Mediation Analysis of Satisfaction on Consumer Loyalty of Branded Smartphones in Batam City

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Abstract:

The purpose and purpose of conducting this research is so that researchers and umkm can understand the effect of product quality, brand trust, brand image, perceived value and price on purchasing decisions and loyalty of branded smartphone consumers in Batam City and formulate managerial implications that are applied. The type of research used is a type of survey research based on the results of the questionnaire. This research uses quantitative methods. Based on the results of the study, it was found that there was a significant influence between service quality, brand trust, the price offered, and brand image on customer satisfaction. Then it was found that there was a significant influence between product quality on consumer loyalty mediated by customer satisfaction. It was also found that there was a significant influence between the satisfaction felt by consumers and the loyalty or loyalty given by consumers. And it was found that there was a significant influence between product quality, service quality, brand trust, price, and brand image on loyalty.

Keywords: *Satisfaction, Loyalty, Consumer, Brand Image, Product Quality*

1. Introduction

A smartphone is an integrated technology device that has the ability to run an operating system, do internet browsing, and run programming applications. Cell phones can be utilized by people both actually and for business, and today envisioning current regular routine without one is exceptionally difficult (Alyssa Provazza 2019). Based on data sourced from Newzoo, China is the country that is lined up at number one, which is the country with the largest quantity of smartphone usage in the world in 2022. Meanwhile, Indonesia is fourth on this list (Sadya 2023).

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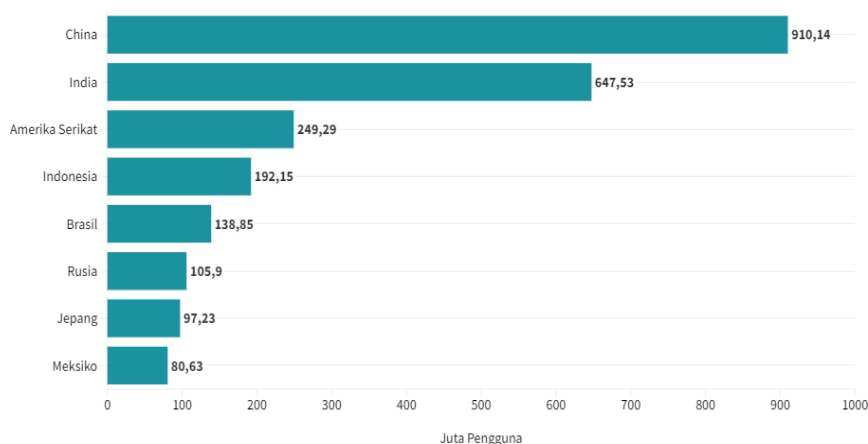
Figure 1 Eight countries with the most smartphone users in the world

According to Newzoo data, China will soon surpass all other nations in terms of smartphone ownership. by 2022. This can be seen from the fact that the number of smartphone users in China reached 910.14 million. India has a total of 647.53 million smartphone users and is second. It is followed by the United States, with 249.29 million smartphone users. Indonesia is fourth on this list. Last year, the number of smartphone users in the country was 192.15 million. A total of 138.85 million smartphone users came from Brazil. Then there are 105.9 million smartphone users in Russia. There were 97.23 million cell phone clients in Japan. Mexico has a total of 80.63 million smartphone users and ranks eighth (Sadya 2023).

Customers are increasingly utilizing smartphones to connect with brands and friends through social media. Online entertainment stages like Facebook, Instagram, Twitter, and LinkedIn all have flexible applications that clients can download from their cell application stores. These applications license wireless clients to post individual updates and photos while in a rush. Another renowned use of PDAs is prosperity and wellbeing following. For instance, the iOS Wellbeing application can follow rest designs, nourishment, body estimations, important bodily functions, psychological well-being activities, and substantially more.

