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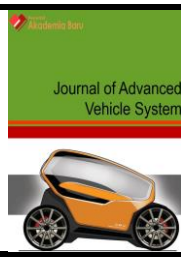

The Comparison of Intention to Purchase Safer Car Between Malaysia and Indonesia: An Application of Theory of Planned Behaviour

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ABSTRACT

Due to the rise of car culture, cars have become faster and smarter. Every vehicle has different features to ensure the safety of the car, with most of the cars were equipped with advanced safety features. There is a rapid urbanization and motorization in Malaysia and Indonesia. Hence, this paper presents the comparison of the behavioural intention to purchase safer cars between Malaysia and Indonesia based on Theory of Planned Behaviour (TPB). A questionnaire survey was conducted to identify consumers' behaviour. The questionnaires were distributed in Malaysia and Indonesia with 500 each. An application of TPB is used for this study. The results indicate that Malaysians shows more positive attitude and greater perceived behavioural control compared to Indonesians, hence Malaysians have stronger intention to purchase safer vehicles. Otherwise, social pressure has a greater impact on Indonesians to convince them in safer car purchasing because they are high in numbers for the overall percentage compared to Malaysians.

Keywords:
ASEAN NCAP; Vehicle Safety; Road Safety;
Purchase Intention; Road Traffic Accident;
Theory of Planned Behavior

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1. Introduction

Road users in low- and middle- income countries are vulnerable to die twice as likely in a traffic accident. Urbanization and motorization in these low- and middle- income countries are in rapid growth together with their economy [14]. Hence, their infrastructure development, policy changes and level of enforcement are not directly proportional to the increased vehicle use. Different from the high-income countries, they managed to dramatically reduce traffic deaths by keeping their infrastructure safer, improving vehicles' safeties, and ensuring their enforcement level is in pace with the number of vehicles.

According to the World Bank Group, Hong Kong, Japan, South Korea, Taiwan and Singapore are the countries in East Asia that have transited from middle to high-income countries, while Malaysia

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and Indonesia are still caught in the middle-income and lower middle-income trap [13]. In 2017, Indonesia is believed to be one of the emerging countries with the deadliest roads [10]. Latest population of Indonesia in the year of 2018 is 267,276,884 people which is equivalent to 3.5% of the total world population.

While Indonesia is ranked as the ninth country in the world with the riskiest roads, Malaysia is ranked third. The current population of Malaysia is 32,111,434 as of Sunday, September 2, 2018. With a death rate of about 23 per 100,000 population, approximately 7,000 to 8,000 Malaysians die on the roads every year [10]. Transport Minister Datuk Seri Liow Tiong Lai stated that a total of 7,152 people died in Malaysia in 2016.

In accordance with the continuous death rates, both Indonesia and Malaysia should look towards decreasing their traffic-related death rate in order to become well developed countries. Vehicle safety standards must be elevated in achieving safe road traffic. Malaysian Institute of Road Safety Research (MIROS) states that safety is one of the main factors with braking system as the most important preferences by consumers.

2. Study Objective

This research aims to analyze the differences of consumers' behavioral intention in purchasing safer cars between Malaysia and Indonesia with the application of Theory of Planned Behavior.

The objectives of this research are:

i. To compare the consumer's attitude in purchasing a safer car between Indonesia and Thailand.

ii. To compare the subjective norms among consumer's intention in purchasing a safer car between Indonesia and Thailand.

iii. To compare the perceived behavioral control among consumer's intention in purchasing a safer car between Indonesia and Thailand.

3. Methodology

3.1 Data Acquisition

A primary data has been used in this research. A self-administered questionnaire has been distributed to selected sample. The sample consisted of engineers, scientists, government officers, lecturers, and self-employed person. The questionnaires contained a few demographic questions such as gender, age, marital status, and several other questions to create a profile for each respondent in this research. There were also several Likert-type scales of questions about the respondent's experience in road traffic accidents and their intentions to purchase safer cars. Respondents were asked to range themselves such as from strongly disagree (1) to strongly agree (5), very unimportant to most important, very impossible to very possible and other ranges.

3.2 Theory of Planned Behavior

In 1985, the Theory of Planned Behavior (TPB) is proposed by Icek Ajzen that is developed from the theory of reasoned action [2]. TPB is implemented when a researcher aims to understand consumer's intention or decision making. Human behavior is difficult and complex to be understand but it can be interpretable with an extreme concern on biological and environmental factors on behavior. Therefore, social attitude and personality trait played a big part in explaining human behavior. Figure 2 depicts the conceptual framework of theory of planned behavior for this research.

