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RESEARCH ARTICLE

Factors affecting Malaysians purchase intention for foreign automobiles and the mediation effect of trust.

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ABSTRACT

This study explores the factors influencing Malaysians' purchase intention toward foreign automobiles, with a particular emphasis on the mediating role of trust. Grounded in the Theory of Planned Behavior (TPB), the model is extended to include trust as a key mediating variable. The study investigates the relationships between brand image, product quality, product design, trust, and purchase intention.

Data were collected through an online questionnaire from 287 Malaysian respondents who own and drive foreign cars. The proposed hypotheses were tested using Partial Least Squares Structural Equation Modeling (PLS-SEM).

The results show that brand image significantly and positively influences purchase intention, highlighting the importance of a strong brand reputation in driving consumer decisions. In contrast, product quality and product design do not have direct effects on purchase intention. However, trust significantly mediates the effects of both product quality and product design on purchase intention, indicating that these attributes indirectly influence purchasing behavior through the development of consumer trust.

This study contributes to the theoretical advancement of the TPB by integrating trust as a central mechanism in understanding consumer behavior in the automotive industry. From a practical perspective, the findings suggest that foreign automobile manufacturers aiming to increase market penetration in Malaysia should prioritize strategies that enhance brand image and foster consumer trust. Overall, the research underscores trust as a critical determinant in shaping purchase intentions within the foreign automobile market.

Keywords: Automobile industry; brand image; product design; purchase intention; product quality; trust

1. Introduction

1.1. Background of the study

Malaysia's automotive industry is made up of two companies that produce domestic cars, namely Proton and Perodua. Since the first domestic car, Proton, was produced in 1983, the automotive business has expanded to be among Malaysia's most important industries[1]. Proton has been an important driver of Malaysia's national development since its inception. Perodua is the second national car manufacturer in Malaysia. It was established in 1993 and started its production in 1994[2]. Perodua is a joint venture between Malaysian companies and Japan's Daihatsu Motor Company to produce good quality, secure and dependable

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automobiles (Perodua n.d.). In addition, Perodua supplies engine components to local and foreign car manufacturers, contributing to the development of the Malaysian automotive industry.

The outbreak of COVID-19 triggered a recession across all sectors of the economy, significantly impacting various industries—most notably the automotive industry. According to Kaitwade[3], The automotive industry is an important source of income for both emerging and developed economies. The automotive industry is frequently regarded as a cornerstone of a country's gross domestic product (GDP), signifying that a nation's economic growth can depend heavily on the industry's performance[4] The automotive industry is a major source of income for economies worldwide, whether emerging or established, and the Malaysian economy showed resilience in 2022 to overcome the sluggish global economic environment. Malaysia's GDP increased to 8.7% from a modest 3.3% in 2021, marking its best performance since 2000[5]. In addition, the COVID-19 pandemic has had a major detrimental effect on global economies, and many governments decided to lock down countries to prevent the spread of the virus.

Malaysia recorded a total of 18,721,618 registered vehicles in December 2022 (Central Economics and Information Centre, n.d.). Despite spending billions of dollars on urban transport infrastructure, Malaysia has a poor reputation for its public transit[6]. As a result, the majority of urban residents remain dependent on cars. Some cities have built subways and bus lines, but these efforts have failed to attract the residents to use public transportation. For example, in Kuala Lumpur, only 21% of all trips are currently made using public transport—well below the projected 40% target set for 2021[7]. Despite the efforts made by the government, there are still many Malaysian residents who decide to buy their own vehicles for some reason. Firstly, many Malaysians perceive private car ownership as highly convenient, offering the flexibility to travel to any destination at any time. The people will appreciate the ease with being able to go whenever and wherever they want with their own automobile[8]. Secondly, individuals tend to feel more comfortable using a private car, as it allows them greater autonomy and the freedom to travel according to their own preferences.

According to Figure 1, domestic automobiles will be cheaper than imported ones because the Malaysian government will impose high import duty and local taxes toward imported automobiles. The figure outlines the import duties, local taxes, excise duties, and sales tax rates applied to vehicles in Malaysia based on their engine capacity (in cubic centimeters or CC).

	Import Duty		**Local Taxes**	
Engine Capacity(CC)	**Most Favoured Nation(MFN)**	**ASEAN ATIGA**	**Excise Duties**	**Sales Tax (Before SST Exemption)**
Below 1,800	30%	0%	75%	10%
1,800 - 1,999	30%	0%	80%	10%
2,000 - 2,499	30%	0%	90%	10%
Above 2,500	30%	0%	105%	10%

Figure 1. Import duty and local taxes on CBU passenger cars

(Source: Carsome, 2021)

The advantage of Malaysians purchase national automobiles mainly because they are cheaper than foreign automobiles, easier to maintain, and low-income families also can afford it. When people have limited funds to purchase foreign automobiles, they are more willing to replace them with national ones. Next, the advantage of purchasing foreign automobiles depends on good quality and brand image. Foreign automobiles often provide superior quality, which can give consumers more peace of mind and more comfortable.

1.2. Overview of automobile industry in malaysia

Malaysia's automotive sector has played a major role in the country's transformation from an agricultural to a manufacturing nation, leading to higher economic operations, a higher standard of living and better-paying employment (MARii, n.d.). Anchored by national brands such as Proton and Perodua, it also hosts numerous multinational automotive companies and assembly plants, establishing Malaysia as a major force in the Southeast Asian automotive market. Despite its potential, the sector has faced challenges, including the influence of the COVID-19 pandemic, which disrupted production and weakened consumer demand[4]. The government supports the industry through initiatives like the National Automotive Policy (NAP), aimed at fostering innovation, energy efficiency, and sustainable practices[7]. Nevertheless, the industry continues to adapt, driven by urbanization, rising incomes, and a shift toward electric vehicles, ensuring its relevance in a competitive global market.

The automotive industry provides numerous societal benefits. One of its most important advantages is the creation of millions of jobs worldwide, from manufacturing and assembly to research and development, distribution, and sales. About 1.7 million employees work directly in the automotive industry, planning, developing, producing and distributing materials for the manufacturing, sale and operation of modern automobiles (Hill et al., n.d.). Secondly, the nation's economy benefits from the automotive sector as well. By selling cars to other nations, the automotive industry can assist the nation in generating wealth and growing its GDP. The automotive industry contributes an estimated 4% (RM40 billion) to Malaysia’s GDP (Malaysia External Trade Development Corporation[9]. The government of Malaysia has launched the National Automotive Policy (NAP2020), and under the NAP 2020, the government is targeting to grow that to 10% of GDP by 2030[10].

1.3. Problem statement

In recent years, the Malaysian automotive market has seen an increasing demand for foreign automobiles, driven by their perceived superior performance, advanced technology, and global brand reputation[11]. In addition, Honda Malaysia reported sales of over 80,200 vehicles in 2022, representing a 51% increase compared to the previous year. This achievement allowed the company to maintain its position as the best-selling non-national passenger car brand in Malaysia for the ninth consecutive year, according to its internal records[12].

