



Consumer Behavior towards Safer Car Purchasing Decisions

Khairil Anwar Abu Kassim^{1,2,*}, Mohd Hafzi Md Isa¹, Yahaya Ahmad¹, Intan Osman² & Lawrence Arokiasamy²

¹ASEAN NCAP, Lot 125-135, Jalan TKS 1, Taman Kajang Sentral,
43000 Kajang, Selangor, Malaysia

²Faculty of Business & Information Science, UCSI University, No. 1, Jalan Menara
Gading, UCSI Heights, 56000 Cheras, Selangor, Malaysia

*E-mail: khairilanwar@miros.gov.my

Abstract. In Malaysia, the car safety level has been elevated through regulations and a consumer-based approach, i.e. the New Car Assessment Program in Southeast Asian Countries (ASEAN NCAP). Nevertheless, the availability of information on consumers' car purchasing decisions towards safety is still limited in Malaysia. Thus, this study was aimed at evaluating consumers' purchasing decisions of their present cars and investigating their awareness of ASEAN NCAP. Self-administered questionnaires were distributed among consumers visiting different car showrooms and dealer shops. The findings suggest that safety was considered as one of the top three factors by the respondents when purchasing their present cars. Awareness of ASEAN NCAP has increased as compared to a previous study. This information is essential for policy makers, manufacturers and other stakeholders to assist in setting priorities with regard to the promotion of car safety in the country.

Keywords: *ASEAN NCAP; consumer behavior; New Car Assessment Program; purchasing decision; safer car.*

1 Introduction

Malaysia is recognized as one of the largest automotive markets in the Southeast Asia (SEA) region and has vibrant production activities [1]. Vehicle ownerships for new and additional consumers in Malaysia showed promising figures in the year 2013, at 27% and 44% respectively. This shows that automobiles are becoming indispensable in daily life, which is a subject of interest in many intellectual sectors [2].

In addition, with enhanced consumers' insight into the field of car purchasing, this has created a strong competitiveness among automotive companies in providing 'ideal' cars that suit consumers. The way in which consumers think and react is being recognized as the key to current marketing success [3]. The buying process is a complex procedure that is influenced by the perceptions of

consumers [4]. Buying roles are important for marketers, as the act of purchase is dependent on different people besides the buyer.

There are many factors contributing to consumers' purchasing decisions of specific cars. Among those are price, brand, safety aspects, fuel economy, maintenance, reliability, interior and luggage space, performance, resale value and vehicle size [5-9]. In terms of the safety aspect, the demand for vehicles equipped with advanced safety technologies is expected to increase in Malaysia due to improved vehicle regulations imposed on new vehicles and establishment of a consumer-based initiative on vehicle safety-rating, known as the New Car Assessment Program for Southeast Asian Countries (ASEAN NCAP).

ASEAN NCAP was established in December 2011 as a collaboration effort between Global NCAP and the Malaysian Institute of Road Safety Research (MIROS) in view of elevating the degree of vehicle safety in the region [10]. Nevertheless, the information available on consumers' behavior regarding their purchasing decisions, especially towards safety and awareness of ASEAN NCAP, is rather limited. Thus, this study intended to achieve the following objectives:

1. To evaluate consumers' behavior towards car purchasing with respect to safety.
2. To investigate consumers' awareness of ASEAN NCAP and their source of information.

2 Methodology

Development of questionnaire. The questionnaire was adopted from a study recently conducted in Malaysia [5]. Generally, there are three main sections in the questionnaire. The first section primarily covers aspects related to consumers' purchasing decisions of their present cars based on 13 vehicle features. Respondents were asked to rate the importance level and rank the vehicle features if "very important" was chosen. A modification was made in this part, where the Likert scale was reduced to three (*unimportant*, *important* and *very important*) instead of five (*very unimportant*, *unimportant*, *neither*, *important* and *very important*).

As for the second section, respondents were asked to indicate their knowledge regarding ASEAN NCAP. An additional question was asked on their source of information, if respondents knew or had heard about ASEAN NCAP. The last section covers demographic profiles, including gender, age, driving experience, income, previously involved in accidents, and experience of being summonsed.

This particular questionnaire was also checked for face and content validity [5]. As for reliability testing, a pilot study was conducted among 30 selected respondents which yielded an acceptable Cronbach's alpha coefficient value of 0.834 (13 items in the first section).