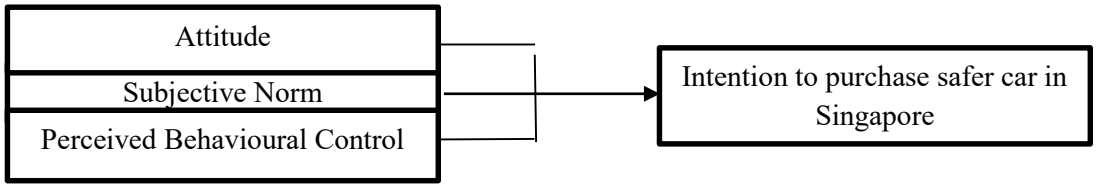

Fig. 2. Conceptual Framework of Theory of Planned Behaviour

The first predictor variable is Attitude. Attitude is when a person evaluates their behavior of interest favorably or unfavorably [7]. Secondly, Subjective Norm is a belief for a person to perform a given behavior as expected by significant others [1]. Significant others refer to the group of people that can influence one's intention in making decision. Other than that, subjective norm and attitude is independent. People can favor a given behavior but perceive social pressure not to perform it. Lastly, Perceived Behavioral Control is the perception of the ease or difficulty of a person to perform the behavior of interest. LaMorte adds that a person usually results having varying perceptions of behavioral control depending on the situation.

To apply the TPB, construct domain and measurement items are adapted from several researchers [3,4,5,6,8] is shown in Table 1.

Table 1
Adapted Construct Domain and Measurement Items

Construct	Literature Source
Attitude (ATT) [4 items]	ATT1 [5] ATT2 [8] ATT3 [5, 8] ATT4 [5, 8]
Subjective Norms (SN) [6 items]	SN1 [5, 8] SN2 [5, 8] SN3 (Explanatory study) SN4 [8] SN5(Explanatory study) SN6 (Explanatory study)
Perceived Behavioral Control (PBC) [5 items]	PBC1 [8] PBC2 [1] PBC3 [4] PBC4 [4] PBC5 (Explanatory study)
Purchased Intention (PI) [3 items]	PI1 [3] PI2 [3] PI3 [3]

Khairil Anwar et al. [6] also stated in their research that the hypothesis for this construct is proposed as follows:

H_1: There is a positive correlation between attitude and intention to purchase safer car.

H_2: There is a positive correlation between subjective norm and intention to purchase safer car.

H_3: There is a positive correlation between perceived behavioral control and intention to purchase safer car.

4. Results and Discussion

Data comparison between Malaysia and Indonesia is performed to see the differences of behavioral intention among the consumers. 18 questions in total will be analyzed from four TPB constructs which are attitude, subjective norms, perceived behavioral control and consumers' purchase intention to see how Malaysians and Indonesians engage in safer car purchasing behavior.

3.1 Attitude

For the first determinant of TPB, four questions were asked regarding the consumer's attitude. Figure 3 represents the total scores for attitude in both countries. The bar chart shows that Malaysia has higher scores in terms of the four questions asked. In overall, Malaysia has more positive attitude in purchasing safer vehicles compared to Indonesia.