Additionally, there will be currency outflows as Malaysian consumers opt to purchase cars manufactured in other countries. This is because imported cars require large foreign currency payments, thus reducing GDP growth[13]. Importing too many foreign cars means Malaysia is paying more money to foreign manufacturers, which is not flowing into the local economy, potentially leading to a reduction in foreign exchange reserves. The amount by which a country's exports exceed its imports in a given time period is called the trade balance[14]. When people choose to buy from another country, money flows out of their home country and into the country where the goods are purchased. The health of the national economy will be affected by the trade balance. Additionally, the increase in foreign cars could impact local employment, particularly in the automotive manufacturing and assembly sector. For example, reduced demand from car manufacturers and suppliers could lead to higher unemployment, especially among traditional car production workers and related service industries[15]. With the decline of the local auto industry, the skills of local technicians may not be effectively transferred to other growth areas.

The market share of national car brands was 62%, while the market share of non-national car brands was 38%, as shown in **Figure 2**. Non-national car brands refer to automobile brands that are not produced by domestic manufacturers of a particular country. In other words, these are foreign car brands that are imported

into a country for sale and use. According to Tan[16], Perodua ranks first in market share among the top five car manufacturers in Malaysia, followed by Proton, Honda, Toyota, and Nissan. This data indicates that three out of every five automobile brands are foreign-owned. Therefore, it is crucial for the national vehicle manufacturer to examine the variables influencing Malaysian consumers' purchasing intentions. This research study will provide the government and local automakers with the knowledge they need to develop effective strategies and methods to meet the needs and wants of local customers in the years to come. If the goods and services offered are reasonably priced in comparison to international automobiles, local people are likely to purchase national vehicles.

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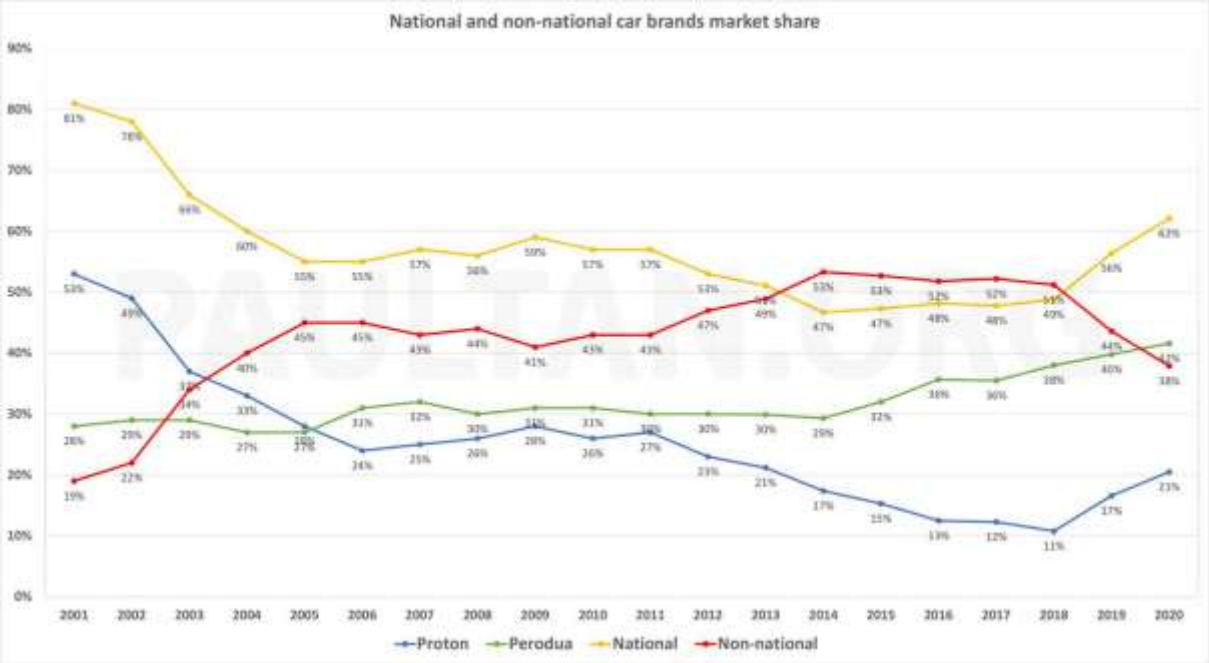

Figure 2. National and non-national car brands market share[17]

However, while product attributes like quality and performance are significant, factors such as trust and the overall purchase experience often play a more substantial role in influencing consumer decisions[18]. Trust has been shown to affect consumer behavior significantly, there is limited research on its mediating role in the relationship between factors such as brand reputation, product quality, and purchase intention in the context of foreign automobiles in Malaysia. This thesis primarily draws on the Theory of Planned Behavior. The Theory of Planned Behavior (TPB) initially identifies three core variables that influence individual behavior: attitudes, subjective norms, and perceived behavioral control. These variables influence an individual's intention to perform a specific behavior, which subsequently impacts actual behavior. In the context of purchasing foreign automobiles, trust will be incorporated into the TPB framework as an additional influencing factor. By integrating trust into the TPB model, we can gain a deeper understanding of

how consumer confidence in product quality, brand reputation, and external factors influences the decision-making process and ultimately affects purchase intentions. This extended framework is expected to provide deeper insights into consumer behavior, particularly regarding the purchase of foreign automobiles.

A substantial body of literature focuses on consumer behavior related to the purchase of foreign imports, examining factors such as quality, price, and brand reputation [19-21]. Much of this research explores various types of imported goods, with a particular emphasis on general consumer products. However, there is limited attention given to the specific category of "foreign cars" in the context of purchasing decisions. While studies on consumer preferences for foreign products have explored general cross-cultural factors and perceived value, the automotive industry, in particular, has received relatively less focus. Research on foreign cars tends to be more segmented, often exploring either automotive industry dynamics or specific market trends, but not necessarily integrating these within broader frameworks of consumer purchasing behavior. This gap highlights the need for more targeted research into the factors that influence consumer decisions when purchasing foreign automobiles, which may differ significantly from those associated with other imported goods.

1.4. Research objectives

This research focuses on identifying the factors that influence Malaysians' intentions to buy foreign automobiles. The objectives of the study are as follows:

i: To examine the relationship between brand image and purchase intention towards foreign automobiles.

ii: To investigate the relationship between product quality and purchase intention towards foreign automobiles.

iii: To determine the relationship between product design and purchase intention towards foreign automobiles.

iv: To examine the relationship between brand image and trust towards foreign automobiles.

v: To investigate the relationship between brand quality and trust towards foreign automobiles.

vi: To determine the relationship between product design and trust towards foreign automobiles.

vii: To examine the relationship between trust and purchase intention towards foreign automobiles.

viii: To examine the mediating role of trust between brand image and purchase intention towards foreign automobiles.

ix: To examine the mediating role of trust between product quality and purchase intention towards foreign automobiles.

x: To examine the mediating role of trust between product design and purchase intention towards foreign automobiles.

