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# A Study on The Key Factors That Lead to Customer Satisfaction in Automobile Industry: A Case of Perodua

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## **ABSTRACT**

The Perusahaan Otomobil Kedua Sendirian Berhad (Perodua) is Malaysia's largest car Manufacturer. Perodua was established in 1992, with its headquarters office in Rawang, Selangor, and over 200 outlets in Malaysia. Perodua's mission is to provide Malaysians with total mobility through practical and high-value goods and services offered with the utmost care. In the very competitive auto market, manufacturers seek features for their new models to help them stand out from their competitors. In 2019, Perodua recorded the highest market share, which is 40% for the Malaysian vehicle market. This research analyzes the factors that make customers feel satisfied with purchasing from Perodua. The other aim of this research would be to recognize the current degree of consumer loyalty, to distinguish the connection between factors, and ultimately to give suggestions/recommendations on product improvement. A questionnaire would be carried out using a google form to a total of 100 respondents for data collection. This research found that vehicles' appearances, standing charges, resale value were related to customer satisfaction, while safety features did not significantly relate to customer satisfaction.

**Keywords:** Automobile Industry, Consumer Loyalty, Customer Satisfaction, Key Factors, Perodua

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## INTRODUCTION

The automotive industry is defined as all operations involved in producing motor vehicles (Binder, 2020). Malaysia's automotive industry is a vital and strategic component of our manufacturing sector. The automotive sub-sector is part of a larger ecosystem that includes main industries, manufacturing, support services, and after-sales. According to the government, Malaysia's automotive industry development has become a production hub for major automobile component manufacturers. Malaysia currently has roughly 800 automotive component manufacturers who produce a diverse range of components such as body panels, brake components, engine components, rubber components, and many more. Malaysia's automotive industry is a vital and strategic component of the nation's industrial economy. Malaysia's automotive industry ranks third among Southeast Asia and 23rd overall globally, with more than 500,000 vehicles produced each year in annual production output.

The establishment of the National Automobile Company (PROTON) in 1983 paved the way for Malaysia to emerge as a major player in the automobile industry in the following years. In October 1993, Perusahaan Otomobil Kedua Sdn. Bhd. (PERODUA) was determined following the success of the first national car to provide Malaysians with complete mobility through pragmatic and high-value products and services delivered with the utmost care. The Malaysian automobile manufacturer, Perodua, recorded new sales records in October 2021 by registering 27,858 vehicles that the Malaysia Book of Records has acknowledged, benefiting a wide range of Malaysian suppliers, dealers, and business partners. In comparison to Proton, Perodua has achieved considerable success in its business endeavors. So, in this research, customer satisfaction with Perodua products and services was evaluated in terms of safety features, vehicle appearance, standing charges, and resale value, and customer satisfaction with Perodua products in Malaysia will be analyzed to understand better how customers perceive the company's products and services.

According to one of the research projects by Koppel, Charlton, Fildes, and Fitzharris (2008), the most significant factor determining a consumer's choice of vehicle is safety. In the occasion of an unavoidable collision, car safety must consider the vehicle's design. Crumple zones, seat belts, and airbags are an example of safety features. This protection must work in real life and cover many speeds and accident objects. For example, Perodua uses Perodua Smart Assists Drive as a safety system to provide a safe experience to the users.

Next, the product appearance, which includes design elements such as exterior styling, interior styling, colour, and trim design and graphic design, has a significant impact on automotive sales. Perodua's new launch product, "Myvi", provides a youthful design with bright colours such as electric blue, lava red, and many more. Moreover, it also offers a versatile internal design that includes a "Power Mode Drive", a new meter design with a TFT display, voice recognition, etc.