Third-party portable devices such as smartwatches can connect to smartphones to retrieve personal health statistics and more. B. Send heart rate and aggregate information to your mobile phone. Mobile payment is another widely used app on smartphones. The wallet feature allows clients to store charge card data on their cell phones and use it while making buys at retail locations. Applications like Apple Pay additionally permit clients to pay different iOS clients straightforwardly from their cell phones (Techpro 2022).
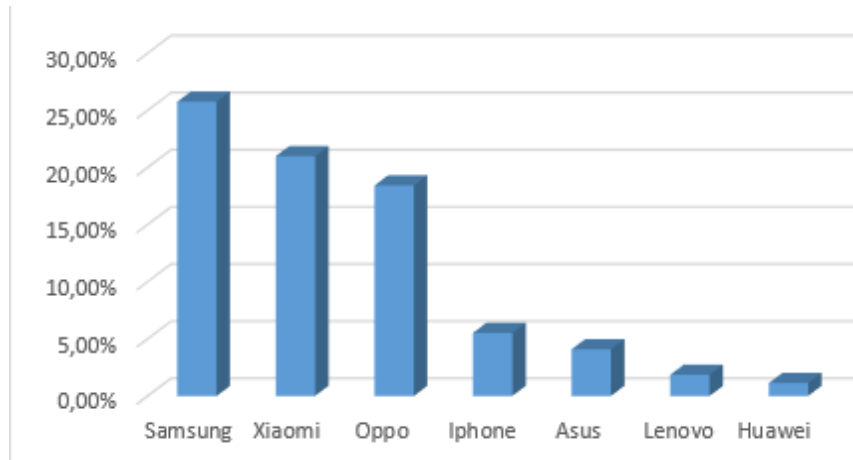
Figure 2 Branded smartphone brands
Source: (Zakiah 2021)

From the image above, we can see that Samsung is the brand with the largest achievement of 25.75% of this, making it the leading smartphone maker both in Indonesia and in the world. After that, it is followed by the Xiaomi brand with a usage percentage of 20.98%, Oppo with a percentage of 18.42%, the iPhone with 5.52%, Asus with 4.08%, Lenovo with 1.85%, and Huawei with 1.13% (Zakiah 2021).

Therefore, in this age of increasingly sophisticated technology, there are many products and brands of branded smartphones that want to dominate the market. In addition to presenting quality with super sophistication and completeness, this smartphone is also believed to raise the status and degree of the user of the branded smartphone.

Therefore, with the many choices of brands circulating among the wider community, it is necessary to have some basis that can be used as a reference for the community in choosing a branded smartphone for daily use. Several factors trigger the influence of consumers in choosing branded smartphones, ranging from the quality of the products offered, the brand image of the branded smartphone, the value that consumers get for the product, the price, and consumer confidence in the product, so that from this it can trigger consumer satisfaction and lead to consumer loyalty to the branded smartphone.

2. Theoretical Background

According to (Lestari and Nurhadi 2021) argues that the quality of a fierce product can trigger marketers to be able to issue higher quality products in the development of

products that are more useful, varied and innovative in accordance with the needs of market share and consumer expectations.

Price, according to Alman (Farisi and Siregar 2020), is the worth in the form of cash of a cost.The selling price is the result of using the selling price. The cost of obtaining or manufacturing the product determines the selling price. Price can be defined as money or the value of money and/or other types (non-financial), including for personal use, that are required to obtain services. Price is also adjusted to reflect the value as well as the advantages of an item. Price is also an important element when thinking about the amount of money needed (including multiple products if possible). Kotler & Armstrong (Farisi & Siregar, 2020) also argue that price is narrowly a bill for a product or service. Meanwhile, broadly speaking, price is the worth given by the buyers to benefit from a product, including both goods and services. It can be concluded that price is the measuring worth of a thing communicated in cash, whose determination is influenced by the costs incurred in producing a product.