1.5. Scope of study

This research aims to explore the factors that shape Malaysians' intentions to purchase foreign automobiles, with a specific focus on the mediating effect of trust. The research examined a range of variables commonly associated with consumer purchasing behavior, particularly in the automotive sector.These factors include brand image, product quality, product design, and trust. This study targeted Malaysians who own foreign automobiles to explore how these factors may differ in their impact on purchase intentions. Additionally, this research will investigate the role of "trust" as a mediator to explore how trust in foreign automobiles, along with other factors, might affect purchasing foreign automobiles. By

integrating the Theory of Planned Behavior (TPB) with the mediation effect of trust, this study will expand existing models of consumer decision-making in the automotive industry.

1.6. Significance of study

1.6.1. Theoretical significance

The theoretical significance of this study lies in its contribution to the development and expansion of consumer behavior theories, particularly by integrating trust into the Theory of Planned Behavior (TPB). TPB has long been a foundational framework for understanding purchase intentions, focusing on the key variables of attitudes, subjective norms, and perceived behavioral control[22]. However, trust as a psychological construct that mediates consumer decisions, especially in contexts involving foreign products like automobiles, has received less attention in the original TPB model[23]. This study addresses this gap by examining how trust influences purchase intentions for foreign automobiles in the Malaysian market, thus extending the application of TPB. This mediation effect of trust in the purchase decision-making process is largely unexplored in the context of foreign automobiles in Malaysia, making the study a valuable theoretical contribution. Furthermore, this research will offer insights into the cross-cultural application of TPB. While TPB has been widely applied in Western contexts, there is a growing interest in understanding its applicability in emerging markets such as Malaysia, where consumers' behaviors may be influenced by both global and local factors[16].

1.6.2. Managerial significance

This study is significant for its potential to provide deeper insights into the factors influencing Malaysians' foreign automobile purchase intentions, with special attention to the mediating role of trust. By exploring how trust, in particular, mediates the relationship between various factors (such as quality and design), this study will provide critical insights that can help foreign automobile manufacturers and Local policymakers refine their marketing strategies to better align with consumer demands and preferences.

Finally, the study offers managerial implications for foreign automobile companies regarding their competitive positioning. By understanding how trust interacts with other factors such as consumer attitudes and societal perceptions, foreign car brands can differentiate themselves in the Malaysian market by addressing these specific concerns.

1.7. Summary of hypothesis

In this study, brand image, product quality, and product design are the factors that affecting Malaysians' purchase intentions for foreign automobiles. To quantify the factors influencing Malaysians' intention to purchase foreign automobiles, these will be used as independent variables. There are a total of ten proposed hypothesis in this study.

Thematic Group 1: Direct Determinants of Purchase Intention

Hypotheses:

H1: There is a relationship between brand image and purchase intention towards foreign automobiles.

H2: There is a relationship between product quality and purchase intention towards foreign automobiles.

H3: There is a relationship between product design and purchase intention towards foreign automobiles.

H7: There is a relationship between trust and purchase intention towards foreign automobiles.

Research Question 1:

What are the direct effects of brand image, product quality, product design, and trust on Malaysian consumers' purchase intention towards foreign automobiles?

Thematic Group 2: Antecedents of Trust

Hypotheses:

H4: There is a relationship between brand image and trust towards foreign automobiles.

H5: There is a relationship between product quality and trust towards foreign automobiles.

H6: There is a relationship between product design and trust towards foreign automobiles.

Research Question 2:

How do brand image, product quality, and product design influence consumer trust in foreign automobile brands?

Thematic Group 3: Mediating Role of Trust

Hypotheses:

H8: Trust mediates the relationship between brand image and purchase intention.

H9: Trust mediates the relationship between product quality and purchase intention.

H10: Trust mediates the relationship between product design and purchase intention.

Research Question 3:

Does trust mediate the relationships between brand image, product quality, and product design, and consumers' purchase intention towards foreign automobiles?

1.8. Conclusion

This chapter outlines the overall research and sets the structure for the upcoming chapters, focusing on the problem statement, research background, and the study's questions and objectives. To help readers understand the definitions used in this study, additional information is provided on the definitions of each term. Besides, the next chapter will reviews the important literature used to explore this study and establish a research methodology basis for this study.

2. Literature development

2.1. Reviews on previous studies

2.1.1. Purchase intention

Purchase intention is widely defined as a tendency or willingness to buy a product or service by a consumer[24]. A consumer's purchase intention is defined as their willingness to make a purchase[25].

2.1.2. Brand image

Brand image is shaped by consumers' perceptions and the associations they hold in memory, playing a vital role in influencing brand equity[6]. Mao et al.[26] suggest that brand image is a significant factor of

customer attitudes and preferences toward a brand, such as when evaluating a product or service before buying it. Hien et al.[27] note that brand image represents how consumers perceive a brand and the emotions it evokes in their minds. Hamzah et al.[6] claim that a positive brand image will positively impact consumers'behavioral intention and loyalty. Brands are significant in the purchasing decision process because the greater the brand image, the higher the perceived product quality and the stronger the purchase intention of the customers[28].

2.1.3. Product quality

Product quality refers to the overall attributes and features of a product or service that determine its ability to meet the stated or implied needs of its users[29]. Product quality is increasingly important for firms striving to maintain their competitive advantage[30]. According to[31], product quality can affect satisfaction which has implications for loyalty and trust[32] mention that while a buyer purchasesa goods, they are also purchasing the product's expectation. High-quality products not only function as intended but also provide value, ensuring that consumers feel their investment is worthwhile. Product quality will always meet or exceed the needs and expectations of our customers [33].

2.1.4. Product design

Product design is the art and science of bringing together technological, financial, operational, and emotional components to produce a unique product[34]. Product design, according to Gilal et al[34], is "conceiving and providing form to commodities and services that meet customers' needs and wants. Product design is the process of turning ideas into reality with the primary goal, as in many human activities, of meeting human needs[35]. Furthermore, Product design is considered a critical success factor in the market, as it not only captures consumer attention but also effectively communicates product value to consumers[36]. Talim et al.[37] reported that excellent product design is just the ability to convey your message in the most effective method possible.

2.1.5. Trust

Trust serves as a crucial element in building and sustaining long-term relationships with consumers[38]. Trust is vital for building social exchange relationships in the workplace[39]. Therefore, trust is critical for both consumers and companies. According to Cha and Lee[40], increasing customer trust can help bring merchants and customers closer together and break down barriers to customer purchase hesitation. Wang et al.[41] demonstrated consumers ' trust has a positive impact on purchase intention. According to Rahman et al.[42], creating a good brand image builds trust among consumers and amplifies the purpose of gaining trust.

2.2. Theory of planned behavior

According to Ajzen[22], the Theory of Planned Behavior (TPB) appears to be an expanded version of the Theory of Reasoned Action (TRA), which was allegedly spurred by the shortcomings of the previous model in addressing behaviors over which humans have only a limited amount of freedom and choice. The Theory of Planned Behavior is applied to interpret human behavior and identify the factors that drive it[43]. The TPB's purpose is to forecast how an individual will behave while making a purchasing decision. The TPB theory consists of three elements which are attitudes, subjective norms and perceived behavioral controls.

