THE EFFECT OF BRAND IMAGE, PERCEIVED VALUE, AND CUSTOMER SATISFACTION ON CUSTOMER LOYALTY ON USED INTERNATIONAL SMARTPHONE USER

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Abstract

This research has purpose to determine influence of brand image and perceived value as independent variables on customer loyalty as dependent variable through mediating variable of customer satisfaction. The data collected using the method of distributing questionnaires by using Google Form. This research managed to collect 272 respondents from Jabodetabek area, aged 17 years or older, and currently still using or already using a used international iPhone for the last 6 months. Structural Equation Model (SEM) on AMOS Software is used to process and analyze the data that has been collected. The results of this study indicate that brand image and perceived value has positive effect on customer satisfaction, brand image and perceived value has positive effect on customer loyalty, customer satisfaction affects customer loyalty, and brand image and perceived value has positive effect on customer satisfaction through customer satisfaction.

Keywords: Brand Image, Perceived Value, Customer Satisfaction, Customer Loyalty, Used International iPhone

1. Introduction

The smartphone we are currently using has become a multi-purpose tool that facilitates daily human activities with its various features. With these features, people can spend hours using their smartphones for work, assignments, or just playing games. A study conducted by the Data.ai research institute in 2021 revealed that Indonesians spend the most time on their smartphones, averaging 5.4 hours per day (Dewi, 2022).

Currently, iPhone dominates the flagship or luxury smartphone market. Despite its high prices, Apple offers exclusive features for iPhone users. Apple releases four types of iPhones, each with different features and prices, annually. In 2023, the iPhone reached its 15th series at launch. The products launched include the regular iPhone 15, the iPhone 15 Plus, the iPhone 15 Pro, and the top-of-the-line iPhone 15 Pro Max (Bestari, 2023). In 2022, several iPhone models released by Apple entered the "top 10 best-selling smartphones" list, including the iPhone SE, the regular iPhone 12, the regular iPhone 13, and the regular iPhone 14 series (Riyanto, 2022).
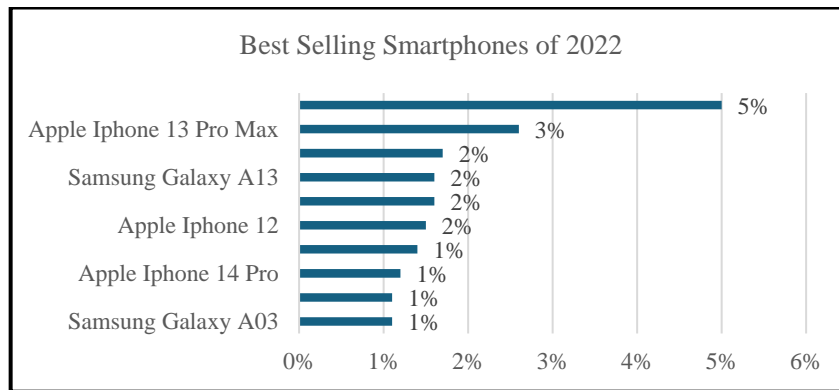
Figure 1. Best Selling Smartphones of 2022
Source : Riyanto (2022)

Every year, Apple releases the latest iPhone series with the most affordable model priced at USD 799 in the United States, a price considered very expensive for a smartphone. However, thanks to Apple's success in creating a strong brand image, people eagerly anticipate new products from Apple each year (Taufani, 2023). Beyond its image, Apple also offers compelling features that attract buyers, such as an excellent camera, ecosystem connectivity among its products, and the luxury and exclusivity of the iPhone (Yudhistira, 2023).

These features make the iPhone a symbol of today's aspirational lifestyle. Although owning an iPhone is a dream for many, some segments of society are reluctant to purchase iPhone products due to their high cost. Consequently, a common phenomenon in Indonesia is that people opt to buy used international iPhones. These are iPhones previously owned by users in other countries, which are then resold in Indonesia at a lower price (Azmi, 2023).