Brand image, according to (Astuti, Widhyadanta, and Sari 2021) is a logical or emotional thought that consumers have about a particular brand. Image of a Brand comprises of useful and emblematic brand convictions. Image of a brand is part of the product category and must be adjusted for the unique properties of a particular brand category. In addition, brand image can also mean how a consumer remembers a brand. In other words, the brand is the first thing that comes to mind when consumers buy a product. Consumers judge brands based on their characteristics. Brand image is described as the overall impression consumers have of a product. A strong brand image increases a company's reputation, revenue, and profits.

Perceived value, according to (DAM 2020) is defined as the value perceived by consumers who evaluate the benefits of the product at the cost of the time they give to get the product. In previous research (Hellier et al., 2003), it was also revealed that apparent worth affects buy expectation.

According to (Azizan and Yusr 2019), trust has been demonstrated to lead buyers to client steadfastness. Conscious trades and powerful correspondence have assisted form with marking trust among shoppers', making them ready to spend additional cash on a specific brand of decision since they accept it can give components like uniqueness, capability, and in particular, quality that their rivals can't offer. This demonstrates that trust is a significant calculate building solid and long haul connections among brands and their clients.

Referring to Khristianto, (Azizan and Yusr 2019), they state that customer satisfaction makes consumers happy because they get what they need and anticipate from buying an item or service. This is a significant promoting instrument. Consumer loyalty has assisted an organization with producing serious wins and gains that make long haul connections that assist associations with making long haul progress. Consumer loyalty

will come from surpassing the purchaser's assumptions. If the organization delivers a performance that is lower than their expectations, dissatisfaction from consumers will arise.

According to (Azizan and Yusr 2019) Suggests that customer loyalty is connected with strong feelings of attachment and affection. However, according to a business viewpoint, client dependability implies acquiring client trust in the items and administrations gave. All organizations use client faithfulness to quantify their exhibition pointers in their particular organizations. It is utilized to hold clients as well as measure their readiness to repurchase the item. The part of client faithfulness requires further consideration among advertisers to further develop client maintenance, which can significantly influence overall revenues. Steadfast clients can be relegated when they think a brand is developing and furnishing the right items with uncommon quality. Regardless of whether they realize it or not, they will purchase a particular brand repeatedly. These days, because of the cutthroat idea of carrying on with work, acquiring brand steadfastness has turned into an exceptionally difficult errand. Pioneers must come up with an efficient promoting methodology to acquire client faithfulness (Ong et al., 2016).

Through the previous explanation, there has been no recent research that combines these variables to study the effect of product quality, brand trust, brand image, perceived value, and price on consumer satisfaction and consumer loyalty to branded smartphones in the city of Batam. In light of the foundation that has been depicted in this review, the motivation behind carrying out this study is so that researchers and umkm can understand the effect of product quality, brand trust, brand image, perceived value, and price on the purchasing decisions and loyalty of branded smartphone consumers in Batam City and formulate managerial implications that can be applied.

3. Methodology

The kind of exploration utilized is a sort of review research considering the results of the poll. This exploration utilizes quantitative strategies, which is an examination strategy used to get information that happens previously or present about convictions, sentiments, qualities, conduct, and variable connections and to test a few speculations about humanistic and mental factors from tests taken from specific populaces. Data collection techniques by observation (meetings / interview or surveys questionnaires) are not complete, Additionally, research findings typically lend themselves to generalization. (Lise Tiasanty and Sitio 2020). The reliant variable of this study is client unwaveringness, trailed by consumer loyalty as a variable that intervenes the free factors, which are item quality, brand image, price, service quality, and brand trust.

Samples are some of the populace that has generally similar attributes and is viewed as agent (Wantara and Tambrin 2019a) In this study, the sample or object of this research is consumers who use branded smartphones, while the population of this study is those who use branded smartphones in Batam city. A population is an assortment of people who have the attributes and characteristics that have been spread out. In view of these characteristics and properties, the populace can be perceived collectively of people or observational articles that have no less than one trademark in common (Wantara and Tambrin 2019a). While the population of this study are those who use branded smartphones in Batam city.