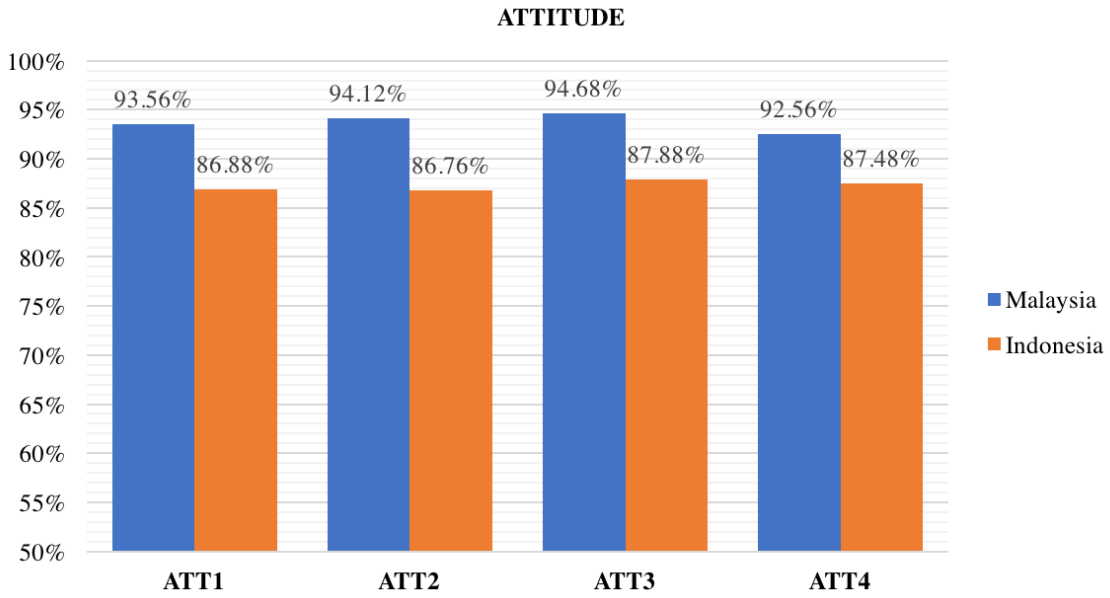

Fig. 3. Bar Chart for Attitude in Malaysia and Indonesia

3.1.1 Attitude 1

In the first question, consumers were asked to give their opinion on the importance of buying safer vehicles. Malaysians show more positive attitude with 74.8% of them strongly agree that buying safer vehicles are important, which is higher from the Indonesia people by 17.6%. The scores summary for ATT1 for both countries are shown in Table 2.

Table 2
The Summary of Scores for ATT1

For me, buying a safer car is	Malaysia	Indonesia
Very Not Important	0.6%	0.2%
Not Important	0.6%	0.2%
Moderate	4%	21.8%
Important	20%	20.6%
Very Important	74.8%	57.2%

3.1.2 Attitude 2

The second question asked the consumers' opinion on whether it is a stupid or smart decision to purchase safer vehicles. From Table 3, 76.2% of Malaysians agreed that purchasing a safer vehicle is a very smart decision, while only 51% of Indonesians hold the same position.

Table 3
The Summary of Scores for ATT2

For me, buying a safer car is	Malaysia	Indonesia
Very Stupid	0.6%	0.2%
Stupid	0.4%	1.2%
Moderate	3%	19.2%
Smart	19.8%	28.4%
Very Smart	76.2%	51%

3.1.3 Attitude 3

In the third question, the consumers were asked whether purchasing a safer vehicle is good or bad. None of the respondents in both of the countries agreed that purchasing a safer vehicle is a very bad decision, of which is a good and positive attitude. In total, 94.68% of Malaysians and 87.88% Indonesians shared the same opinion that it is a very good decision to purchase safer vehicles.

Table 4
The Summary of Scores for ATT3

For me, buying a safer car is	Malaysia	Indonesia
Very Bad	0	0
Bad	0.6%	0.4%
Moderate	3.4%	18%
Good	18%	23.4%
Very Good	78%	58.2%

3.1.4 Attitude 4

The last question regarding the consumers' attitude asked about the usefulness of purchasing safer vehicles. Indonesian people showed a very good attitude because none of them agreed that purchasing safer vehicles are very useless. However, in general, purchasing safer vehicles are more useful to Malaysian because 70% agreed so, compared to only 56% Indonesians that shared the same opinion.

Table 5
The Summary of Scores for ATT4

For me, buying a safer car is	Malaysia	Indonesia
Very Useless	0.4%	0
Useless	0.8%	0.6%
Moderate	4.4%	17.4%
Useful	24.4%	26%
Very Useful	70%	56%

3.2 Subjective Norms (SN)

The second determinant of TPB analyzes a person's beliefs about whether peers and important people to the person engage in his/her behavior to purchase a safer vehicle. Six questions were asked in this section and four out of six indicated that Indonesians have a higher score. It is shown in Figure 4 that Indonesian people hold the opinion that they are influenced by others better than Malaysians.