According to Ajzen[22], an attitude is when individuals frequently behave in a certain way depending on their opinions about how to carry out a specific behavior. Social structures and values, typical and behavioral conditioning, knowledge, and listening to people in the surrounding are variables that affect how people create attitudes. The more positive the attitude, the more obvious the purchase intention[43].

Next, subjective norms represent a person's view of external forces that influence or do not influence the conduct of a particular action[22]. The stronger the social pressure, the higher the motivation to perform a specific behavior[43,44]. Someone's actions are affected by others, especially those who are close to them. Additionally, because they are connected to a person's social group, subjective norms play a crucial role in predicting how people will behave. For instance, the majority of the younger generation prefers to purchase international automobiles over domestic ones because they think the later offer superior performance and product quality.

Ajzen[22] mentions that perceived behavioral controls are characterized by the complexity of conducting the action. Perceived behavioral control refers to the extent to which an individual believes they have control or mastery over performing a specific behavior[43]. There are two types of perceived behavioral constraints that may impact a person's actions: internal and external controls. The internal control reveals how the person who carried out the specific action in the issue arrived at his knowledge, skills, and ability. The external forces that shape a person's behavior are referred to as the external control. By offering new ideas and influencing their views or perspective toward the brand. Therefore, external factors play a significant role in influencing someone's behavior, making the choice of friends or social groups crucial. The consumer's capacity to take action during the purchasing process will also be influenced by the product design. Customers' concerns about the product design will influence their decision to purchase during the purchasing process.

According to Ding et al[43], the Theory of Planned Behavior(TPB) has been widely used as an effective theory to analyze human behavior, which can identify which factors drive human behavior. Their research comprehensively considers a specific cultural background and practical needs, and extends the traditional TPB model to include a factor: trust.

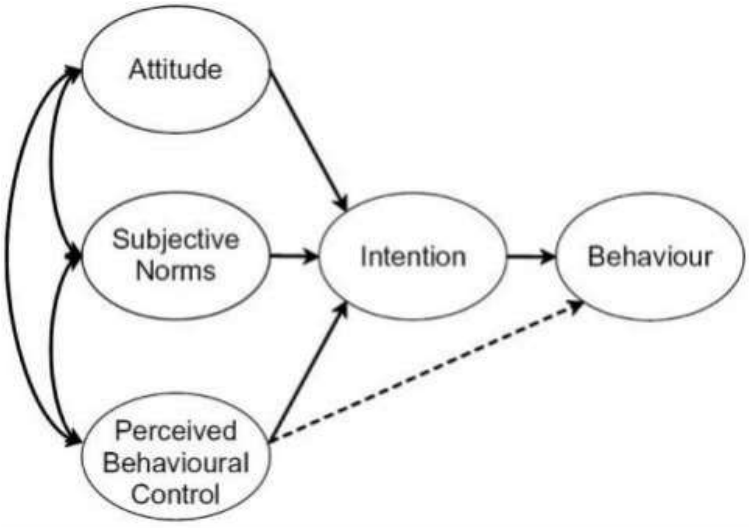

Figure 3. Theory of planned behavior

(Source:[22])

2.3. Hypothesis development

2.3.1. Brand image and purchase intention

Brand image is an important factor in enhancing the relationship between a business and its customers. Badar[45] claims that while compared to its competing competitors, the image should be obvious and offer benefits. Brand image serves a critical function in shaping consumers' perceptions and preferences,

particularly in the realm of foreign automobiles. Furthermore, previous researchers have also explored some articles on brand image. For example, Rao et al.[46] stated that brand image moderates the effect of online word-of-mouth on purchase intention. According to Jasin[47], brand Image has positive and significant impact on purchase intention. Savitri et al.[48] investigated that there was a positive and significant relationship between brand image and purchase intention. Benhardy et al.[49] discovered that brand image significantly affects purchase intention. Based on this, the following hypothesis is formulated:

H1: There is a relationship between brand image and purchase intention towards foreign automobiles.

2.3.2. Product quality and purchase intention

Product quality is commonly understood as the attributes of a goods that meet the interests. Wiwaha and Budiyanto[50] mention that the product quality has been among the most important factors for buyers when deciding whether to purchase a product. Thanra et al.[51] revealed that product quality has a significant positive effect on purchasing decisions. Consequently, The connection between product quality and purchase intention stands out as a key element in the consumer decision-making process within this market segment. In a study on cons[52] (2023) discovered that product quality was the most critical determinant that affected consumer purchase intention. Perlambang and Susanto[32] stated that purchase intention of tissue plenty in Jakarta is positively influenced by product quality. Hence, the following hypothesis is developed as below:

H2: There is a relationship between product quality and purchase intention towards foreign automobiles.

2.3.3. Product design and purchase intention

Product design refers to the overall features that determine a product's taste, usability, and visual appeal , tailored to consumer preferences. Good product design can attract purchasing attention, reduce production costs, and provide a competitive advantage in the target market[53]. Ahmada et al.[54] discovered that product design has a significant positive effect on purchase intention. According to Alam et al.[55], product design has an impact on consumers' purchase intention and recommendation intention. Studies have shown that the visual appeal of a vehicle, such as its exterior shape, color, and overall design, plays a significant role in attracting potential buyers[56]. Thus, a hypothesis is developed as below:

H3: There is a relationship between product design and purchase intention towards foreignautomobiles.

2.3.4. Brand image and trust

Brand image reflects consumers' perceptions of a brand and the emotions it evokes when they think about it[27]. Additionally, an automobile brand's reputation can serve as a signal of its ethical practices and commitment to sustainability, which can strengthen consumer trust, especially in an era of growing environmental awareness[57]. Marliawati and Cahyaningdyah[58] stated that brand image has a positive and significant influence on brand loyalty, with trust serving as the mediating factor.

According to Rahman et al.[42], creating a strong brand image fosters trust among consumers and reinforces the purpose of establishing trust. Khan and Fatma[59] revealed that trust serves as a mediating factor in the relationship between brand image, corporate social responsibility, and consumer word-of-mouth. Thus, a hypothesis is developed as below:

H4: There is a relationship between brand image and trust towards foreign automobiles.

2.3.5. Product quality and trust

Product quality is a key strategy employed by marketers to establish product positioning within the market[60]. Product quality is a cornerstone of trust when it comes to automobiles. Irfan et al.[61] found that the effect of product quality on consumer trust is positive and significant. Widyastuti and Hidayat[62] stated that

product quality has a significant influence on trust and repurchase intention. Product quality has a positive and significant impact on brand trust[63]. Lailiyah[64] show that product quality has a positive and significant effect on brand trust. Hence, the following hypothesis is developed as below:

H5: There is a relationship between product quality and trust towards foreign automobiles.