Various factors can explain why sales of used iPhones surpass those of new ones. Lower prices are the main reason why people prefer used iPhones (Margaretha, 2023). In 2019, the COVID-19 pandemic impacted every level of society and disrupted economic activities. As a result, people have had to economize and be more cautious when purchasing certain items, including smartphones. A study by Counterpoint reveals that the iPhone was the top-selling second-hand smartphone in 2021 and 2022.
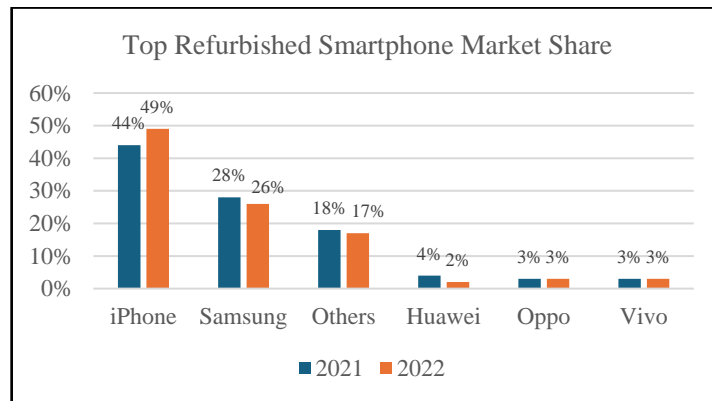
Gambar 1. 1 *Top Refurbished Smartphone Market Share*
Sumber : Counterpoint (2023)

Although interest in internationally used iPhones increases every year, consumers frequently complain that these devices do not always meet the desired condition (Kurniawan, 2023). In fact, there are many frauds associated with internationally used iPhones, such as non-original products or HDCs (High Detailed Copies), and non-original components being installed. These issues lead to confusion among buyers about whether to purchase a new iPhone, which is expensive but offers guaranteed quality, or a used iPhone, which is much cheaper but with uncertain quality.

Buying an internationally used iPhone carries various risks, such as questionable quality and authenticity. Often, these iPhones come without a warranty, increasing buyer concerns. According to a government policy implemented in September 2020, all devices in Indonesia must register their IMEI (International Mobile Equipment Identity) numbers with the Ministry of Industry (Franedya, 2020). This means that internationally used iPhones must be registered on the Ministry of Industry website. Consequently, people must be more selective when purchasing used iPhones from international sources and ensure that the iPhone they buy is not damaged and is functional in Indonesia.

2. **Literature Review**

   2.1. **Customer Loyalty**

   Consumer loyalty, as explained by Thakur in Islam et al. (2021), is defined as repeat purchases resulting from psychological processes that stem from commitment. Oliver, in Jung et al. (2020), defines loyalty as a strong desire to consistently purchase goods or services with preference, even when consumers are faced with situations that might prompt them to choose another brand. According to Dick and Basu in Dam and Dam (2021), customer loyalty is the power of consumer's relative attitudes between the relationship of their repurchase behavior for the same brand.

According to Molinillo et al. (2021) Customer loyalty encompasses three dimensions for measuring the level of customer loyalty, that include's the following:

1) Repetition refers to a customer's loyalty toward purchasing a product and their likelihood of making repeat purchases.
2) Retention describes customers who are not influenced by marketing efforts from other brands.
3) Recommendation involves a customer who endorses the same product or service they have used to other people.

2.2. Brand Image

Brand image, as defined by Uppal et al. in Shehzadi et al. (2021), can be looked as a distinctive set of associations in the minds of customers. Meanwhile, Minkiewicz, cited in Özkan et al. (2020), said, brand image is the result of people's feelings, beliefs, experiences, thoughts, impressions, and knowledge about a brand. According to Gray and Balmer in Balmer et al. (2020), corporate image is related to the mental image a person holds of an organization, which is evoked when they see or hear the company logo or company name.

Lin et al. (2021) identifies three dimensions that can be used to measure the level of brand image, including the following:

1) Functional image refers to the tangible aspects of a service or product that aim to meet customer requirements and provide satisfaction through the physical environment.
2) Affective image pertains to the psychological and emotional impact a brand has on consumers, such as feelings of pride and trust.
3) Reputation image encompasses the overall impression and opinion about a brand. This reputation can be assessed by the brand's presence in the market and its ranking within its sector.