With the intention of obtaining the results of this study, researchers used two sampling methods, namely purposive sampling and non-probability sampling, where the purposive sampling method was used by researchers in collecting sample data that had a special assessment in accordance with the research conducted. While the non-probability sampling method, where certain elements are used (Engriani and Aulia 2019).

This study applies the method from Babin, Anderson, Black, & Hair (2019) with parameters 1: 10, namely, each variable question item will represent as many as 10 respondents. So based on the number of instruments—as many as 24 questions—used in this study, researchers need at least 240 respondents. This means that the number of questionnaires to be distributed is at least 240. However, in order to avoid data shortages and obtain accurate data, the number of questionnaires to be distributed is 300. The questionnaire was distributed using Google Forms.

The author intends to conduct research on the effects of price, location, brand image, and purchasing decisions on customer loyalty. This study will utilize the findings from modified research journals by Diputra and Yasa (2021), Subaebasni et al. (2019), and Wulur, Militina, and Achmad (2020). Based on the research model above, the following are the hypotheses developed by researchers:

H1: Significant Effect of Service Quality on Customer Satisfaction
H2: Significant Effect of Brand Trust on Consumer Satisfaction
H3: Significant Effect of Brand Image on Consumer Satisfaction
H4: Significant Effect of Price on Consumer Satisfaction
H5: Significant Effect of Product Quality on Consumer Satisfaction
H6: Significant Effect of Consumer Satisfaction on Consumer Loyalty
H7: Significant Effect of Service Quality Obtained on Consumer Loyalty Mediated by Consumer Satisfaction
H8: Significant Effect Between Brand Trust and Consumer Loyalty Mediated by Consumer Satisfaction

H9: Significant Effect Between Prices Offered to Customers on Consumer Loyalty Mediated by Consumer Satisfaction

H10: Significant Influence Between Brand Image and Consumer Loyalty Mediated by Consumer Satisfaction

H11: Significant Effect Between Product Quality and Consumer Loyalty Mediated by Consumer Satisfaction.

4. Empirical Findings/Result and Discussion

Model Evaluation Results

Table 1 Outer Loadings Test Results

Variable	Indicators	Loading Factor	Cut-Off	Description
X1 (Quality of Service)	Kpel_1	0,769	0,700	Valid
	Kpel_2	0,800		Valid
	Kpel_3	0,851		Valid
	Kpel_4	0,829		Valid
	Kpel_5	0,754		Valid
X2 (Brand Trust)	KM_1	0,931		Valid
	KM_2	0,936		Valid
	KM_3	0,912		Valid
	KM_4	0,900		Valid
X3 (Brand Image)	CM_1	0,924		Valid
	CM_2	0,916		Valid
	CM_3	0,918		Valid
	CM_4	0,932		Valid
X4 (Price)	H_1	0,924		Valid
	H_2	0,894		Valid
	H_3	0,928		Valid
	H_4	0,701		Valid
X5 (Product Quality)	Kpro_1	0,741		Valid
	Kpro_2	0,879		Valid
	Kpro_3	0,755		Valid
	Kpro_4	0,898		Valid
Y (Consumer Satisfaction)	KK_1	0,934		Valid
	KK_2	0,927		Valid
	KK_3	0,938		Valid
	KK_4	0,930		Valid
Z (Consumer Loyalty)	LK_1	0,916		Valid
	LK_2	0,930		Valid
	LK_3	0,933		Valid

Source: Primary data processed (2023)

The method used to assess convergent validity is to look at the amount of value in the outer loadings section. At this stage, the criteria determined for the value of outer loadings in exploratory research are > 0.7. After testing the data, no indicators were found that did not meet the criteria below the value of 0.7, or it could be concluded that all indicators met the outer loading criteria.