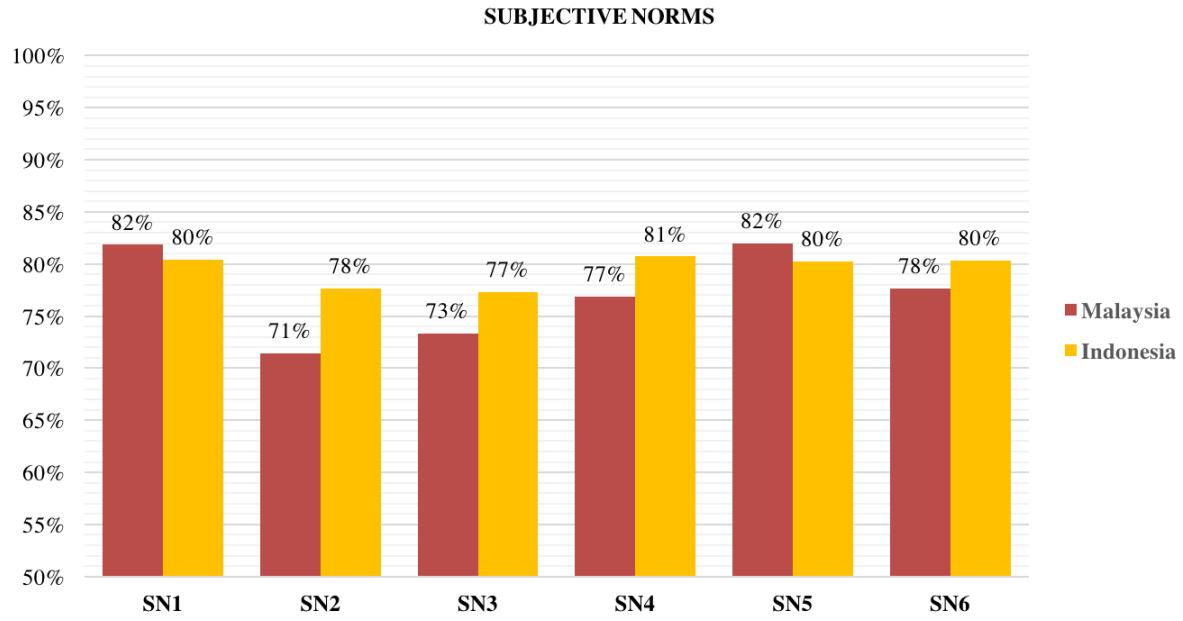

Fig. 4. Bar Chart for Subjective Norms in Malaysia and Indonesia

3.2.1 Subjective Norms 1

Family members played a big role in giving influence and encouragement because they are the people who are genetically closest to us. In the first question, consumers were asked whether encouragement and support from their family members influenced them to purchase safer vehicles. According to Figure 4, the overall percentage shows that Malaysians were more influenced by family members 2% higher than Indonesians. This may be due to a better relationship that Malaysians have with their family, or Indonesian people are more independent and they do not let themselves get worked up by the idea from their family members. Table 6 summarizes the scores for each scale.

Table 6
The Summary of Scores for SN1

Encouragement by my family members influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	2.8%	0.6%
Disagree	4.8%	1.6%
Moderate	17.6%	28.6%
Agree	30%	33.4%
Strongly Agree	44.8%	35.8%

3.2.2 Subjective Norms 2

To some people, friends may be more important than family. And sometimes friends trump family in giving ideas and support. Therefore, Subjective Norms 2 asked consumers on their opinion of encouragement from their friends or colleagues in purchasing safer vehicles. Indonesians appear to have their friends or colleagues to be more influencing for them to buy safer cars compared to Malaysians. Figure 4 indicates that 78% of Indonesians were more influenced and 71% of Malaysians are in accord.

Table 7
The Summary of Scores for SN2

Encouragement by my friends or colleagues influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	5.4%	1.8%
Disagree	7.4%	1.4%
Moderate	34.2%	32.2%
Agree	30.8%	35.8%
Strongly Agree	22.2%	28.8%

Table 7 also shows that the choice 'strongly disagree' and 'disagree' were chose higher by Malaysians with 5.4% and 7.4% respectively. On the other hand, the choice 'agree' and 'strongly agree' were chose higher by Indonesians with 35.8% and 28.8% respectively.

3.2.3 Subjective Norms 3

The third question under Subjective Norms analyzes whether sales person gives influence to consumers. Sales person often serve as a critical nexus between retailers and customers by providing information and service that assist customers during the purchase process. By looking at the scores percentage in detailed in Table 8, 38% of Malaysians rated 'agree' that sales person have an impact on them. However, 77% of Indonesians were more influenced by sales person to purchase safer cars compared to Malaysians with only 73% as the overall percentage (see Figure 4). Sales person in Indonesia might give a better information to influence respondents in safer car purchasing compared to sales person in Malaysia.

Table 8
The Summary of Scores for SN3

Information from sales person influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	3.6%	1.2%
Disagree	8.4%	2.4%
Moderate	27.8%	33%
Agree	38%	35.4%
Strongly Agree	22.2%	28%

3.2.4 Subjective Norms 4

The next question asked the consumers about the effect media have on their intention to purchase safer car. Media plays a very important role and has influence in virtually every aspect of our lives. Newspaper, magazine, radio, television and internet are the different types of media. Therefore, this question asked consumers whether information from media influence them to buy safer cars. Results from Figure 4 shows that there are 82% of Malaysians and 80% of Indonesians are affected by information from media. The results show there is only 2% difference between the two countries but Malaysia is perceived to be more affected. Table 9 summarized the scores for this question.