2.3.6. Product design and trust

Product design focuses on creating products that satisfy consumer demands and help businesses gain a competitive advantage in intense market environments[65]. Trust refers to an individual's subjective expectation regarding another person's future actions, which is shaped by their previous behaviors[66]. According to Simmons[67], innovative design features, such as electric or hybrid vehicle technologies, not only address consumer desires for sustainability but also signal the brand's commitment to future-focused, responsible design, which can increase trust. Therefore, companies that prioritize high-quality design elements can foster deeper trust and loyalty from consumers, positively impacting purchase intentions[68]. Thus, a hypothesis is developed as below:

H6: There is a relationship between product design and trust towards foreign automobiles.

2.3.7. Trust and purchase intention

Trust is the knowledge and conclusions that consumers have about an object, its attributes, and benefits[69]. In addition, Cha and Lee[40] stated that trust can influence purchase intention. According to Wang et al.[70], it showed that consumers' trust has a positive impact on purchase intentions. Javed and Wu[71] showed that trust in online retailers impacts future repurchase intentions after delivery services. Rahman et al.[42] revealed that trust has a positive influence on the intention to purchase the products from the internet. Hence, the following hypothesis is developed as below:

H7: There is a relationship between trust and purchase intention towards foreign automobiles.

2.3.8. The mediating effect of trust

Consumer purchasing intention have been extensively studied in contemporary marketing literature[72,73]. Purchase intention is a series of steps that consumers go through before making a purchase. Brand image refers to a customer's perceptions about a brand, promoted by the interaction of affective, cognitive, and evaluative processes in a customer's mind[74]. According to Yu et al.[75], brand image can help consumers build trust in companies and brands influencing the use and evaluation of products. Positive trust beliefs that consumers have towards the brand may reinforce their purchase intentions[46]. Besides, Kusuma et al.[76] stated that brand image does not directly influence purchasing decisions, but is fully mediated by brand trust. Chandrruangphen et al.[77] show that trust in sellers and trust in products have different mediating effects on the relationship between perceived value and user engagement. Brand image has a positive and significant effect on purchase decision through brand trust. That is, brand trust is able to mediate between product quality and purchase decisions [63]. Hence, the subsequent hypothesis is suggested:

H8: Trust mediates the relationship between brand image and purchase intention.

Trust is an important factor in developing long-term relationships between service providers and customers[78]. Consumers' purchasing behaviors and behaviors beyond purchasing are widely influenced by the trust[79]. Product quality is refers to a product's ability to perform its intended functio[80]. Trust has a significant impact on consumer behavior, influencing their perception of product quality[81]. Brand trust successfully mediates the effect of product quality on purchase decisions; the higher the product quality, the

faster consumers decide to buy, provided they previously felt trust in the McDonald's brand[64]. Trust mediates the effect of product quality on purchase decision[63]. Hence, the subsequent hypothesis is suggested:

H9: Trust mediates the relationship between product quality and purchase intention.

Product design aims to create successful products that fit consumers ' needs and establish a competitive advantage for enterprises in a highly competitive market[82]. Trust plays a key role in the relationship between businesses and consumers[83]. To sum up, we expect that when consumers actively perceive the product design of an enterprise, they will increase their trust in the enterprise, thus generating the purchase intention that is conducive to the development of the enterprise. When consumers perceive foreign automobile brands as leaders in innovative and aesthetically pleasing design, it enhances their trust in the brand's ability to deliver desirable vehicles. Based on the previous discussion, we propose the following hypothesis:

H10: Trust mediates the relationship between product design and purchase intention

2.4. Research framework

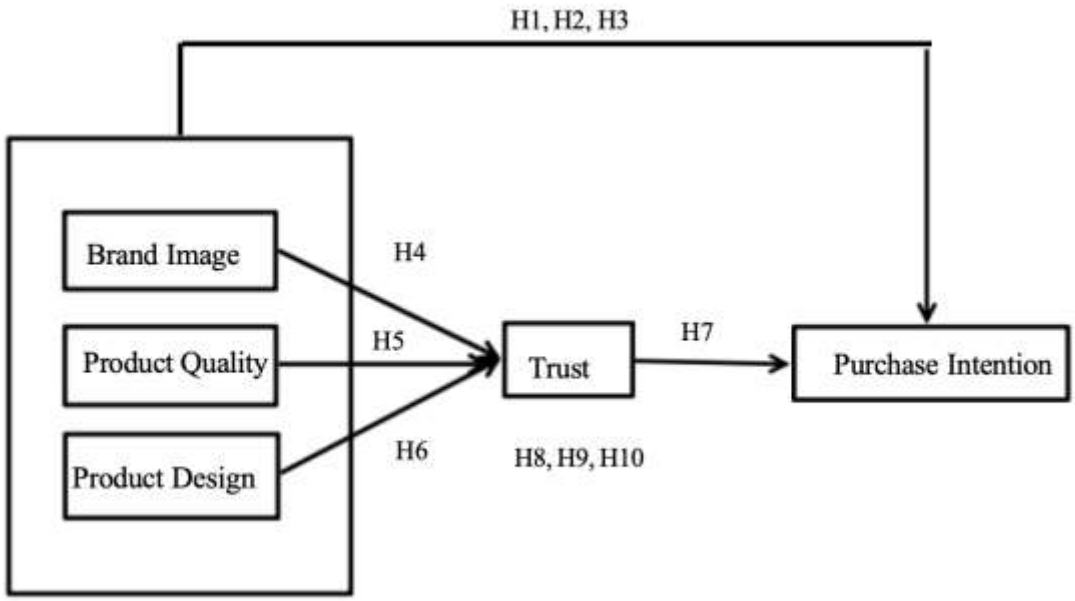

Figure 4. Theoretical framework

2.5. Conclusion

In conclusion, this chapter reviews the Theory of Planned Behavior to study based on independent variables that affect Malaysian's purchase intention towards foreign automobiles. There are ten proposed hypotheses have been developed for testing purchase intention.The methodology that will be used to evaluate the hypothesis will be described in the following chapter.

3. Method

3.1. Research design

Research design is the overall plan for connecting the conceptual research problems to the pertinent and achievable empirical research[84]. Research design serves as a guide for preparing and answering research questions[85]. The research design must contain a strategy for interpreting the analysed data to provide adequate findings and conclusions from the research which will allow the researcher make recommendations

or implications based on the study[84]. In this research, the quantitative research design will be adopted. Furthermore, the descriptive research will be used to determine the characteristics of the population. Descriptive research attempts to characterize a group, condition or phenomena in a standardized and consistent way[85]. The questionnaire survey will be conducted online to collect information from the respondents. Thus, Google Forms will be distributed to residents of Malaysian who own and drive automobiles in their daily lives.

3.2. Target population and selection of sample

The target population in a study refers to the defined group of individuals or entities to which the research findings are intended to be generalized. Identifying the target population is crucial for ensuring that the research results are relevant and applicable to the group being studied[86]. In consideration of the target population, the participants for this study are limited to individuals who owned and drive foreign automobiles in their daily lives in Malaysia.

A properly determined sample size ensures that the study can detect a meaningful effect if one exists, while minimizing errors and resource waste[87]. G*Power 3.1 software was used to calculate the sample size. The effect size of 0.15, power of (1-β) =95%, number of tested predictors is 3, total number of predictors is 4 were used, and the results indicated that the minimum sample size that should be taken into consideration is 119 respondents (with the power of 0.80 in **Table 1** and **Figure 5**). Recommended sample sizes for SEM vary, but general guidelines suggest a minimum of 200 observations for simple models, with larger samples required for more complex models[88]. Therefore, this study aims to collect data from 250 respondents.