2.3. Perceived Value

Kim et al., as cited in Chen and Lin, (2019), stated that perceived value is an overall effective metric of a product or service as assessed by consumers. It considers the efforts consumers must make to obtain the anticipated benefits. Additionally, Fernández et al., in Karjaluoto et al. (2019), mentioned that perceived value is a important basic for a lot of organizational activities and crucial for a company's accomplishment due to its remarkabe impact on brand loyalty. Moreover, according to Ju and Koo, as referenced in Chae et al. (2020), the value that consumers derive can be defined as offering functions such as price, quality, emotional, and social benefits to the consumers.

According to Prebensen and Xie (2020), there are three dimensions that can be used to measure the level of perceived value:

1) Quality value is a feeling of satisfaction among consumers based on their positive evaluation of a brand, indicating that the product or service they use is of good quality.
2) Economic value occurs when a product or service from one brand offers the same quality as another but at a cheaper price.
3) Emotional value encompasses feelings such as pride or confidence, and the expectation that others will be impressed when they see the consumer using a product from that brand."
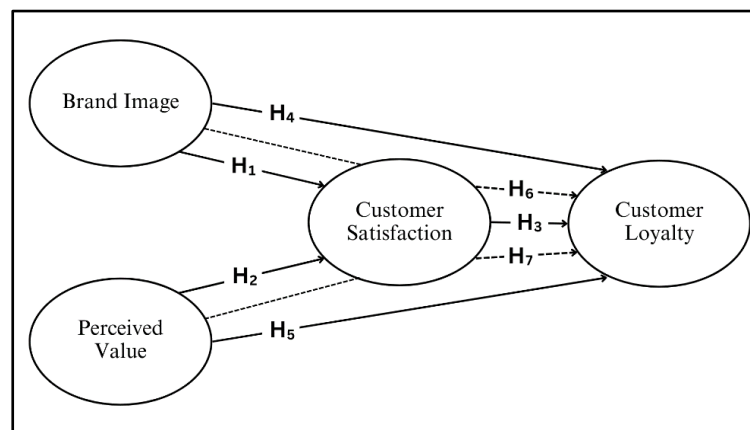
2.4. Customer Satisfaction

From Rita et al. (2019) argue that customer satisfaction is the biggest priority for businesses involved in services, namely that a business must provide and maintain customer satisfaction. The success factor for surviving in maintaining customer satisfaction is a strategy that focuses on the services provided by the business. According to Molinillo et al. (2021), customer satisfaction is an assessment made by customers after using a product or service which is indicated by the expand to which the service or the product exceeds and meets customer expectations. Zhong and Moon (2020) argue that customer satisfaction is an overall perception of a the product or the service from consumer's impressions when using the product or service from time to time.

According to Slack et al. (2020) customer satisfaction has three dimensions, including:

1) Price, for certain customers, low costs tend to be the main reason for satisfaction because consumers will get high value for money.
2) Product quality, consumers feel satisfied when using a service or item if the quality of the service or item is considered good.
3) Overall satisfaction, which can be shown from the consumer's attitude towards the product or service provider, or emotional reactions to the difference between expectations and what they receive.

2.5. Theoretical Framework and Hypothesis

The following is the research model and hypothesis that researchers want to use in this research:

H$_1$: *Brand image* has positive effect on *customer satisfaction*
H$_2$: *Perceived value* has positive effect on *customer satisfaction*
H$_3$: *Customer satisfaction* has positive effect on *customer loyalty*
H$_4$: *Brand image* has positive effect on *customer loyalty*
H$_5$: *Perceived value* has positive effect on *customer loyalty*
H$_6$: *Brand image* has positive effect on *customer loyalty* through *customer satisfaction*
H$_7$: *Perceived value* has positive effect on *customer loyalty* through *customer satisfaction*

3. Material and Method

3.1. Design Study

Researchers will use quantitative methods in this study. According to Santoso and Madiistriyatno (2021), quantitative methods involve collecting, analyzing, and interpreting data to generate information that facilitates conclusions and decision-making. The research period will span from November 2023 to June 2024, approximately eight months, beginning with the distribution of questionnaires. This study will employ Google Forms to prepare and distribute questionnaires via social media applications such as WhatsApp, Instagram, X (Twitter), and other similar platforms. The subjects of this research are residents of Jabodetabek who use internationally used iPhone smartphones. The Jabodetabek area was chosen as the research location because it allows for wide-reaching questionnaire distribution and is accessible to the researchers.