Table 2 Test Results *Average Variance Extracted* (AVE)

Variable	(AVE)	*Cut-off*	Description
X1 (Service Quality)	0,642		Valid
X2 (Brand Trust)	0,846		Valid
X3 (Brand Image)	0,851		Valid
X4 (Price)	0,751	0,500	Valid
X5 (Product Quality)	0,675		Valid
Y (Consumer Satisfaction)	0,869		Valid
Z (Consumer Loyalty)	0,858		Valid

Sumber: Data primer yang diolah (2023)

There is another method of assessing validity by looking at the AVE value. The value of AVE can be declared to meet the criteria if the value is> 0.5 or greater than 0.5. Based on the test results, it is stated that all indicators have a value of> 0.5, from which it can be concluded that the data or AVE value of these indicators is declared to have met the validity criteria.

Table 3 Test Results Cross Loading

	X1 (KPel)	X2 (KM)	X3 (CM)	X4 (H)	X5 (Kpro)	Y (KK)	Z (LK)
Kpel_1	0,769	0,260	0,231	0,307	0,557	0,492	0,418
Kpel_2	0,800	0,142	0,150	0,163	0,298	0,393	0,309
Kpel_3	0,851	0,208	0,162	0,238	0,303	0,429	0,303
Kpel_4	0,829	0,182	0,128	0,131	0,301	0,391	0,368
Kpel_5	0,754	0,309	0,214	0,308	0,435	0,413	0,437
KM_1	0,264	0,931	0,419	0,548	0,223	0,632	0,494
KM_2	0,252	0,936	0,376	0,522	0,262	0,602	0,535
KM_3	0,252	0,912	0,398	0,511	0,256	0,598	0,495
KM_4	0,258	0,900	0,371	0,499	0,218	0,576	0,554
CM_1	0,187	0,383	0,924	0,595	0,123	0,578	0,251
CM_2	0,191	0,348	0,916	0,531	0,070	0,584	0,211
CM_3	0,200	0,396	0,918	0,638	0,103	0,613	0,261
CM_4	0,251	0,441	0,932	0,564	0,127	0,601	0,293
H_1	0,298	0,565	0,558	0,924	0,133	0,662	0,414
H_2	0,220	0,499	0,668	0,894	0,140	0,659	0,353
H_3	0,288	0,520	0,555	0,928	0,137	0,662	0,362
H_4	0,203	0,352	0,376	0,701	0,180	0,466	0,267
Kpro_1	0,298	0,134	-0,046	-0,006	0,741	0,333	0,205
Kpro_2	0,463	0,270	0,197	0,195	0,879	0,448	0,398

	X1 (KPel)	X2 (KM)	X3 (CM)	X4 (H)	X5 (Kpro)	Y (KK)	Z (LK)
Kpro_3	0,327	0,157	0,059	0,153	0,755	0,344	0,349
Kpro_4	0,470	0,267	0,125	0,173	0,898	0,459	0,474
KK_1	0,532	0,639	0,624	0,649	0,434	0,934	0,486
KK_2	0,471	0,591	0,574	0,653	0,474	0,927	0,420
KK_3	0,510	0,629	0,609	0,689	0,427	0,938	0,442
KK_4	0,476	0,582	0,596	0,669	0,488	0,930	0,423
LK_1	0,380	0,523	0,249	0,362	0,381	0,437	0,916
LK_2	0,444	0,524	0,241	0,383	0,427	0,443	0,930
LK_3	0,459	0,519	0,276	0,385	0,429	0,441	0,933

Source: Primary data processed (2023)

One of several methods for testing the discriminant validity of an indicator is the cross-loading method. This method has the requirement that fellow indicators must come together with a high correlation value of 0.7 each.

Based on table 4.11, all indicators listed in the table above show fairly high results exceeding the criteria requirements of the cross loading itself, namely 0.7. KK_3 is an indicator with the highest accumulated value of 0.938 to the lowest of 0.701 in indicator H_4. Therefore, it very well may be reasoned that the information above passes the outer loading criteria requirements.