Table 1. Sample size power

Power	Total sample size
0.80	77
0.85	87
0.90	99
0.95	119

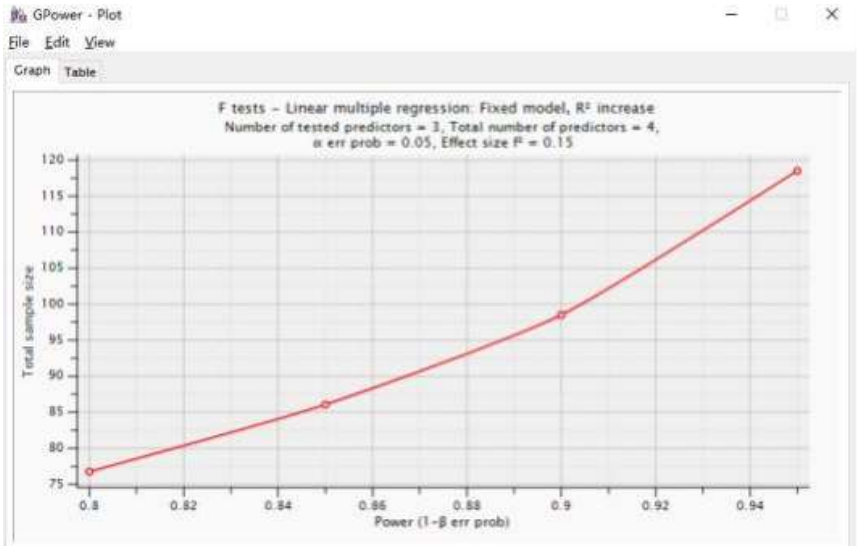

Figure 5. Statistical power in a fixed model

*(Source: Extracted from G*Power 3 software)*

3.3. Sampling technique

To gather the data for this study, judgemental sampling will be used. Judgemental sampling is a technique for acquiring information from a specific population that meets the requirements. The use of judgmental sampling has various benefits, including the ability for researchers to engage directly with their target market and the fast collection of results. This study focuses on the factors that influence the purchase intention of Malaysians to buy foreign automotives. Therefore, the judgement sample can be conducted from Malaysians who own foreign automotives. The following are the inclusive specific criteria that the participants must meet: (a) Malaysians (b) own and drive foreign automobile in daily life

3.4. Measurement and questionnaire

The measurement method for the questionnaire is based on a summated scale approach. The much more well-known summated rating scale is the Likert scale. Furthermore, the Likert scale is a five-point or seven-point scale that allows people to explain how much people agree or disagree with a given argument[89]. These measurement scales were used to assess brand image, product quality, product design, trust and purchase intention.

The data for this study were collected through an online questionnaire. The primary data will be collected from respondents who own and have experience with foreign automobiles, using an online questionnaire. Specific measurement items can be referred to **Table 2**. The questionnaire was distributed through social media to the respondent in google form. The benefit of using a questionnaire in google form is convenience to the researchers and respondents as it requires less cost and time. Moreover, the questionnaire was reviewed and approved by the Ethics Committee of Universiti Putra Malaysia (UPM).

Table 2. Measurement items

Variables	Number of items	Items	Sources
Brand image	5	1. The brand image of foreign automobile companies will influence my purchase decision. 2. I am willing to purchase the foreign automobiles that have a good reputation. 3. Positive brand image will reduce my concern about the problem of automobiles. 4. The company that has a good brand image will produce high quality automobiles. 5. The foreign automobiles always provide good customer service.	Wang &Tsai [90]
Product quality	5	1. The quality of foreign automobiles will influence my purchase decision. 2. Foreign automobiles frequently provide high quality products. 3. The quality of foreign automobiles makes me feel safe and comfortable. 4. I am confident with the quality of foreign automobiles. 5. Quality of foreign automobiles meets my needs and requirements.	De Cannie re,De Pelsma cker &Geue ns [91]
Product design	5	1. The design of foreign automobiles will influence my purchase decision. 2. The design of automobiles will represent my taste and preferences. 3. The foreign automobiles are fashionable and trendy. 4. The foreign automobiles are elegant. 5. The foreign automobiles have high safety aspects.	Chen& Lin [92]
Trust	5	1. I trust that foreign automobiles are safer than national automobiles. 2. I trust that foreign automobiles are cleaner and sanitary than national automobiles. 3. Foreign automobiles never disappoint me. 4. Foreign automobiles are honest and serious when addressing my needs and desires. 5. Foreign automobiles make every effort to please me.	Ding et al [43] &Asla n [38]
Purchase	5	1. I am likely to buy foreign automobiles.	Mirabi, Akbari

Variables	Number of items	Items	Sources
intention		2. I will consider buying foreign automobiles. 3. I would prefer to buy foreign automobiles. 4. I am willing to buy foreign automobiles. 5. I would still buy foreign automobiles compared to national automobiles.	yeh&Tahma sebifar d [93]

Table 2. (*Continued*)

3.5. Pilot-Test

There are many different ways to determine the sufficient number of sample size for the pilot test. For instance, Hertzog[94] recommended that the size of the pilot test is 10% of the population study. Meanwhile, Martins & Onofre[95] suggested that a sample of 40 individuals is sufficient for initially assessing reliability and item discrimination. However, this study, based on the methods proposed in previous literature, conducted a pilot test with 50 respondents to test the reliability and validity of the questionnaire. The SPSS version 27 will be used to test reliability and validity of the questionnaires. This study will use Cronbach's Alpha coefficient to test reliability. The specific Cronbach's Alpha coefficients are presented in **Table 3**.

Table 3. Coefficient of Cronbach's Alpha

Coefficient of Cronbach's Alpha	Reliability Level
more than 0.9	Excellent
0.80-0.89	Good
0.70-0.79	Acceptable
0.60-0.69	Questionable
0.50-0.59	Poor
less than 0.59	Unacceptable

3.6. Data analysis

Two distinct statistical software programs were utilized to analyze the data for this study. Descriptive analysis will used to initially profile respondents, utilizing the Statistical Package for the Social Sciences (SPSS, version 27). After that, PLS-SEM is utilized to evaluate the measurement model and examine the association with independent variable, mediating variable and dependent variable. Please refer to **Table 4** for details on how to measure hypotheses with PLS-SEM.