Standing charges denotes the annual cost of road tax plus vehicle insurance (Flood-Page, Campbell, Harrington, & Miller, 2000). The road tax is a fee charged to vehicle owners for the privilege of using public roads. The tax rate varies according to the vehicle type, specifications, registered venue, ownership type, and purpose of the vehicle. In Malaysia, road tax is collected annually. The minimum road tax for an engine-driven car is RM20 for engines with 1,000 cc or fewer displacements. An insurance policy is a contract in which an insured person or entity receives financial protection or remuneration from an insurance company in case of a claim or loss. Perodua also

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provides insurance which is "Perodua Total Protect Plus". "Perodua Total Protect Plus" is a comprehensive insurance protection plan for all Perodua cars.

Next, resale value is the amount in which it is expected to sell in the future. When resale, many factors, including maintenance record, year made, modification, can affect the product value. According to Reed (2009), some cars degrade more quickly than others. For example, it's possible to recoup up to 60% of the original purchase price of an automobile after five years of ownership. However, another could have plummeted to 20% of its initial price.

According to Kotler and Armstrong (2008), customer satisfaction is defined as the degree to which a product's perceived performance matches a buyer's expectation. The perception of quality is a considerable factor influencing the success of automobile manufacturers today. Understanding the customer's perception of quality is the most crucial step in achieving the most significant advantage. Customer satisfaction in the automotive industry is essential to highlight. Satisfied customers will be more loyal. Thus, companies like Perodua should evaluate the service quality offered to the customer. Customer performance is vital in establishing a positive relationship between a brand and its consumers. It is essential to investigate how customers' awareness of variables such as safety features, vehicle appearance, standing charges, and resale value affects their satisfaction and loyalty from Perodua' customers. Therefore, this study aims to identify the relationship between variables, determine the satisfaction customers have with Perodua products and services and give recommendations to improve the deficiency.

## LITERATURE REVIEW

## The Development of Perodua

Perusahaan Otomobil Kedua Sdn Bhd (Perodua) enhances its research and development (R&D) team to design and create its own vehicles. Daihatsu is one of the major shareholders in Perodua, with a 20% stake. Daihatsu has decided to allow Perodua to take more part in the vehicle's design and development (The Star, 2015).

## **Customer Satisfaction**

According to (Kotler and Armstrong, 2017), customers are the major performers in the company's microenvironment. The overall value delivery system aims to service and build strong relationships with target customers (Rosli & Nayan, 2020). It is important to find new customers to replace lost customers business, business development, and expansion targeting new markets (Weinstein, 2001). This action is important because customer satisfaction results from customer experiences after consuming certain products (Kumar, 2018). This is also the reason why customer satisfaction is crucial, as it can lead to loyalty and repeat purchase (Mohd Nazri et al., 2020).

# **Safety Features**

ABS brakes, side-impact protection bars, and driver and passenger front airbags are included in car safety features that must be provided in every car (Nurhazwani, 2013). Vehicle safety systems are generally divided into active safety and passive safety. The research conducted by Shailesh (2014) proved that safety and security features become the main factor for customers using the car, which is at 24.759%. In supporting this claim, Barry (2018) also reported in the news article that about 51 percent of respondents planning to buy a new or used car said it was significant for the next car to have a rearview camera or stoppage warning. Other 45 percent said they wanted a blind-spot warning system in the survey that was managed in the U.S. So, it led to a hypothesis: H1: Safety features are positively related to customer satisfaction.

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## **Vehicle Appearances**

Customers are the greatest asset because every customer has unique experiences, a variety of skills, and opinions. The research conducted by the Chemical company Asahi Kasei Europe and the market research institute SKOPOS survey found that most customers are still concerned about the vehicle's interior design (54.8%) (Alton, 2021). Next, other studies also provide some observations of customer preferences. For example, about 44.8% of customers value interior surfaces that look high quality, and just 11.4% do not pay attention to the quality of surfaces (Muaddi, 2020). The conclusion comes to one hypothesis, which is:

H2: Vehicle appearances are positively related to customer satisfaction

## **Standing Charges**

Standing charges define the circulation tax and car insurance for a year (Nurhazwani, 2013). In Malaysia, the road tax rate was calculated depending on the engine size. For instance, an engine capacity of 1000cc and below costs RM 20.00 and up to RM 90.00 for engine sizes 1401cc to 1600cc (Ministry of Transport Malaysia, 2021). Meanwhile, car insurance, also known as auto insurance, is a type of insurance that covers loss or damage to any vehicle (The Economic Times, 2021). The reasonable price is based on age, license age, postal code, engine power, vehicle use, and claims history (Antonio et al., 2017). Since auto insurance plays a vital role to anyone who owns a car, Rudden (2022) states that in the U.S., there was approximately 203 million passenger car insured from 2007-2015. The conclusion comes to one hypothesis, which is:

H3: Standing charges is positively related to customer satisfaction

## **Resale Value**

Car depreciation is the price difference when we buy the car, and the price when we want to resale the car usually depends on the mileage, fuel economy, shifting customer preferences, condition, and reputation (Ramsey, 2020). It can be proved from the research carried out by Rashid et al. (2020) in Vietnam, and the customers determine the type of car to buy and buy based on their income level. Therefore, the trend of the majority of customers is toward a cheaper car price and a higher resale value (Phuong, Anh, & Rashid, 2020). Next, the research paper by Shailesh (2020) summarises that 0.883 respondents agreed that cars must have good resale value. So, the conclusion comes to one hypothesis, which is:

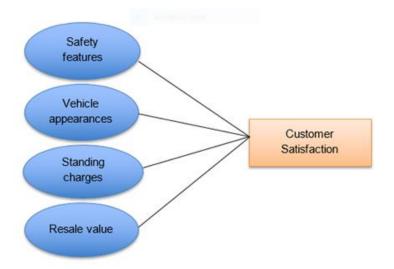
H4: Resale value positively related to customer satisfaction

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Figure 1. Research Framework



#### RESEARCH METHOD

## Sample and Procedure

The targeted respondents of this research were experienced and inexperienced in using Perodua cars. We expected the respondents to give their opinions about the car's criteria that fulfill their satisfaction. The sampling was taken from Malaysia and India, with 100 respondents. The Google Form questionnaire is used to collect the data, and we use the SPSS software to examine the data.

## **Measures**

We provide six sections of the questionnaire. Section 1 (demographic profile) contains seven questions in order to obtain the respondents' personal information such as gender, age, ethnicity, nationality, occupation, knowledge about Perodua, and lastly, their experiences buying a car from Perodua. For the rest of the sections from sections 2 to 6, the respondents are required to specify "1" for strongly disagree and "5" for strongly agree for every statement in the questionnaire based on their opinions and preferences. Section 2, 3, 4, and 5 in the questionnaire have the questions about the reasons why respondents feel satisfied with the cars from Perodua, which are a safety feature, vehicle appearances, standing charges and resale value, respectively. The last section is section 6, customer satisfaction toward Perodua. It contains three questions to assess customer satisfaction with their purchasing from Perodua.

For the statistical analysis, we use the IBM SPSS Statistics Regression analysis to discover the relationship between the independent variables (safety features, vehicle appearances, standing charges and resale value) and dependent variables (customer satisfaction). Next, SPSS is also used to analyze data by using reliability tests such as Cronbach's Alpha to determine whether the scale is reliable. The benchmark of Cronbach's Alpha of the results is presented in Table 1.

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Table 1. Benchmark of the Cronbach's Alpha

Cronbach's Alpha	Implied Reliability
α ≥ 0.90	Consider shortening the scale
$0.90 > \alpha \ge 0.80$	Very good
$0.80 > \alpha \ge 0.70$	Respectable
$0.70 > \alpha \ge 0.65$	Minimally acceptable
$0.65 > \alpha \ge 0.60$	Undesirable
0.60> α	Unacceptable