Table 4 Test Results Cronbach's Alpha & Composite Reliability

Variable	Cronbach's Alpha	Composite Reliability	Cut-off	Description
X1 (Service Quality)	0,860	0,899		Reliabel
X2 (Brand Trust)	0,939	0,957		Reliabel
X3 (Brand Image)	0,942	0,958		Reliabel
X4 (Price)	0,886	0,923	0,700	Reliabel
X5 (Product Quality)	0,837	0,892		Reliabel
Y (Consumer Satisfaction)	0,950	0,964		Reliabel
Z (Consumer Loyalty)	0,917	0,948		Reliabel

Source: Primary data processed (2023)

A variable can be supposed to be solid le when it meets the criteria for the Cronbach's alpha and composite reliability value requirements at a value of> 0.70. After the reliability test is carried out, it can be concluded in the table. Based on the reliability test results in table 4.12 above, it is known that all variables are dependable in light of the fact that the Cronbach's alpha and composite dependability values of all variables have shown> 0.70, with the highest Cronbach's alpha value in the customer satisfaction variable being 0.950 with the lowest value of 0.837 product quality variables, and the highest composite reliability in the customer satisfaction variable being 0.964 with the lowest value of 0.892 product quality variables.

Inner Model Evaluation

Table 5 Test Results *Path Coefficinets* (*Direct Effect*)

	Original Sample Direct Effect	T Statistics	P Values	Description
X1 (Service Quality) -> Y (Customer Satisfaction)	0,195	2,361	0,019	Significant
X2 (Brand Trust) -> Y (Customer Satisfaction)	0,249	2,346	0,019	Significant
X3 (Brand Image) -> Y (Customer Satisfaction)	0,278	2,419	0,016	Significant
X4 (Price) -> Y (Customer Satisfaction)	0,299	2,483	0,013	Significant
X5 (Product Quality) -> Y (Customer Satisfaction)	0,248	2,306	0,022	Significant
Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,475	5,633	0,000	Significant
Indirect Effect				
X1 (Service Quality) -> Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,093	2,128	0,034	Significant
X2 (Brand Trust) -> Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,118	2,056	0,040	Significant
X3 (Brand Image) -> Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,132	2,491	0,013	Significant
X4 (Price) -> Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,142	2,215	0,027	Significant
X5 (Product Quality) -> Y (Customer Satisfaction) -> Z (Customer Loyalty)	0,118	2,067	0,039	Significant

Source: Primary data processed (2023)

H1: Service Quality Affects Customer Satisfaction

An effect can be said to have a significant correlation if it has a T-statistics value> 1.96 or a P-value <0.05. Based on the results of the direct effect test conducted by researchers, the relationship between service quality and consumer satisfaction obtained a T-statistic value of 2.361 with p-values of 0.019, indicating that the quality of service provided by a brand has a significant positive effect on customer satisfaction.

H2: Brand Trust Influences Consumer Satisfaction

An influence can be said to have a significant correlation if it has a T-statistics value > 1.96 or a P-value < 0.05. Based on the results of the direct effect test conducted by researchers, the relationship between brand trust and consumer satisfaction obtained a T-statistic value of 2,346 with a P-value of 0.019; therefore, it can be concluded that brand trust has a positive and significant influence on consumer satisfaction.

H3: Brand Image Influences Consumer Satisfaction

An impact can be said to have a huge relationship on the off chance that it has a T-insights esteem > 1.96 or a P-esteem < 0.05. The direct effect test that researchers carried out revealed that the relationship between consumer satisfaction and brand image had a T-statistic value of 2,419 and a P-value of 0.016; hence, it tends to be presumed that brand picture impacts purchaser fulfillment

H4: Price has an influence on consumer satisfaction

An impact can be said to have a huge relationship on the off chance that it has a T-insights esteem > 1.96 or a P-esteem < 0.05. In light of the consequences of the immediate impact test completed by specialists, the connection between brand picture and shopper fulfillment got a T-measurement worth of 2.483 with a P-worth of 0.013; subsequently, it very well may be inferred that cost affects buyer fulfillment.