2.1 Recruitment of Respondents

Respondents were informed about the study's purpose and they were also communicated their rights of participation. A random sampling technique was applied to select consumers visiting different car showrooms and dealer shops. In addition, to ensure the reliability of the information obtained from the respondents, the enumerators were recruited through a proper interview process and trained for data collection. The data collection was completed within a one month period (from 15th July 2015 to 15th August 2015).

2.2 Data Analysis

Out of the 130 respondents surveyed, only 103 respondents who met the inclusion criteria (i.e. main or joint decision-maker when purchasing their present car) were considered for further analysis. A number of descriptive analyses were performed in which the results were tabulated in tables and graphs. All of the analyses were performed using the Statistical Package for Social Sciences (SPSS) version 16.0.

3 Results

3.1 Demographic Profiles

The proportion of the respondents between males and females was almost even, being slightly higher for females (52.4%) (see Table 1). The respondents' age and driving experience recorded averages of 30.9 and 9.9 years respectively. In terms of household income, the majority had an income less than MYR3000. About 52% and 45% of the respondents had been involved in an accident and had the experience of being summonsed.

Table 1 Demographic information of the respondents.

	N (%)	Mean (Standard Deviation)
Gender		
Male	49 (47.6)	
Female	54 (52.4)	
Age Group		
17 to 25 years old	50 (48.5)	
26 to 35 years old	26 (25.3)	30.85 (10.65)
36 to 45 years old	10 (9.7)	
More than 45 years old	17 (16.5)	

	N (%)	Mean (Standard Deviation)
Income		
Below MYR2000	30 (29.1)	
MYR2001 to MYR3000	36 (35.0)	
MYR3001 to MYR4000	10 (9.7)	
MYR4001 to MYR5000	12 (11.7)	
More than MYR5000	15 (14.6)	
Driving Experience		
Less than 10 years	71 (68.9)	9.88 (8.85)
More than 10 years	32 (31.1)	
Involved in Road Accident		
Yes	53 (51.5)	
No	50 (48.5)	
Experience of Being Summoned		
Yes	46 (44.7)	
No	57 (55.3)	

3.2 Factors Influencing Car Purchasing Decisions

At least one of nine factors as listed in Figure 1 were considered by the respondents to be the “most important” factor when purchasing their present car. The remaining four choices, namely brand, interior or luggage space, resale value and warranty coverage, were considered by the respondents either only as “important” or “unimportant”. Based on Figure 1, price was ranked as the most sought factor (27%), followed by safety (19%), fuel economy (17%) and comfort (14%).

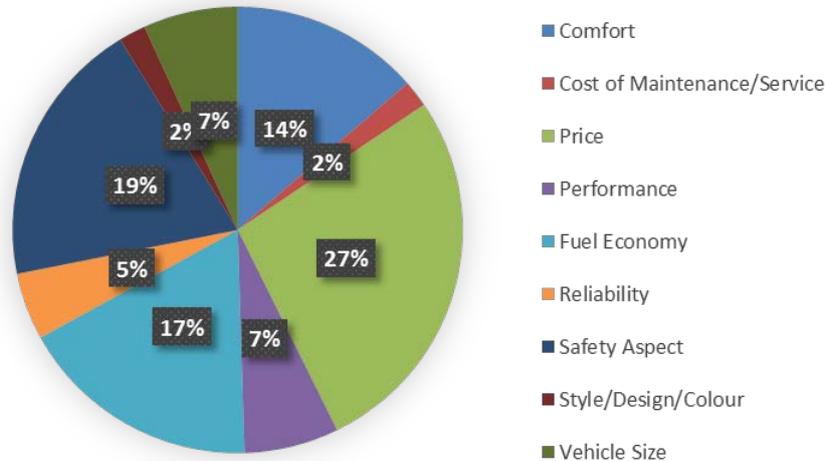


Figure 1 Factors considered most important by respondents when purchasing their present car.

3.3 Knowledge about ASEAN NCAP

Approximately 32% of the respondents had heard of or had certain knowledge regarding ASEAN NCAP, primarily from their friends and families, car dealers and social media such as Facebook and Twitter. Only about 3% of the respondents knew about ASEAN NCAP through its website, as shown in Figure 2.