Table 4. Analyzing data

Hypothesis	Corresponding question from questionnaire	statistical method
H1	BI(1-5) and PI(1-5)	Descriptive Statistics and PLS-SEM. 1.The path-coefficient assessment table will be displayed to test the significance of these H1-H7 hopytheses. 2.The hypothesis testing for indirect relationship(H8-H10) will be displayed to test the mediation effects.
H2	PQ(1-5) and PI(1-5)	
H3	PD(1-5) and PI(1-5)	
H4	BI(1-5) and T(1-5)	
H5	PQ(1-5) and T(1-5)	
H6	PD(1-5) and T(1-5)	
H7	T(1-5) and PI(1-5)	
H8	BI(1-5) , T(1-5) and PI(1-5)	
H9	PQ(1-5), T(1-5) and PI(1-5)	
H10	PD(1-5), T(1-5) and PI(1-5)	

3.7. Conclusion

In this chapter, the research design for this study have been discussed. The target population and sampling strategy are also described.The measurement for this study includes nominal,ordinal and interval scale. The pilot test will be carried out to test the validity and reliability of the questionnaire. The data collection will be distributed in social media. Finally, the data analysis consist of descriptive analysis, a more accurate estimation of the structural model ,the validity and reliability of research.

4. Results

4.1. Reliability test

Cronbach's α coefficient was used in this study to measure the reliability of the entire questionnaire and each item , as shown in **Table 5**. Currently, there is no unified standard, however, according to most scholars, a measured value of the α coefficient of 0.7 or higher is generally deemed acceptable, while values below 0.7 may suggest that the items lack sufficient correlation and may require revision.

During the pilot test, if the Cronbach's alpha values for individual questions are higher than the overall value, it typically indicates that these questions exhibit strong internal consistency with other items, yet may not align well with the conceptual framework of the overall scale. This situation may suggest that those questions are measuring a different underlying dimension or that they are redundant in terms of the information they provide. Specifically, if specific questions show high correlations with other items but fail to maintain internal consistency within the entire scale, excluding them from the analysis may be necessary to enhance the reliability and coherence of the overall scale[96]. As a result, this study excludes the BI5, PQ1,PQ5 and PD2.

Table 5. Cronbach reliability

VVariable	IItem-Total Statistics	CCorrected Item-Total Correlation	CCronbach's Alpha if Item Deleted	CCronbach's Alpha
Brand Image (BI)	BI1	0.662	0.665	0.771
	BI2	0.533	0.737	
	BI3	0.562	0.722	
	BI4	0.541	0.734	
Product Quality (PQ)	PQ2	0.698	0.807	0.848
	PQ3	0.723	0.782	
	PQ4	0.732	0.774	
Product Design (PD)	PD1	0.650	0.812	0.842
	PD3	0.646	0.813	
	PD4	0.781	0.751	
	PD5	0.634	0.818	
Trust (T)	T1	0.675	0.762	0.818
	T2	0.637	0.775	
	T3	0.510	0.813	
	T4	0.713	0.761	
	T5	0.552	0.799	
Purchase Intention (PI)	PI1	0.681	0.832	0.861
	PI2	0.655	0.839	
	PI3	0.722	0.824	
	PI4	0.750	0.814	
	PI5	0.606	0.853	

It can be seen from **Table 6** that the reliability of the research data meets the standards and can be used for further analysis.

4.2. Respondent profile

A respondent profile includes information such as age, gender, education level, geographic location, and occupation, which can help researchers identify patterns and differences among various subgroups within the sample[97]. This profile is crucial for ensuring that the sample is representative of the target population, as well as for examining how demographic variables might influence study outcomes[98].

Table 6. Distribution of respondents profiling (n=287)

Demographic profile		Frequency	Percent %
Gender	Female	223	77.7
	Male	64	22.3
Age	25 years old and below	212	73.9
	26 - 35	47	16.4
	36 - 45	12	4.2
	46 - 55	13	4.5
	56 years old and above	3	1.0
Marital Status	Married	37	12.9
	Single	250	87.1
Education Level	High School	11	3.8
	Diploma	33	11.5
	Degree	211	73.5
	Master	27	9.4
	PhD	5	1.7
Income Level	Below RM 2,000	184	64.1
	RM 2,001 - RM 4,000	36	12.5
	RM 4,001 - RM 6,000	25	8.7
	RM 6,001 - RM 8,000	23	8.0
	RM 8,001 and above	19	6.6
Occupation	Student	201	70.0
	Housewife	3	1.0
	Self-employed	21	7.3
	Employee - Government	19	6.6
	Employee - Private sector	43	15.0

4.3. Assessment of reflective measurement (measurement model)

This section presents the analysis of the measurement models, which was conducted before the structural model analysis. As the evaluation criteria for reflective and formative models differ, the following two sections outline the assessment of each model type separately.

4.3.1. Assessing composite reliability and convergent validity

Composite reliability (CR) assesses the internal consistency among indicators that measure a latent variable. A commonly accepted threshold for CR is 0.7 or higher, indicating good reliability [88]. As shown in Table 4.3, the composite reliability for all constructs exceeded the minimum threshold of 0.7. On the other hand, outer loadings are calculated as the correlation between the indicator and the latent construct, with values closer to 1 signifying strong associations. Typically, outer loadings greater than 0.7 are considered acceptable [88]. However, suppose an indicator has an outer loading between 0.5 and 0.7. In that case, it may still be acceptable, particularly in exploratory research or when removing such indicators would substantially reduce the scale's content validity. A commonly accepted threshold for AVE is 0.5 or higher, meaning that at least 50% of the variance in the indicators is explained by the latent construct [88]. **Table 7** depicts that the AVE values for all the reflective constructs were greater than the threshold value of 0.5 meaning that all the items were loaded on the respective constructs and explained more than 50% of the constructs 'variances.

Table 7. Assessment of reflective measurement model

Construct	Indictor	Outer Loadings	Cronbach Alpha	Composite Reliablity	AVE
Brand Image	BI1	0.718	0.729	0.831	0.552
	BI2	0.723			
	BI3	0.806			
	BI4	0.721			
Product Quality	PQ2	0.826	0.718	0.842	0.640
	PQ3	0.815			
	PQ4	0.755			
Product Design	PD1	0.551	0.717	0.825	0.547
	PD3	0.764			
	PD4	0.816			
	PD5	0.796			
Trust	T1	0.778	0.864	0.902	0.648
	T2	0.846			
	T3	0.819			
	T4	0.796			
	T5	0.784			
Purchase Intention	PI1	0.826	0.857	0.897	0.636
	PI2	0.781			
	PI3	0.802			
	PI4	0.801			
	PI5	0.777			

4.3.2. Assessment of discriminant validity

One standard method for assessing discriminant validity is the Fornell-Larcker criterion, which compares the square root of the AVE of a construct to its correlations with other constructs. For discriminant validity to hold, the square root of the AVE for each construct should be greater than its correlations with other constructs[99]. **Table 8** showed that all reflective constructs exhibited sufficient discriminant validity.

Table 8. Discriminant validity

	Brand Image	Product Design	Purchase Intention	Product Quality	Trust
Brand Image	0.743				
Product Design	0.486	0.739			
Purchase Intention	0.555	0.535	0.798		
Product Quality	0.469	0.653	0.529	0.8	
Trust	0.41	0.588	0.546	0.615	0.805

Henseler, Ringle, and Sarstedt [100] introduced an additional method for assessing discriminant validity by examining the heterotrait-monotrait ratio (HTMT) of correlations. An HTMT value below 0.90 generally indicates that constructs are adequately distinct and exhibit minimal overlap, thereby supporting discriminant validity. As presented in **Table 9**, all HTMT values were below the 0.90 threshold, providing evidence that the constructs demonstrated sufficient discriminant validity.