3.2. Data Analysis

data obtained is processed by AMOS with SEM (Structural Equation Modeling). The following are the stages in analyzing the data.

1) Analyze the characteristics of respondents
2) Analyze descriptive variables
3) Evaluate validity and reliability
4) Evaluate goodness of fit indices
5) Measuring the direct hypothesis
6) Measuring the indirect hypothesis

4. Results

According to the results of collecting online questionnaires of 272 respondents, the following data was found.

Table 1. Respondent Profile Descriptive Statistics

	Characteristic	Frequency	Percentage
Gender	Male	151	55,5%
	Female	121	44,5%
Age	17 – 25 y.o	144	53%
	26 – 31 y.o	120	44%
	32 – 40 y.o	6	2,3%
	> 40 y.o	2	0,7%
Last Education	Primary School	0	0%
	Junior High School	2	0,7%
	Senior High School	71	26,1%
	Bachelor / Diploma	199	73,2%
Occupation	Students	117	43%
	Employee	125	46%
	Own a business	26	10%
	Others	4	1%
Salary	< Rp. 1.000.000	48	17,7%
	Rp. 1.000.000 – Rp. 5.000.000	158	58,0%
	Rp. 5.000.000 – Rp. 10.000.000	54	19,9%
	> Rp. 10.000.000	12	4,4%

After collecting the responses, the researcher will conduct validity and reliability tests. The following are the results.

Table 2. Respondent Profile Descriptive Statistics

Variable	Indicator	Loading Factors	Cut-off Value	Results
Customer Loyalty	CL1	0,580		*Valid*
	CL2	0,565		*Valid*
	CL3	0,550		*Valid*
	CL4	0,617	0,1185	*Valid*
	CL5	0,683		*Valid*
	CL6	0,687		*Valid*
	CL7	0,612		*Valid*
	CL8	0,637		*Valid*
Brand Image	BI1	0,591		*Valid*
	BI2	0,675		*Valid*
	BI3	0,712		*Valid*
	BI4	0,713	0,1185	*Valid*
	BI5	0,701		*Valid*
	BI6	0,723		*Valid*
	BI7	0,641		*Valid*
Perceived Value	PV1	0,609		*Valid*
	PV2	0,598		*Valid*
	PV3	0,572		*Valid*
	PV4	0,630		*Valid*
	PV5	0,690	0,1185	*Valid*
	PV6	0,620		*Valid*
	PV7	0,746		*Valid*
	PV8	0,675		*Valid*
	PV9	0,667		*Valid*
Customer Satisfaction	CS1	0,711	0,1185	*Valid*
	CS2	0,686		*Valid*

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CS3	0,663	*Valid*
CS4	0,554	*Valid*
CS5	0,694	*Valid*
CS6	0,643	*Valid*
CS7	0,686	*Valid*
CS8	0,641	*Valid*

Table 2 reveal the outcome of the validity tests for indicator separately. According to the validity test results, it concluded that all indicators are valid because they have a loading factor value of above 0,1185.

Table 3. Respondent Profile Descriptive Statistics

Variable	Cronbach's Alpha	Results
Customer Loyalty	0,767	Reliable
Brand Image	0,806	Reliable
Perceived Value	0,825	Reliable
Customer Satisfaction	0,779	Reliable

The reliability test is approved if it has a Cronbach's alpha value above 0.60. In table X, the reliability test results reveal that the variables have a value above 0.60 therefore, they are concluded reliable.

Figure 3. Research Model
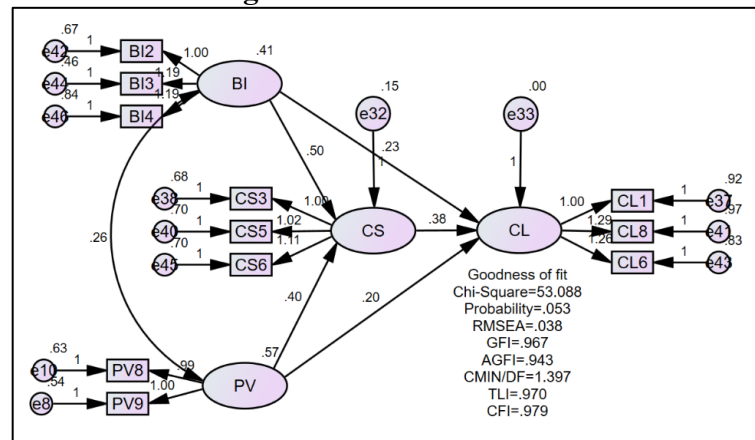
Table 4. Respondent Profile Descriptive Statistics