## **RESULTS**

**Table 2.** Summary of Respondent's Demography (N = 100)

	Frequency
Variable	and
	Percentage
Gender	
Female	71
Male	29
Age	
18-25 years old	60
26-33 years old	21
33-45 years old	16
45 years old and above	3
Nationality	
Malaysian	84
Indian	16
Occupation	
Government	22
Non-Government	17
Not student	12
Student	49
Do you know anything about Perodua?	
Yes	92
No	8
Have you ever bought any cars from Perodua before?	
Yes	78
No	22

To conduct a study on the main factors that lead to customer satisfaction in the Perodua automobile company's automobile industry, 100 respondents (N=100) answered the questionnaire questions. Respondents comprised 29 (29%) men and 71 women (71%). Most of the respondents consisted of those aged between 18 to 25 years old, which is 60 people (60%). There were 21 (21%) respondents aged between 26 to 33 years. Respondents aged 33 to 45 years are 16 people (16%), and the rest of those aged 45 years and above are only three people (3%). The respondents' nationality is divided into two, which are Malaysia and India. Respondents from Malaysia 84 people (84%), and respondents from India 16 people (16%). Respondent's occupation background also showed 22 respondents (22%) worked in the royal sector. Furthermore, about 17 (17%) respondents work in the non -governmental sector. 12 respondents (12%) were non-students. The remaining 49 respondents (49%) were students. 92 respondents (92%) out of 100 respondents had knowledge of Perodua, and as many as 8 respondents had did not know there had never heard of the Perodua company. 78 respondents had

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bought a Perodua vehicle, and only 22 respondents (22%) had never bought a vehicle from a Perodua company.

Table 3. Descriptive Analysis, Cronbach's Coefficients Alpha, And Zero-order

Variables	1	2	3	4	5
Safety features	0.619				
Vehicle appearance	0.579**	0.663			
Standing charges	0.588**	0.468**	0.865		
Resale value	0.421**	0.567**	0.630**	0.821	
Customer's satisfaction	0.472**	0.583**	0.567**	0.582**	0.845
Number of items	3	3	3	3	3
Mean	4.5219	4.3533	4.4600	4.2600	4.1852
Standard deviation	0.49754	0.64410	0.5872	0.72783	0.74265

## **Correlations of All Study Variables**

Table 3 above reveal the reliability test's results. The Cronbach's alpha based on standardized is important as it measures the internal consistency of the variables. The Cronbach's Alpha of the respective variables, safety features ( $\alpha$  = 0.619), vehicle appearance ( $\alpha$  = 0.663), standing charges ( $\alpha$  = 0.865), resale value ( $\alpha$  = 0.821), customer's satisfaction ( $\alpha$  = 0.845). Based on table 3, standing charges recorded the highest value of 0.865 compared to the lowest value of 0.619, recorded by the safety features. These findings show that the safety features and vehicle appearances are undesirable reliability. In contrast, elements of understanding charges, resale value, and customer satisfaction indicate very good reliability.

**Table 4.** Relationship Between the Independent and Dependent Variable

Model		Unstandardized Coefficients		Standardized Coefficients		
	В	SE	Beta	t	Sig	
1(Constant)	275	.560		492	.624	
Safety features	.113	.157	.072	.719	.674	
Vehicle appearance	.348	.117	.299	2.974	.004	
Standing charges	.313	.136	.245	2.307	.023	
Resale value	.241	.107	.234	2.259	.026	
Adjusted <b>R</b> <sup>2</sup>	.458					
$R^2$	.482					
Significance	.000					

a. Dependent Variable: Satisfaction

N= 100, \*p<0.05, \*\*p<0.01

From table 4 above, the regression coefficients between the dependent variable and the predictors (independent variables) are measured. The model consists of four main variables: safety features, vehicle appearances, standing charges, and resale value. Firstly, we will investigate the coefficient of determination ( $R^2 = 0.48$ ), which indicates that 48% of the variation in the dependent variable (customer's satisfaction) would be affected by the independent variables. Meanwhile, the other 52% were not explained by the independent variables.

