



Examining customer's satisfaction towards national car attributes among Malay, Chinese and Indian

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ABSTRACT

Rapid entry of foreign or imported cars in the domestic market leaves Malaysian car manufacturers struggling to compete with their foreign counterparts. Despite of high sales, customer's satisfactions towards national car were low as compared to imported cars. This prompted the current investigation with the objectives to identify the most important automobile attributes influencing customer's satisfaction and also to determine the most appealing automobile attributes among major ethnic groups in Malaysia. This study employs survey approach where 370 responses were collected from car owners and drivers of national car in Klang Valley area. Results from the regression analysis showed that all variables namely safety feature, vehicle appearance, resale value and standing charges are related to customer's satisfaction. Thus, all hypotheses were accepted. Secondly, all major ethnic groups; Malay, Indian and Chinese were influenced mostly by safety feature. In addition, the result depict that Chinese has lower satisfaction level towards national car consumption as compared to other races.

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Introduction

Overview landscape of automotive industry in Malaysia

Globalization of the markets coupled with slow economic recovery changes the pattern of consumer purchase and consumption. The consumer buying process is a complex matter as many internal and external factors have an impact on the buying decisions of the consumer. Previous researches have attempted to understand people's needs and wants, decision making and satisfaction by studying customers respond to controllable marketing stimuli which are four P's: product, price, place and promotion. It also attempts to understand the buyer decision making process through uncontrollable factors such as economic, technological, political and cultural. These factors will enter the buyer's black box where individual's characteristics will influence buyer's decision process and turned into buying responses including buyer's satisfaction. In our research context, national cars are represented by Proton and Perodua specifically 1.3cc engine size models. The Malaysian auto market is dominated by these two government funded car manufacturers. Despite of high sales as compares with imported cars, local cars suffered from a reputation for unimaginative models and poor quality that has left it struggling to compete against Japanese and European car makers. Therefore, it is relevant to identify the most important automobile attributes influencing customer's satisfaction to Malaysian and differences between major ethnic groups.

The automotive industry in Malaysia can be considered as one of the most important and strategic industries in the manufacturing sector. Compared with other industries in the manufacturing sector in Malaysia, the automotive industry has been earmarked to boost the industrialization process so that Malaysia can be a developed nation by 2020 (Siti Iswalah Arshad, 2001). Thus the second phase of the development in the automotive industry was started with the launching of the

National Car Project, Perusahaan Automobil Nasional (PROTON), in 1984.

The PROTON project, which was a joint-venture programme with Mitsubishi Motors Corporation of Japan, began its production with the PROTON Saga model in 1985. After the success of the first national car, Perusahaan Otomobil Kedua Sdn. Bhd. (PERODUA) was established in October 1992. It was the result of an agreement between UMW Corporation Sdn. Bhd., Daihatsu Motor Co. Ltd of Japan, Med-Bumikar Mara Sdn. Bhd., PNB Equity Resources Corporation Sdn. Bhd., Mitsui & Co. Ltd of Japan and Daihatsu (Malaysia) Sdn. Bhd. In 2008, Perodua led the sales with 30.17% followed by Proton with 26.3% (Malaysian Automotive Association, 2008). However, based on a research done by J.D. Power Asia Pacific in 2009 regarding the Malaysia sales satisfaction towards national car, satisfaction level of national cars like Proton and Perodua are below the industry average as compared to imported cars like Toyota and Nissan. This implies that national car producer needs to improve its customer satisfaction in order to compete with imported cars.

Conceptualization of constructs and hypotheses

Safety Feature

Car safety feature includes ABS brakes, side impact protection bars and driver and passenger front airbags (Page et al, 2000). Car safety has to consider the design of cars which give everyone travelling in them effective protection should a collision prove unavoidable. This protection must function in real life and cover the most representative types of accident at a wide range of speeds and involving many different collision objects. Volvo established a reputation for safety that in its obvious extension meant a concern for their customers (Baltas and Saridakis, 2009).