Goodness of fit indices	Criteria	Results	
Chi Square	Low	53,08	Good
Probabilities	$\geq 0,05$	0,05	Good
RMSEA	$\leq 0,08$	0,03	Good
GFI	$\geq 0,90$	0,96	Good
AGFI	$\geq 0,90$	0,94	Good
CMIN/DF	$\leq 2,00$	1,39	Good
TLI	$\geq 0,95$	0,97	Good
CFI	$\geq 0,95$	0,97	Good

According to the tables, the outcome of the goodness of fit indices test indicate a probability value of 0.05. The CMIN/DF value obtained is 1.39, which is less than 2.00, suggesting a good model fit. The Chi-Square value of 55.08 is considered

favorable as it is relatively low, and the RMSEA value is 0.03, bellow the criteria which is 0.08. The GFI and AGFI values are 0.96 and 0.94, respectively, both surpassing the minimum standard of 0.90. Furthermore, the TLI and CFI values from the model feasibility test are both 0.97, exceeding the minimum criteria. Given these results and the eight criteria met by the goodness of fit measurements, this research model is deemed fit.

Table 5. Direct Hypothesis Test Results

	Hypothesis			Standarized Regression Weight	C.R	P	Results
H_1	*Brand Image*	→	*Customer Satisfaction*	0,500	4,460	0,00	Accepted
H_2	*Perceived Value*	→	*Customer Satisfaction*	0,396	3,874	0,00	Accepted
H_3	*Customer Satisfaction*	→	*Customer Loyalty*	0.231	2,053	0,04	Accepted
H_4	*Brand Image*	→	*Customer Loyalty*	0,204	2,027	0,04	Accepted
H_5	*Perceived Value*	→	*Customer Loyalty*	0,382	2,528	0,01	Accepted

Hypothesis testing was conducted using AMOS. The outcome of the test of hypothesis are visible in the AMOS output, specifically in the critical ratio (CR) column. If CR value is above 1.96, it can be concluded that the hypothesis is approved. The significance of the hypothesis also can be determined by its value of the probability.

Table 6. Indirect Direct Hypothesis Test Results

Hypothesis	Dependent Variable	Mediating Variable	Independent Variable	*Sobel Static*	*P-Values*	Results
H_6	*Brand Image*	*Customer Satisfaction*	*Customer Loyalty*	2,200	0,01	Accepted
H_7	*Perceived Value*	*Customer Satisfaction*	*Customer Loyalty*	2,119	0,01	Accepted

The results of the Sobel test indicate mediation if the value of the Sobel static is greater than standard value which is 1.96 and the P-value is less than standard which is 0.05. Based on the tests conducted, for Hypothesis 6, the Sobel statistic is 2.20 with a P-value of 0 .01. For Hypothesis 7, the Sobel statistic is 2.19 with a P-value of 0.01. Thus, it can be concluded that both Hypothesis 6 and Hypothesis 7 are significantly supported.

5. Discussion

The first hypothesis, which is brand image has a positive effect on customer satisfaction, is acceptable. The test results, obtained from a critical ratio (C.R.) of 4.46, support this finding. The second hypothesis, asserting that perceived value positively affects customer satisfaction, is also declared acceptable with a C.R. of 3.87. The third hypothesis, which posits that customer satisfaction positively influences customer loyalty, is supported by a C.R. of 2.05. The fourth hypothesis,

suggesting that brand image positively impacts customer loyalty, is confirmed with a C.R. of 2.02. Lastly, the fifth hypothesis, indicating that perceived value positively affects customer loyalty, is validated with a C.R. of 2.52.