Table 4 shows vehicle appearances have a p-value of less than 0.01, while standing charges and resale values have a p-value of less than 0.05. This indicates a significant relationship between these three predictors and the dependent variable. Moreover, the

b. Predictors: (constant), Safety Features, Vehicle Appearances, Standing Charges, Resale Value.

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vehicle appearances significantly impact the dependent variable, with a coefficient beta of 0.299, followed by standing charges ( $\beta$  = 0.245), then Resale Value ( $\beta$  = 0.234), and lastly, safety features with only 0.072. Consequently, the conclusion is that vehicle appearances are crucial in customer satisfaction with Perodua's cars. However, the p-value of safety features is 0.674, more excellent than 0.10. Accordingly, there is no significant relationship between safety features and customer's satisfaction, so H1 is rejected. Meanwhile, the other three hypotheses, H2, H3, and H4, are supported.

## DISCUSSION

In terms of regression analysis, the p-value of vehicle appearances is 0.004, lower than the significant level of 0.01. It portrays a positive and significant relationship between vehicle appearance and customer's satisfaction. Most customers would like to prioritize how the car looks on the outside more than the car's interior. Several people might leave their favorite model if it does not come in the desired color (Chandra, 2016). For instance, for someone who takes pride in their car, a sporty vehicle that looks sleek and has higher performance is a must (Sam, 2017). As for Perodua's latest car model, Perodua Ativa Av has an adequate balance between appealing and truculent (Arif, 2021). Arif (2021) also states that the Perodua Ativa model looks very cheerful yet adventurous. Therefore, there is no doubt that the first impression matters and styling is what people are into these days. The car's appearance is what pulls you towards it in the first place, so naturally, this will be the first thing you must look at (Syaheer, 2020).

Based on regression analysis, the p-value of standing charges has a p-value of 0.023, which is less than the significant level of 0.05. Thus, this shows that standing charges positively and significantly correlate with customer satisfaction. Standing charges supporting this result are fixed costs that have to be paid just to get the right to drive a car. It has to pay for this whether we use a car or not. Operating costs, depending on the actual use of the vehicle. They are flexible and can be influenced by changing driving behavior, finding a cheaper gas station, or improving the car. If you are a regular long-distance driver, handling costs will be your main concern. You can increase your financial burden by replacing diesel engines, driving at optimum speeds or avoiding stopping and going in city traffic. So, paying at the top of the scale for both fuels will cost around \$500 a year before you start using any energy. Ofgem (2016) proposed changes to curb fixed charges 2016. Still, most energy sources remain to add them. Nevertheless, an energy price limit limits the unit rates and fixed charges that a merchant can charge you for its standard variable tariff (Hutson, 2021).

Looking back at the regression analysis, the p-value of the resale value, which is 0.026, is also lower than the significant level of 0.01. Therefore, there is strong evidence that the resale value is positively related and significantly to the customer's satisfaction with Perodua's cars. This can be proven when to avoid huge losses with costs for your car. Resale value is very important to be made one of the aspect when you research to buy it. A car with a high safety rating and good gas mileage is very important, but you should also consider its value a few years from now (Marquit, 2015). The amount your car will earn is essential in the used car market. Those prices will cover half the amount of your new car. Therefore, if you get an excellent resale price, your loan for a brand-new car will be less than the actual price without selling your used car (Sarang, 2013).

Car lovers mostly like to choose the car's resale value as the most important factor when they want to purchase a car in Malaysia. This is due to the high taxes for car purchases in this country. Car prices in Malaysia are the second most expensive in Asia after Singapore. In Singapore, they have to buy a Certificate of Eligibility (COE), which is why cars are pricey. Since they are some car lovers who like to use the car for over five years

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and some also like to change the car after three years, car lovers will expect better resale value when they sell the car, and that is one of the reasons why the sale value has become one of the relatively important aspects when choosing a car (Dhina, 2021). This may be the reason why car companies such as Proton, Perodua, Honda, and Toyota covered about 81.9 percent of the Malaysian automotive market in 2019. Thus, 4 out of 5 cars on Malaysian roads belong to one of the four leading car brands featured in this report. It's no wonder why these four car brands outperform all the others- because they provide incredible value for money, highly reliable as they have been in the market for a long time, therefore, managed to gain consumer trust and retain most of the original price tag while reselling them (Arvind, 2020).