H1: There is a significant positive effect of safety feature on consumers' satisfaction towards national car consumption

Vehicle Appearance

Cornet and Krieger (2005) have shown that aesthetic and identity related factors such as “exterior styling”, “interior styling”, “trendy” and “makes me feel attractive” are among the ten most important purchasing criteria for mid-sized sedans in Japan, Germany and the USA. Aspects such as aesthetic appeal, emotional response, brand impression and expression are heavily influenced by product appearance, and thus of main concern for automotive manufacturers today. The design elements include exterior styling, interior styling, and colour and trim design and also graphic design. Jordan (1998) found that properties of products that are salient in terms of influencing the level of pleasure/displeasure with a product include aesthetics, apart from traditional aspects such as features, usability, performance and reliability. Authors in a number of fields, from psychology (e.g. Norman, 2004) to design have offered a variety of viewpoints which provide insights into the complex nature of product experience and its relation to, e.g. meaning (Vihma, 1995), formal aesthetics (Muller, 2001; Warell, 2001), emotions (Desmet, 2002) and brand perception (Karjalainen, 2004).

H2: There is a significant positive effect of vehicle appearance on consumers’ satisfaction towards national car consumption

Standing Charges

Standing charges refer to the annual cost of road tax and vehicle insurance (Page et al, 2000). The road tax rate in Malaysia for engine size 1.3cc and below is around RM20 up to RM70 per year for petrol-based vehicle. The smaller the engine size, the lower the tax charges. As for insurance, increased in vehicle age would decrease the sum insured for the vehicle. In addition, leased vehicles require higher insurance coverage, because the lease contract places a greater financial burden on the lender, who wants to protect their investment (Washington State Auto Dealers Association, 2006).

H3: There is a significant positive effect of standing charges on consumers’ satisfaction towards national car consumption and finally

Resale value

Page et al (2000) conceptualized resale value of the car as a percentage of the purchase price after 3 years or 36,000 miles. Variety factors including consumer appeal, production levels, and whether buyers are paying over or under the sticker price determine a vehicle’s residual. Residual values play a major role in determining prices for car leases. A vehicle with a higher residual value requires customer to repay less, which results in lower monthly payments. According to Reed (2009), some cars depreciate faster than others. After five years, one car could be worth nearly as much as 60 percent of its initial purchase price. Another could have fallen to 20 percent of its starting value.

H4: There is a significant positive effect of resale value on consumers’ satisfaction towards national car consumption.

Customer Satisfaction of National Car

Customer satisfaction refers to a qualitative measure of performance as defined by customers, which meet their basic requirements and standards. Kotler and Armstrong (2008) conceptualized customer satisfaction as the extent to which a product’s perceived performance matches a buyer’s expectations. It can be determined through quality of product coupled with services provided. In the context of Malaysian made-car, a study by J.D. Power in 2009 indicates that satisfaction level towards national car is below industry average as compared with imported cars.

Customer expectations in the Malaysian market are definitely rising, and manufacturers and dealers must try to understand and meet these changing needs, while at the same time seeking new and innovative ways to please their customers,” said Taku Kimoto, GM of J.D. Power Asia Pacific, and Singapore. Moreover the independent CSI study measure customer satisfaction after 10 to 21 months of ownership that covers 77 attributes grouped in four factors (the importance of each factor is shown as a percentage): vehicle quality and reliability (32%); vehicle appeal (29%)—which includes performance, design, comfort, styling and features; dealership service satisfaction (19%); and cost of ownership (20%)—which includes fuel consumption, insurance and cost of service/repair.

Methodology

The data for this study were collected in Klang Valley area through self-administered questionnaires. The population of interest for this study was defined as those who own or drives national cars where most of the respondents were Proton and Perodua club members of various car models. This survey was distributed through convenience sampling technique to 370 respondents. The scales employed in this study are Likert Scale (5-point scale; 1=strongly disagree to 5=strongly agree) and dichotomous scale. The collected data were analyzed by using Reliability Analysis, Frequency Distribution, Descriptive analysis, Regression Analysis and Anova.