H5:   Product Quality Affects Consumer Satisfaction

If an influence has a T-statistics value greater than 1.96 or a P-value less than 0.05, it is considered to have a significant correlation. In light of the consequences of the immediate impact test directed on the variable connection between item quality and consumer loyalty, the T-measurements esteem is 2.306 with a P-worth of 0.022. The outcomes got can straightforwardly reason that item quality affects consumer loyalty. The higher the securing of the quality worth of an item by respondents, the higher the degree of fulfillment felt by buyers.

Conversely, if product quality decreases, there will also be a decrease in customer satisfaction. This study's findings are consistent with previous research by Diputra & Yasa (2021), Hwang *et al.* (2021), Nguyen *et al.* (2020), Subiyantoro (2021), Wantara & Tambrin (2019),), who found that a product is considered to have good quality if it is able to provide solutions to the needs and expectations of customers. By presenting good product quality to customers, it will automatically help strengthen their level of satisfaction. This level of customer satisfaction is obtained when the customer feels positive value from the perceived product quality, especially if the product can provide benefits that exceed consumer expectations.

H6: Consumer Satisfaction Affects Consumer Loyalty

If an influence has a T-statistic value greater than 1.96 or a P-value less than 0.05, it is considered to have a significant correlation. In view of the consequences of the relapse test directed by scientists, the connection between consumer loyalty and client

steadfastness has a T-factual worth of 5.633 and p-upsides of 0.000, from which it very well may be reasoned that consumer loyalty has a positive and critical relationship with client reliability. Loyalty or loyalty from consumers is believed to start with satisfaction obtained by them. By achieving consumer expectations for a product, of course, it will provide satisfaction for each consumer, so it will automatically help create consumers who are loyal to a company's product.

H7: Product Quality Affects Consumer Loyalty Mediated by Customer Satisfaction

If an influence has a T-statistics value greater than 1.96 or a P-value less than 0.05, it is considered to have a significant correlation. In view of the consequences of the immediate impact test led by specialists, the connection between administration quality and shopper devotion interceded by buyer fulfillment gets a T-measurement worth of 2.128 with p-upsides of 0.034, from which it very well may be reasoned that help quality on a brand meaningfully affects customer unwaveringness intervened by shopper fulfillment.

H8: Brand Trust Influences Consumer Loyalty, Mediated by Consumer Satisfaction

An impact can be said to have a critical connection assuming it has a T-insights esteem > 1.96 or a P-esteem < 0.05. In view of the consequences of the immediate impact test did by scientists, the connection between brand trust and shopper steadfastness intervened by customer fulfillment got a T-measurement worth of 2.056 with a P-worth of 0.040; As a result, it is possible to draw the conclusion that customer satisfaction is significantly influenced by brand trust.

H9: Brand Image Influences Consumer Loyalty, Mediated by Consumer Satisfaction

An influence can be said to have a significant correlation if it has a T-statistics value > 1.96 or a P-value < 0.05. Based on the results of the direct effect test conducted by researchers, the relationship between brand image and consumer loyalty, mediated by consumer satisfaction, obtained a T-statistic value of 2.491 with a P-value of 0.013; therefore, it can be concluded that brand image has a significant positive influence on consumer loyalty, mediated by consumer satisfaction.

H10: Price has an influence on consumer loyalty, mediated by consumer satisfaction.

An impact can be said to have a critical connection assuming it has a T-insights esteem > 1.96 or a P-esteem < 0.05. In light of the consequences of the immediate impact test completed by scientists, the connection between brand picture and shopper steadfastness interceded by buyer fulfillment got a T-measurement worth of 2.215 with a P-worth of 0.027; consequently, it tends to be presumed that cost affects customer unwaveringness interceded by shopper fulfillment.

H11: Product Quality Influences Consumer Loyalty, Mediated by Consumer Satisfaction

An influence can be said to have a significant correlation if it has a T-statistics value > 1.96 or a P-value < 0.05. Based on the results of the direct effect test carried out on the variable The T-statistics value for the relationship between product quality and consumer loyalty was 2.067, and the P-value was 0.039. This relationship was mediated by consumer satisfaction. The outcomes got can straightforwardly presume that item quality affects buyer faithfulness, intervened by shopper fulfillment.