Table 9
The Summary of Scores for SN4

Information from media influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	5.8%	0.8%
Disagree	4.8%	1%
Moderate	22.6%	25.4%
Agree	33%	39.4%
Strongly Agree	33.8%	33.4%

There is a small difference for the 'strongly agree' option between the two countries. However, Malaysia is higher in percentage for the 'strongly disagree' and 'disagree' option. This may be because a few Malaysians were not greatly affected by media, hence media does not have the power to influence their thoughts.

3.2.5 Subjective Norms 5

The fifth question asked consumers about what did they think of their family members who own safer cars. From Figure 4, 82% of Malaysians and 80% of Indonesians appear to be influenced to buy safer cars by their family members who own safer cars. This result is in accordance with the result in subjective norms 1, where the percentage of Malaysians and Indonesians who were influenced by their family members are exactly the same.

Table 10
The Summary of Scores for SN5

My family members who own safer cars influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	1.6%	0.8%
Disagree	3.4%	2.4%
Moderate	19.8%	26%
Agree	33.8%	36.4%
Strongly Agree	41.4%	34.4%

3.2.2 Subjective Norms 6

In the last question, consumers were asked whether their friends or colleagues who own safer cars influence them to buy a safer car. This is because, people pay attention to the things around them and the circumstances can shape them. Hence, respondents can be affected when their friends or colleagues own safer cars. Indonesians are higher by 2% from Malaysians (see Figure 4). By referring to Table 11, there are 36.2% of Indonesians who rated the 'strongly agree' option, while there are 33% of Malaysians who hold the same position.

Table 11
The Summary of Scores for SN6

My friends or colleagues who own safer cars influence me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	2.4%	1%
Disagree	5.2%	1.4%
Moderate	27.2%	28.6%
Agree	32.2%	32.8%
Strongly Agree	33%	36.2%

On the other hand, there are 7.6% of Malaysians who strongly disagree and disagree that their friends and colleagues who own safer cars can influence them, which is the percentage is higher than Indonesians. This may be because Malaysians are easier to imitate and perceive their family member's action compared to their friend's (see Subjective Norms 1 and 5).

3.3 Perceived Behavioral Control

The third determinant of TPB is perceived behavioral control (PBC). PBC in this study refers to the consumers' perception about their ability to perform the behavior of interest, i.e., purchasing safer vehicles. Five questions that varies across situations and actions were asked towards the respondents.

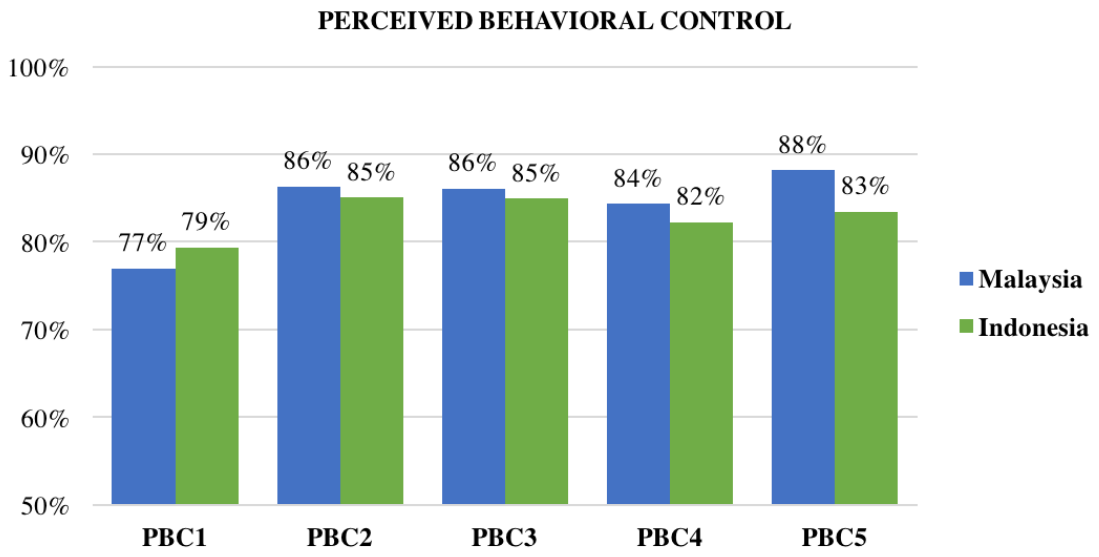

Fig. 5. Bar Chart for Perceived Behavioral Control in Malaysia and Indonesia

Figure 5 depicts the overall percentage for both countries. Indonesia exceeded Malaysia's scores for the first PBC by 2%, while Malaysia surpassed Indonesia for PBC2, PBC3, PBC4 and PBC5. To a large extent, Malaysians have the greatest perceived control causing the intention to purchase safer car to be stronger. However, there is no much differences in percentage indicating that both countries almost perceived the same behavior. Each PBC will be explained in detail.