The sixth hypothesis, which states that brand image positively affects customer loyalty through customer satisfaction, is declared acceptable. The test results from the Sobel statistic reached 2.20. The seventh hypothesis, which posits that perceived value has a positive effect on customer loyalty through customer satisfaction, is also declared acceptable, with a Sobel statistic of 2.21. All hypotheses achieved results that exceeded the required threshold of ≥ 1.96. Thus, it can be concluded that all hypotheses demonstrate a strong level of significance.

6. Conclusion, Implication, and Recommendation

6.1. Conclusion

Based on the results and discussion in this research entitled 'The Influence of Brand Image, Perceived Value, and Customer Satisfaction on Customer Loyalty of Users of Internationally Used Smartphone Products,' the following conclusions can be drawn:

1) Hypothesis 1 (H1) is accepted as brand image has a positive effect on customer satisfaction among users of internationally used iPhone products.
2) Hypothesis 2 (H2) is accepted as perceived value has a positive effect on customer satisfaction among users of internationally used iPhone products.
3) Hypothesis 3 (H3) is accepted as customer satisfaction has a positive effect on customer loyalty among users of internationally used iPhone products.
4) Hypothesis 4 (H4) is accepted as brand image has a positive effect on customer loyalty among users of internationally used iPhone products.
5) Hypothesis 5 (H5) is accepted as perceived value has a positive effect on customer loyalty among users of internationally used iPhone products.
6) Hypothesis 6 (H6) is accepted as brand image enhances customer loyalty through customer satisfaction among users of internationally used iPhone products.
7) Hypothesis 7 (H7) is accepted as perceived value enhances customer loyalty through customer satisfaction among users of internationally used iPhone products."

6.2. Implication

This research is unique in that it focuses on research subjects rarely studied by others. Specifically, the researchers chose used international iPhones because they present an interesting phenomenon in Indonesia and have a distinct market presence. The researchers also selected variables relevant to the observed phenomena, namely perceived value and brand image as independent variables, customer satisfaction as mediating variable, and customer loyalty as

dependent variable. In addition to the uniqueness of this study, the following information was obtained after conducting the research:

1. Brand image, perceived value, and customer satisfaction can influence the increase in customer loyalty. This is supported by research conducted by Jung et al. (2020), Song et al. (2019), and El-Adly (2019), which state that customer loyalty can be positively and significantly influenced by brand image, perceived value, and customer satisfaction.
2. Customer satisfaction plays important role as mediating the relationship between brand image and customer loyalty, as well as between perceived value and customer loyalty. Similar research were reported by Shen and Yahya (2021), Mehta (2020), Paulose and Shakeel (2022), and Scridon et al. (2019), who noted that perceived value and brand image positively and significantly influence customer loyalty, mediated by customer satisfaction.

Several factors significantly influence customer loyalty. Therefore, sellers of internationally used iPhones, including both individuals and shops, are advised to consider the following:

1. International used iPhone sellers should provide a detailed description for each product they sell, including the condition of the used iPhone, and price the product accordingly.
2. Sellers must ensure that the IMEI number of every product they sell is registered with the Ministry of Industry. Without registration, the internationally used iPhone purchased by the buyer will not be able to use signal operators in Indonesia.
3. International used iPhone sellers should set a definitive price range that aligns closely with market rates for internationally used iPhones. This approach ensures that buyers have clear options regarding the condition and price of the product being sold.
4. Sellers of internationally used iPhones must enhance the image of these products to encourage repeat purchases. One aspect to emphasize is that internationally used iPhones are an affordable option. This perception helps buyers recognize that they can obtain a luxury smartphone with good specifications at a low price.

6.3. Recommendation

After conducting the research, the researcher recognized numerous shortcomings and limitations, leading to the conclusion that the study was not perfect. The following are the limitations and shortcomings of this research:

1. The study examined only four variables: brand image, perceived value, customer satisfaction, and customer loyalty. Consequently, the researchers were unable to explore other variables that might influence customer loyalty.
2. There were limitations in collecting information about internationally used iPhones. This is because an internationally used iPhone is not an

original product sold directly by Apple but rather a product that has been used by people in other countries and is sold in a used condition in Indonesia.

3. It was challenging to identify users of the product under study. Although there are many users of internationally used iPhones, many people do not understand whether their iPhone is an internationally used one or a secondhand one from Indonesia, sold at an official reseller. This confusion prolonged the process of collecting respondents."

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