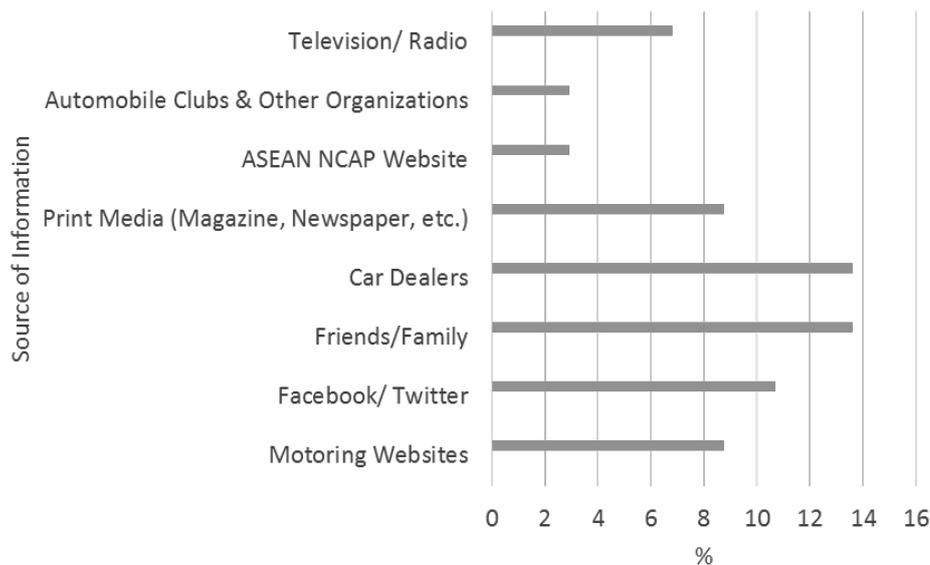


Figure 2 Sources of information referred by respondents.

4 Discussion

The results of the survey show that consumers perceive safety to be one of the most important factors when deciding to purchase their present cars, which is consistent with recent studies conducted in Malaysia [5] and western countries [6-9]. It shows that consumers are looking forward to presence of safety factors when buying vehicles, i.e. they are ready to pay extra to get a vehicle with much better safety levels. This is in line with a previous study, which showed that consumers are willing to pay more for airbags, an antilock-braking system (ABS) and electronic stability control (ESC) [9].

Improvement can be made of the questionnaire by including an element of consumers' willingness to pay (WTP) focusing on more advanced vehicle safety technologies (VSTs) such as autonomous emergency braking (AEB), lane departure warning (LDW), lane keep assist (LKA), blind spot technology

(BST), etc. These emerging VSTs have been shown to provide pertinent safety benefits in term of crash prevention. A proper WTP technique such as conjoint analysis or discrete choice modelling [11] has to be employed in order to avoid any potential bias that may arise.

The results also revealed that respondents considered price prior to safety. It has been shown in the literature that cash income has a direct and immediate impact on demand and price by the number of purchased goods [12]. Based on this study, this phenomenon may be partly due to the relatively high number of younger consumers, who generally belong to the low and middle income categories. It is hoped that this finding may trigger manufacturers to adopt essential steps to meet the requirements and needs of consumers from younger generations.

In addition, initiatives by manufacturers in providing affordable and safer vehicles are growing in Malaysia. Perodua Axia and Proton Iriz have been awarded with a 4-star and a 5-star ASEAN NCAP rating respectively. Both of these car models are the most affordable compared to other cars in similar categories, i.e. vehicle type and star rating [13]. This commendable effort can pave the way for a better road safety situation in the country.

Thus, it is essential to gauge consumers' awareness of ASEAN NCAP. This study shows that the awareness level has increased from 15.5% [5] to 32%. This may be partly due to recent ASEAN NCAP road tour promotion covering the Central, Northern and Southern Regions of peninsular Malaysia, involving not only the public but also academicians and students. The utilization of ASEAN NCAP ratings is expected to increase due to the road tour initiative that is planned to be conducted bi-annually plus potential engagement with vehicle manufacturers through Corporate Social Responsibility (CSR).

Although this research has resulted in interesting findings, certain limitations do exist, owing to the modest sample size. A future study will include more samples to better represent the studied population. Also, adding the opinions and views of consumers as well as manufacturers through qualitative analysis can lead to further areas of investigation regarding perceived safety and car purchase decision-making.

5 Conclusion

Overall, the findings obtained from this study have shown that consumer demand for safer vehicle looks promising in Malaysia. Knowledge regarding consumers' purchasing behavior is important for manufacturers to attain their target in the market. It is recommended to extend this study to other ASEAN

countries in order to better understand the various spectra of consumer behavior in buying private cars.

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