3.3.1 Perceived Behavioral Control 1

In the first question of PBC, consumers were asked about their ability in safer car purchasing. The ability here means that they can afford to purchase safer cars. From Table 12, Malaysia gives a higher percentage in rating the 'strongly disagree' and 'disagree' option, indicating that 7% of Malaysians think that they do not have enough money to pay for a safer car.

Table 12
The Summary of Scores for PBC1

I can afford to buy safer car	Malaysia	Indonesia
Strongly Disagree	1.8%	1.2%
Disagree	6%	2%
Moderate	28.6%	31%
Agree	32.8%	30.4%
Strongly Agree	30.8%	35.4%

Conversely, safer car seems to be more affordable towards Indonesians because there are 65.8% of Indonesians who rated 'agree' and 'strongly agree' that they can afford it. This may be because of the differences in price for safer cars and the cost of living in each country. According to Petrány [9], many Malaysian spec car lacks in many safety features but still sold at high price, hence cars that is equipped with better safety features must be sold at a higher price.

3.3.2 Perceived Behavioral Control 2

Previously, subjective norms analyze the social pressure that consumers have to buy a safer car. However, the second question of PBC analyzes whether consumers make decision for themselves and does not get influenced by another people. There is a small difference in the percentage between both of the countries. There are 86% of Malaysians and 85% of Indonesians appear to make decisions for themselves (see Figure 5). The small difference show that the respondents are independent and their decision to buy a safer car solely depends on them.

Table 13
The Summary of Scores for PBC2

Decision to buy a safer car solely depends on me	Malaysia	Indonesia
Strongly Disagree	1%	0.4%
Disagree	1.8%	0.8%
Moderate	14.6%	18.6%
Agree	30%	33.6%
Strongly Agree	52.6%	46.6%

3.3.3 Perceived Behavioral Control 3

Majority of people may be convinced if there are reduction in tax for car equipped with better safety features since cars can be incredibly costly due to the tax imposed. Hence, PBC3 analyzes which countries were more influenced about tax reduction in safer cars. Figure 5 indicates that Malaysians were more affected to purchase safer cars if there are tax concessions. Although Malaysia is leading with 86%, Indonesia is only lower by 1% (see Figure 5). Detailed percentage is summarized in Table 14.

Table 14
The Summary of Scores for PBC3

Tax reduction for car equipped with better safety features convince me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	0.6%	0
Disagree	2.4%	1%
Moderate	15.8%	21.2%
Agree	28.4%	30%
Strongly Agree	52.8%	47.8%

EuroNCAP said that car tax concessions to vehicles with a five-star safety rating is one of the ways to increase consumer uptake of safer vehicles [11]. This proves why 52.8% of Malaysians and 47.8% of Indonesians strongly agree that tax reduction for car equipped with better safety features convince them to buy safer cars.

3.3.4 Perceived Behavioral Control 4

Other than taxes, the next question analyzes consumers' opinion on whether insurance reduction can also convince them in safer cars purchasing. In Figure 5, both Malaysia and Indonesia were high in numbers indicating that insurance reduction convince them with the overall percentage of 84% and 82% respectively. The scores summary is shown in Table 15.

Table 15
The Summary of Scores for PBC4

Insurance reduction for car equipped with better safety features convince me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	1.6%	1%
Disagree	2.8%	0.8%
Moderate	17.6%	26.2%
Agree	28.4%	30%
Strongly Agree	49.6%	42%

3.3.5 Perceived Behavioral Control 5

Car manufacturers also played a big role in ensuring consumers are safe and satisfy with the safety features that comes with the car. Consideration by car manufacturers to elevate the safety of the vehicles might have an impact on consumers. In this way, consumers will be more confident to

spend on safer vehicles even if it costs more than going for an unsafe car. Hence, this question analyzes whether consideration by car manufacturers on safety convince them to buy safer cars. Table 16 shows the summary of scores for PBC5.