Model Fit (Quality Indexes)

R Squares

In this review, there are two endogenous factors that have R square counts, in particular consumer loyalty and client dependability. As per the models prerequisites of R square, the worth of R squares> 0.50 demonstrates the expectation results are in "major areas of strength for the." In the mean time, in the event that the worth of R squared is 0.25, the forecast results in the "weak" class.

Table 6 R Square Test Results

	R Square	Category
Y (Customer Satisfaction)	0,780	Strong
Z (Consumer Loyalty)	0,226	Weak

Source: Processed primary data (2023)

In table 4.14, the R square value for the endogenous variable customer satisfaction is 0.780, or a percentage of 78%, which means that 78% of customer satisfaction can be explained by product quality, brand trust, brand image, price, and brand quality, while the remaining 22% is influenced by other variables not examined in this study. Then next, the consumer loyalty variable has a value of 0.226 or a percentage of 22.6%, meaning that 22.6% of consumer loyalty can be explained by customer satisfaction, while the remaining 77.4% is also influenced by other variables. Therefore, it can be concluded that the consumer satisfaction variable is a prediction result in the "strong" category, while the consumer loyalty variable is included in the "weak" category.

GoF (Goodness of Fit) Index

Table 7 GoF Results

Variable	Com	R *Square*
X1 (Service Quality)	0,642	-
X2 (Brand Trust)	0,846	-
X3 (Brand Image)	0,851	-
X4 (Price)	0,751	-
X5 (Product Quality)	0,675	-
Y (Consumer Satisfaction)	0,869	0,780
Z (Consumer Loyalty)	0,858	0,226

Variable	Com	R *Square*
Average	**0,785**	**0,503**
GoF value (according to formula)	**0,628**	
Conclusion	Large GoF value (Model Fit)	

Source: Processed primary data (2023)

The Goodness of Fit index (GoF) is used in testing the suitability of a sample of data between two certain variables. There are three categories in the assessment of the GoF test: the first can be classified as weak if the value is> 0.10, the second can be classified as moderate if the value is> 0.25, and the third can be said to be strong if the value is> 0.36. The higher the GoF value, the better the model will be. From table 4.16 above, it can be indicated that the GoF results in obtaining a value of 0.628 or more than 0.36, so it can be said that the model in this GoF study is included in the strong category.

5. Conclusions

Based on the findings of a study that was carried out in Batam City with a total of 290 respondents to find out how satisfaction affects consumer loyalty to brands of smartphones, it can be concluded from this research that the test results for hypothesis H1 have been proven to indicate that there is a huge impact between the quality of service got and the satisfaction of the client or client themselves.The test results for hypothesis H2 have been proven to indicate that there is a critical impact between brand trust presented to customers and satisfaction from the customers themselves. The test results on hypothesis H3 have proven to indicate that there is a critical impact between the value proposed to clients and consumer loyalty. The test results on speculation H4 have demonstrated to show that there is a huge impact between the picture of a brand and consumer loyalty. The test results on speculation H5 have demonstrated to show that there is a huge impact between item quality and shopper dedication, interceded by purchaser fulfillment. The test results on hypothesis H6 have proven to indicate that there is a significant correlation between customers' loyalty and their level of contentment. The test results for hypothesis H7 have shown that customer satisfaction, which is mediated by customer loyalty, has a significant impact on customer loyalty. The test results on speculation H8 have demonstrated to show that there is a huge impact between brand trust and purchaser devotion, interceded by buyer fulfillment. The test results for hypothesis H9 have shown that customer satisfaction has a significant impact on customer loyalty, which is mediated by the price. The test results on speculation H10 have demonstrated to show that there is a huge impact of the picture of a brand on purchaser loyalty, mediated by customer contentment. The test results on speculation H11 have demonstrated to show that there is a huge impact between item quality and purchaser unwaveringness, interceded by shopper fulfillment.

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