Safety features may affect customer satisfaction as they are crucial in choosing a new car (Nagra, 2021). Moreover, it also protects the customer's safety from unavoidable vehicle accidents. A car's safety features come in many features, such as seatbelts, airbags, and more. Of course, people cannot prevent car crashes from happening. However, a good car usually has better crash protection. From table 4, safety features produced a p-value of 0.674, bigger than the significance level of 0.1, portraying a vague relationship between safety features and customer satisfaction. Despite this, the present findings showed an insignificant positive relationship between safety features and customer's satisfaction. Thus, H1 was rejected.

Organizations must successfully increase and improve on the factors influencing consumer satisfaction to generate a positive customer response. Manufacturers in the production process can benefit from information sharing when they are willing to share strategic and tactical data, including inventory levels, forecasts, sales promotion methods, and marketing strategies (Cao & Zhang, 2013). Perodua should collaborate and exchange knowledge to enhance organizational knowledge and improve organizational performance. For example, Perodua can collaborate with other manufacturers from Malaysia or internationally, like Proton, Toyota, Honda, and Suzuki to hone more knowledge from others. As Muniz and O'Guinn (2001) echoed, customer satisfaction is mostly influenced by customers' involvement in the service production and delivery process. Consumers' unfavorable opinions should be considered, and any drawbacks should be addressed so that the company may utilize them as a source of incentive to manufacture higher-guality and higher-value products. Delivery quality refers to how the dealership delivers the core services (Berndt 2009: Berndt and Herbst 2006). For example, Perodua could give a clearer and easier pamphlet to grasp, especially for unfamiliar users who do not know vehicle safety features. This is one way for Perodua to communicate with consumers and give quality information about the product. This will allow people to prioritize safety features when purchasing a vehicle. Perodua should implement these strategies efficiently to compete with advanced automotive manufacturers. After that, Perodua should emphasize enhancing and refining customer satisfaction by directing service implementations. Upgrading a better service to customers will bring incredible economic paybacks to the company. Fostering an effective help quality and administration quide communication system is essential to ensure that customer satisfaction can be an esteemed asset for the association. Organizations should put unique accentuation on overhauling viewpoints to develop customers' further satisfaction since the way of life of the association fills in as a basic variable in the association's capacity to make esteem through utilizing great administrations to the customers.

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## CONCLUSION

In summary, only three independent elements are significant when evaluating automobile features, namely, vehicle appearance, standing charges, and resale value. In contrast, there is no statistically significant correlation between safety features and customer satisfaction. This demonstrates that safety features seem to have no impact on customer satisfaction with Perodua automobiles. This element likely does not impact customer satisfaction because not everyone has great knowledge and knows more about safety features. Typically, only male users who are knowledgeable about and concerned about vehicle safety features highlight this component. In contrast, female users are less tolerant of this aspect of the vehicle safety system. For customer satisfaction to be a valuable resource for the organization, improving the quality of the vehicle's exterior and making it more visually appealing is a critical approach. Moreover, there is a positive and significant relationship between vehicle appearance and customer satisfaction because most customers would usually prioritize how the car looks on the outside more than the car's interior. Furthermore, when it comes to car purchasing, a nice-looking car design and a fancy look are the first things people notice, and they help generate a strong first impression. Thus, H1 is rejected. Meanwhile, the other three hypotheses, H2, H3, H4, are supported. This shows that better quality of products appearance, standing charges, and resale value greatly influence and increase customer satisfaction.

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## **DECLARATION OF CONFLICTING INTERESTS**

The authors declared no potential conflicts of interest

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