Table 16
The Summary of Scores for PBC5

Consideration by car manufacturers on safety convince me to buy a safer car	Malaysia	Indonesia
Strongly Disagree	0.8%	0
Disagree	0.8%	0.8%
Moderate	9.2%	24.2%
Agree	35.2%	32.2%
Strongly Agree	54%	42.8%

3.4 Purchase Intention

This part of the study analyzes the dependent variable of TPB. The general rule of TPB is as attitude and subjective norm becomes more favorable and perceived behavior control becomes stronger, the purchase intention becomes stronger (University of Twente, 2004). Figure 6 shows the overall percentage of the consumers' intention in purchasing safer vehicles in both countries.

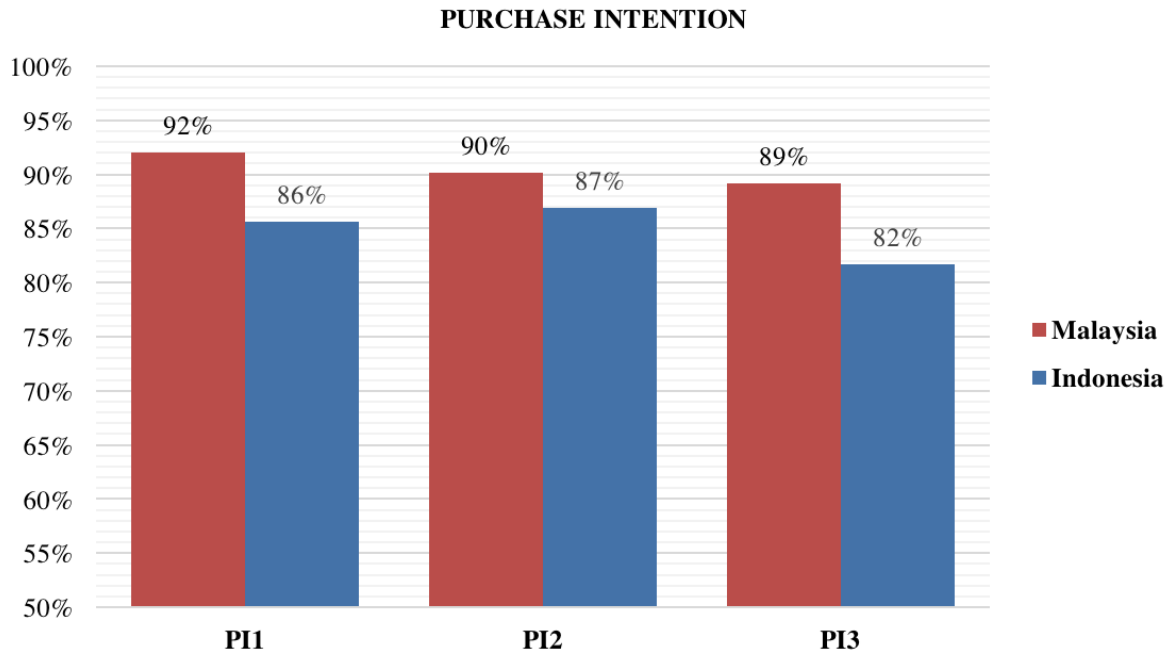

Fig. 6. Bar Chart for Purchase Intention in Malaysia and Indonesia

3.4.1 Purchase Intention 1

The first question analyzes the respondents' plan in the next 5 years. It is expected that 68.8% of Malaysians and 49% of Indonesians strongly agree that a safer vehicle is included in their five-year plan if they are planning to purchase a car (see Table 17). The higher number in Malaysia may be due

to the better exposure and encouragement they receive from their surroundings about safer vehicles compared to Indonesians, hence they are convinced enough to make a purchase in the future.

Table 17
The Summary of Scores for PI1

If I plan to buy a car in the next 5 years, I will buy a safer car	Malaysia	Indonesia
Very Impossible	0.4%	0.2%
Impossible	0.6%	0.4%
Moderate	6.4%	19.4%
Possible	23.8%	31%
Very Possible	68.8%	49%

3.4.2 Purchase Intention 2

Aware of the importance of safer vehicles to be on the road, 61.4% of Malaysians and 52.8% of Indonesians rated 'very possible' for them to purchase a safer car as their next car (see Table 18). On the other hand, 0.4% of Malaysians rated 'very impossible' for safer car to be their next car compared to zero respondents from Indonesia. This may be because purchasing another car was never an option to them, hence they could not make it possible to purchase a safer car as their next car. The scores were summarized in Table 18.

