

1. The regression coefficient ( $\beta$ ) of the constant  $b_0$  is 0.866, meaning that without brand image and self-concept, students' decisions to purchase mobile phones would be 0.866.

2. The regression coefficient of  $X_1$  (Brand Image) is 0.083, indicating a positive influence on students' decisions to purchase mobile phones (Y). This means that an increase of one unit in brand image will lead to an increase of 0.083 in purchase decisions, and vice versa.

3. The regression coefficient of  $X_2$  (Self-Concept) is 0.745, indicating a positive influence on students' decisions to purchase mobile phones (Y). This means that an increase of one unit in self-concept will lead to an increase of 0.745 in purchase decisions, and vice versa.

Based on the regression equation results, it can be concluded that the most influential independent variable on students' mobile phone purchase decisions is Self-Concept  $X_2$ , with a beta coefficient of 0.745, as it has the highest beta value compared to other variables. Furthermore, the R-value of 0.718 indicates a strong relationship since it is close to 1. The determination coefficient ( $R^2$ ) is 0.515, meaning that **51.5%** of the purchase decision **can be explained by brand image and self-concept variables**. The remaining **48.5%** is influenced by other variables **not examined in this study, such as price and service level**.

### Hypothesis Testing

Hypothesis testing in this study aims to examine the influence of independent variables on the dependent variable. This testing consists of *partial hypothesis testing* and *simultaneous hypothesis testing*. The results are explained below.

**Simultaneous Test (F-Test)**

The F-test essentially examines whether all independent variables included in

the model jointly influence the dependent variable. The F-test results are shown in the table below:

**Table: F-Test Calculation Results (Simultaneous Test)**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	9,460	2	4,730	45,704	,000(a)
Residual	8,900	86	,103		
Total	18,360	88			

Source: SPSS 17 Output

This result is confirmed by the F-value of 45.704, which is greater than the F-table value of 3.10, with a significance value (Sig) of 0.000. Since the significance value is far below 0.05, the regression model can be used to predict students' mobile phone purchase decisions. This indicates that brand image and self-concept jointly influence students' mobile phone purchase decisions.

**Partial Test (t-Test)**

The t-test determines the individual (partial) influence of each independent variable (brand image and self-concept) on the dependent variable (students' mobile phone purchase decisions). The results are presented in the following table:

**Table: t-Test Calculation Results (Partial Test)**

Model	T <sub>Count</sub>	Sig.
1 (constant)	2,646	,010
Brand Image	2,810	,041
Self-Concept	7,512	,000

Source: SPSS 17 Output

The influence of each independent variable (brand image and self-concept) on the purchase decision can be determined based on the significance level (probability) and the direction of the coefficient. Both independent variables show a positive relationship and have significance values below 0.05, indicating a significant influence.

These results can be summarized as follows:

1. The influence of brand image on mobile phone purchase decisions.
2. The influence of self-concept on consumers' decisions in selecting a mobile phone.

The Research model or framework is intended to further clarify the essence of the discussion of previous research result and the theoretical basis in the

research, including the relationship between influential variables. (Enny Istanti, et al. 2024 : 150) This research will be conducted in three phases : measurement model (external model), structural model (internal model), and hypothesis testing. (Pramono Budi, et al., 2023 ; 970) Melalui proses tersebut, karyawan diberikan pelatihan dan pengembangan yang relevan dengan kinerja pekerjaannya, sehingga diharapkan dapat menjalankan tanggung jawab pekerjaannya dengan sebaik - baiknya. (Abdul Aziz Sholeh et.al. 2024 :82) Memilih merupakan bagian dari suatu upaya pemecahan sekaligus sebagai bagian dari proses pengambilan keputusan. Oleh karena itu dibutuhkan keputusan pembelian yang tepat (Kristiawati Indriana et.al. 2019 : 28) Kerja sama antara pemerintah, industri, lembaga penelitian dan masyarakat sipil dalam merancang menerapkan, Komitmen dan kerja sama yang kuat dari seluruh pemangku kepentingan menjadi kunci keberhasilan upaya - upaya tersebut. (Gazali Salim et al. 2024 : 63) The SERVQUAL model includes calculating the difference between the values given by customers for each pair of statements related to expectations and perceptions (Diana Zuhro et al. 2024 : 98)

### Discussion

The discussion in the research describes the influence of brand image on

cellphone purchasing decisions by students at University 45 Surabaya. Where brand image includes: attributes, benefits and overall evaluation of consumer decisions in choosing cellphone products

1. Brand image on consumer decisions
2. The influence of self-concept on purchasing decisions

### Conclusion

1. Based on the results of multiple linear regression testing, it is known that brand image and self-concept variables have a significant influence on cellphone purchasing decisions among University 45 Surabaya students.
2. Based on the results of regression testing, it can be seen that the variable that has the greatest influence on consumers' decisions in purchasing cellphone products is the self-concept variable, the reason is because it has the largest beta value and has the smallest probability value compared to other variables.
3. From the results of simultaneous and partial tests (T test and F test), it turns out that the research results prove that all dimensions (brand image and self-concept) of the independent variables simultaneously have a significant influence on the decision to purchase a cellphone, while the independent variable (brand image and self-concept) that has the most influence on the decision to purchase a cellphone is self-concept.



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