Sample characteristic

Out of the 400 questionnaires distributed 379 (94.75%) from were returned. An additional nine were rejected as there were numerous missing values. Thus, resulting in the actual number of response to be 370 (92.5%). Females and males made up 35.4% and 64.6% of the respondents respectively. Forty-two percent were enrolled in diploma programs, 35.9% for undergraduate programs and 13.5% for postgraduate program. The 24-28 age groups made up the largest group of respondents with 48.1%. This was followed by 35.7% for the 18-23 age group and 9.5% for the 29-35 age group. The remaining 6.8% were above the age of 36. The Malays consumers constituted the majority ethnic group with 83.2%, followed by 9.2% of Indians and 7.6% of Chinese.

analysis and findings

Table 1 Automobile Attributes according to Race

VARIABLES	RACES	MEAN	STD. DEVIATION	F	P
SAFETY FEATURE	MALAY	4.11	.712	3.464	.032
	INDIAN	3.78	.847		
	CHINESE	3.99	.583		
VEHICLE APPEARANCE	MALAY	3.62	.575	.440	.644
	INDIAN	3.54	.531		
	CHINESE	3.56	.512		
STANDING CHARGES	MALAY	3.41	1.144	1.011	.365
	INDIAN	3.67	1.186		
	CHINESE	3.58	1.089		
RESALE VALUE	MALAY	3.83	1.027	.667	.514
	INDIAN	3.70	1.087		
	CHINESE	3.64	.826		

From table 1, the p-value for safety feature is 0.032 which is less than 0.05. Therefore, race groups differs significantly in terms of safety feature. Meanwhile there are no differences among race groups for other variables. However, by looking at the descriptives analysis, all three major ethic groups were influenced by safety feature the most. For Malay group, this followed with resale value (3.83), vehicle appearance (3.62), and lastly standing charges (3.41). As for Indian, the second most

influenced factor was resale value (3.70) followed with standing charges (3.67) and lastly vehicle appearance (3.54). Meanwhile, Chinese group were influenced by resale value (3.64) followed with standing charges (3.58) and vehicle appearance (3.56). In sum, all races agreed upon safety features as the most influential automobile attributes towards satisfaction and purchases. The rationalizations of these chosen attributes are due to high accidental rates in Malaysia. One of the important safety features was seat belt (4.39).

Table 2 Satisfaction's Level According To Race

Race	Mean	Std.deviation	F	P
Malay	3.86	.65	1.82	.16
Indian	3.69	.60		
Chinese	3.67	.71		

Based on Table 2, the p-value is 0.162 ($p > 0.05$) which indicates the groups are homogeneous in terms of customer satisfactions. By comparing satisfactions' level among race groups, Malay group (3.86) has the highest satisfaction level towards national car. This followed by Indian group (3.69) and the lowest group is Chinese (3.67). This shows that Malay respondents are most satisfied with national car as compared with Indian and Chinese group. Overall, all means in satisfaction variables are moderate. It shows that all races were moderately satisfied with national car.

Before proceeding to correlation analysis and testing of the hypotheses, reliability analysis was performed for all the constructs (see, Table 3). The reliabilities of all the constructs are acceptable (above 0.7). This is considered acceptable as all the items used in the measurement are new. According to Hair et al (2003), coefficient range of 0.7 and 0.9 are considered high.

Table 3 Reliability Analysis for all constructs

Construct	Number of Constructs	Cronbach's Alpha
Customer's satisfaction	9	.87
Safety	6	.85
Vehicle appearance	17	.80
Standing charges	2	.73
Resale value	1	1.00

The multiple regression analysis was employed to test H1, H2, H3 and H4. The result of the multiple regression analysis is presented in Table 4. The model is significant (F value = 15.36, $p < 0.001$). The R^2 of 0.174, indicates that 17.4 percent of the variance in the customers' satisfaction towards national car consumption can be explained by four independent variables (safety, vehicle appearance, resale value and standing charges) while the other 82.6% were not explained by the independent variables. Even though R square of 17.4 percent is a bit low; however it is fairly sufficient to suggest the feasibility of the model.