Table 18
The Summary of Scores for PI2

Most likely, my next car would be a safer car	Malaysia	Indonesia
Very Impossible	0.4%	0
Impossible	0.8%	0.6%
Moderate	7.8%	17%
Possible	29.6%	29.6%
Very Possible	61.4%	52.8%

3.4.3 Purchase Intention 3

Since purchase intention is affected by social pressure, respondents might feel the need to acquiesce with the preferences of purchasing safer vehicles. This can lead them to persuade and convince others in the same way. Therefore, this last question in Purchase Intention asked whether respondents will propose other people to purchase a safer car. From Figure 6, there is a possibility that 89% of Malaysians and 82% of Indonesians will carry out the behavior.

In subjective norms, Malaysians were more influenced by the encouragement from their family members while Indonesians were more influenced by friends or colleagues, sales person, media, tax and insurance reduction, and car manufacturers. However, it is more possible for Malaysian people to encourage and propose to other to purchase a safer car. Table 19 shows the summary of scores for PI3.

Table 19
The Summary of Scores for PI3

I will propose to other people to purchase a safer car	Malaysia	Indonesia
Very Impossible	0.2%	0.6%
Impossible	0.4%	2%
Moderate	19.4%	25.2%
Possible	31%	32.6%
Very Possible	49%	39.6%

5. Conclusions

The main objective of this research in analysing the differences of consumers' behavioural intention to purchase safer car between Malaysia and Indonesia have been successfully achieved with the application of theory of planned behaviour. Attitudes, subjective norm and perceived behavioural control influence the consumers' purchase intention in Malaysia and Indonesia differently. The effect of attitude and perceived behavioural control are stronger and greater in Malaysia, while subjective norms are better in Thailand. This results in a better purchase intention among Malaysians.

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References
[1] Ajzen, Icek, P. Lange, A. Kruglanski, and E. Higgins. "Handbook of theories of social psychology." *Chapter* 21 (2012): 438-460.
[2] Ajzen, Icek. "The theory of planned behavior." *Organizational behavior and human decision processes* 50, no. 2 (1991): 179-211.
[3] Emsenhuber, E. M. "Determinants of the acceptance of electric vehicles." PhD diss., Master Thesis). Retrieved from http://pure. au. dk/portal-asb-student/files/50709099/THESIS. pdf, 2012.
[4] Hong, Yong Hoe, Nasreen Khan, and Muhammad Madi Abdullah. "The determinants of hybrid vehicle adoption: Malaysia perspective." *Australian Journal of Basic and Applied Sciences* 7, no. 8 (2013): 347-454.
[5] Kelkel, R. (2015). Predicting consumers' intention to purchase fully autonomous driving systems - Which factors drive acceptance? Retrieved from http://repositorio.ucp.pt/bitstream/10400.14/17252/1/Reiner_Kelkel_152112329.pdf
[6] Kassim, Abu, Khairil Anwar, Lawrence Arokiasamy, Mohd Hafzi Md Isa, and Chieng Heng Ping. "Intention to Purchase Safer Car: an Application of Theory of Planned Behavior." *Global Business & Management Research* 9 (2017).
[7] LaMorte, W. W. (2016, April 28). The Theory of Planned Behavior. Retrieved from Behavioral Change Models: http://sphweb.bumc.bu.edu/otlt/MPH-Modules/SB/BehavioralChangeTheories/BehavioralChangeTheories3.html
[8] Moons, Ingrid, and Patrick De Pelsmacker. "Emotions as determinants of electric car usage intention." *Journal of Marketing Management* 28, no. 3-4 (2012): 195-237.
[9] Petrány, M. (2013, September 5). The Ten Most Expensive Places To Buy A Car. Retrieved from Jalopnik: https://jalopnik.com/the-ten-most-expensive-places-to-buy-a-car-1256855393

[10] Ruxyn, T. (2017, June 21). Death Rates On Malaysian Roads Is 3rd Highest Globally, More Than China And India. Retrieved from Says: https://says.com/my/news/malaysia-s-roads-among-the-world-s-most-dangerous-and-deadliest
[11] Thomas, C. (2016, March 13). Road users not seeing benefit of latest car safety features. Retrieved from Express: https://www.express.co.uk/life-style/cars/656648/Road-users-drivers-car-safety-features
[12] University of Twente. (2004, August 14). Theory of Planned Behavior/Reasoned Action. Retrieved from University of Twente: https://www.utwente.nl/en/bms/communication-theories/sorted-by-cluster/Health%20Communication/theory_planned_behavior/
[13] World Bank Group. (2010, April 24). Retrieved from https://data.worldbank.org/country/indonesia
[14] World Health Organization. (2015). Road Safety in The Western Pacific Region 2015. Retrieved from http://www.who.int/violence_injury_prevention/road_safety_status/2015/Road_Safety_WPRO_English.pdf