Result from Table 4 also illustrates that four variables namely safety ($T=2.69$, $p < 0.05$), vehicle appearance ($T=3.53$, $p < 0.05$), standing charges ($T=2.66$, $p < 0.05$) and resale value ($T=3.56$, $p < 0.05$) were found to have a significant effect on consumer satisfaction towards national car. Thus, all four hypotheses are accepted where H1: *There is a significant positive effect of safety feature on consumers' satisfaction towards national car consumption*, H2: *There is a significant positive effect of vehicle appearance on consumers' satisfaction towards national car consumption*, H3: *There is a significant positive effect of standing charges on consumers' satisfaction towards national car consumption* and finally H4: *There is a significant positive effect of resale value on consumers'*

satisfaction towards national car consumption. Looking at beta in the standardized coefficients column, resale value has the highest beta value (0.177). Therefore, it can be concluded that resale value is the most influential factor in driving consumers' satisfaction towards national cars consumption.

Table 4 Multiple Regression

Independent Variables	Standardized Coefficient (beta)	T-Values	Significant
Safety	.148	2.69	.00
Vehicle appearance	.176	3.53	.00
Standing charges	.130	2.66	.00
Resale value	.177	3.56	.00
R^2	.174		.00
Adjusted R^2	.163		
F value	15.36		.00

Research Implication

The findings suggest that safety, vehicle appearance, standing charges and resale value play significant roles in influencing satisfaction towards national cars. It can be supported by previous researches done in the following area. The most influential factor in driving consumers' satisfaction towards national cars consumption is resale value. Surprisingly, by comparing automobile attributes among three major races (Indians, Chinese and Malays); all three races appealed more to safety features. This implies that safety features influenced customers' satisfaction towards national car consumption the most. Based on the finding, customers' satisfaction was in the range of moderate to satisfy. By comparing races, Malay group have highest satisfaction towards national car while Chinese have the lowest satisfaction level. It is suggested that local car manufacturer like Proton and Perodua tailoring marketing activities to these three major races whereby local car manufacturers should enhance safety features in the car design by emphasizing on seat belts, air bags and brake system through R&D.

As for vehicle appearance, local car producer should provide attractive exterior and interior design to cater to customer specific needs by emphasizing on sporty characteristics and design (spoiler, bumper, sport rim, sport meter, sport seats) and metallic paint. Moreover, resale value can be improved by including key features that could enhance resale value like product quality, good brand reputation through promotion and develop and sells second branded spare parts to customer. Cars with more safety features, high reliability ratings and neutral colours also tend to retain their value better than others. Customer's satisfaction could be improved by enhancing customer purchase experience through good and personalized service by sales representative, comfortable and good service ambience in the show room and efficient warranty and customer claim service offered by service center.

It is suggested that the future research should replicate this study by using random sampling technique and test the model in a diverse sample which in line with the national population distribution. Future research should try to obtain response from diverse groups of respondents especially from ethnic groups like Chinese and Indian. In addition, future research should consider studying other automobile attributes that have not been discussed in this research. This could give more conclusive findings to the research.

Conclusion

As a conclusion, when comparing the automobile attributes which are safety features, vehicle appearance, standing charges

and resale value, all four independent factors are found to be significant with resale value to be the most influencing factors. This indicates that these attributes have positive effect towards customers' satisfaction towards national car consumption. The weakest relationship observed was standing charges whereby it has weak positive relationship with customer satisfaction. This shows that standing charges have little influence on customer satisfaction towards national car. In short, it can be said that resale value has the strongest positive relationship with customer satisfaction towards national car consumption. Resale value is the most significant attribute influencing customer satisfaction due to leasing reason. It determines prices for car leases in the future whereby low resale value could lead to financial losses on part of purchaser. This is also due to the resale value of Malaysian car are higher as compares with imported car especially from European countries.

In addition, descriptive analysis was utilized in comparing mean between major ethnic groups and found that all groups were influenced the most by safety features in consuming national car. Meanwhile among race groups, Malay was most satisfied with national car followed by Indian and lastly Chinese.

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