Table 9. Discriminant validity using Heterotrait-Monotrait (HTMT) criterion

	Brand Image	Product Design	Product Quality	Purchase Intention	Trust
Brand Image					
Product Design	0.700				
Product Quality	0.639	0.891			
Purchase Intention	0.701	0.682	0.667		
Trust	0.510	0.724	0.778	0.629	

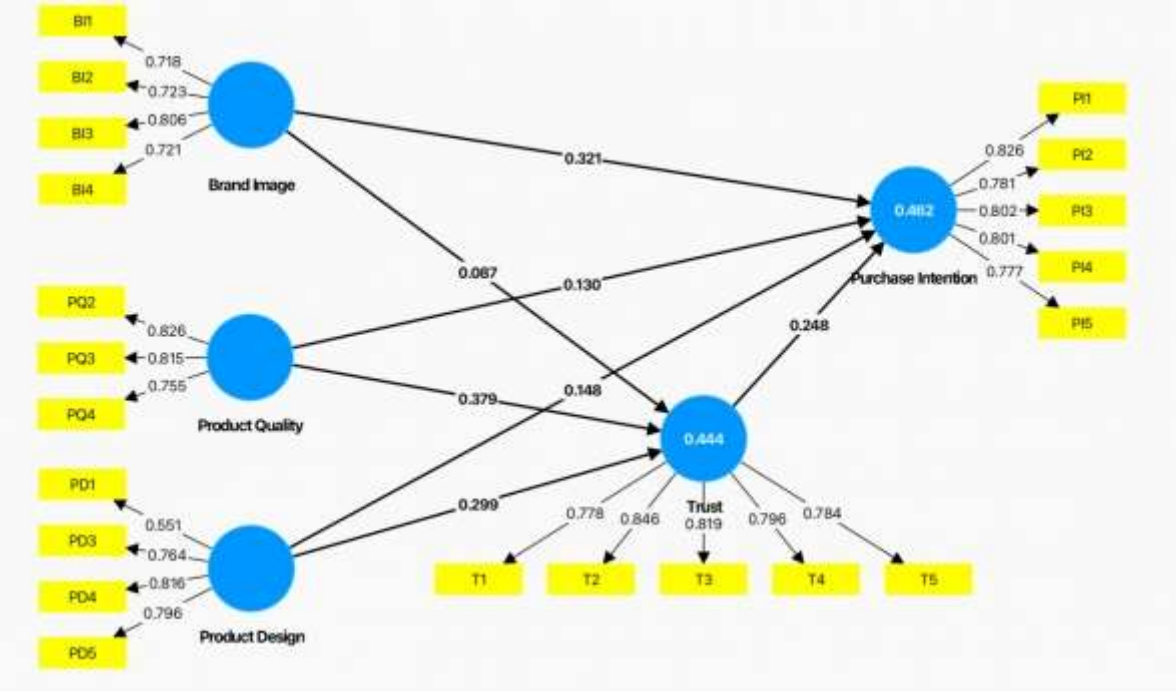

Figure 6. Measurement model

4.4. Descriptive statistics

Descriptive and normality tests of the constructs are shown in **Table 10**. All constructs exhibited a mean score above 3 on a 5 -point Likert scale (where 1=strongly disagree and 5=strongly agree). Among these,

brand image has the highest mean value (M=4.35), whereas trust has the lowest mean value (M=3.96). Next, product quality, product design, and purchase intention have a mean score of M=4.16, M=4.23, M=4.22, respectively. Data analysis was followed by examining the normality distribution of responses. According to Shehu and Mahmood[101], absolute values of skewness and kurtosis greater than 1 indicate a deviation from normality. As illustrated in Table 4.6, not all the constructs met the acceptable skewness range. PLS-SEM was selected as the analytical tool for this study due to its ability to handle non-normal data using the bootstrapping technique[102]. Admin[103] also recommends that the best and most frequently used technique to address non-normality is to use a bootstrap in the analysis.

Table 10. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
BI	287	2	5	4.3554	0.53177	-1.315	3.215
PQ	287	1	5	4.1614	0.63125	-1.081	2.049
PD	287	2	5	4.2369	0.61241	-0.981	1.269
T	287	1	5	3.9638	0.76465	-0.782	0.329
PI	287	2	5	4.2286	0.64549	-0.986	0.752

4.5. Structural model test analysis

This section presents the results of the structural model assessment. Figure 7 illustrates the five-step structural model assessment procedure employed in this section[104]. Evaluating the structural model helps researchers to assess its predictive capability for one or more target constructs[105]. **Figure 7** illustrates the structural model for this study, which was developed using the bootstrapping technique.

Step 1	Assess structural model for collinearity issues
Step 2	Assess the significance of path coefficient
Step 3	Assess the level of R2
Step 4	Assess the f2 effect size
Step 5	Assess the predictive relevance, Q2

Figure 7. Five -step procedure for structural model assessment

(Source: [104])

4.5.1. Step 1: Assessment of structural model for collinearity issues

Variance Inflation Factor (VIF) is a statistical measure used to detect multicollinearity in regression analyses. VIF quantifies this by measuring the increase in variance of a regression coefficient due to collinearity with other variables. A VIF value greater than 5 is often considered a sign of significant multicollinearity, though thresholds may vary depending on the context[105]. It can be seen from **Table 11** that the VIF values between the latent variables of this research model range from 1.382 to 2.101, all of which are less than 5, indicating that there is no collinearity problem between the latent variables of this model.

Table 11. Assessment of lateral collinearity issues

Latent Variable	Purchase Intention	Trust
Brand Image	1.395	1.382
Product Design	2.041	1.880
Product Quality	2.101	1.841
Trust	1.801	

4.5.2. Step 2: Assessment of path coefficient

In this study, the Bootstrapping method of SmartPLS 4.0 was used to test the hypothesis; with repeated sampling times set to 5000. The path coefficient value of the model was then obtained. Whether the path coefficient of the model was significant could be judged by whether the 95% confidence interval contained 0. A significant path coefficient indicated that the hypothesis was valid, allowing for the test of the hypothesis.

The results of the hypothesis testing for the model are presented in the table below. According to Table 4.9: Brand Image's path coefficient to Purchase Intention is 0.323 (T=5.703, P=0.0, and the confidence interval [0.209,0.432] does not contain 0), indicating that Brand Image has a significant positive impact on Purchase Intention. That is, the higher the Brand Image, the higher the Purchase Intention. The path coefficient from Brand Image to Trust is 0.086 (T=0.947, P=0.344, and the confidence interval [-0.087,0.262] contains 0), indicating that Brand Image has no significant influence on Trust. The path coefficient of Product Design to Purchase Intention is 0.145 (T=1.714, P=0.087, and the confidence interval [-0.024,0.312] contains 0), This indicates that Product Design has no significant effect on Purchase Intention.The path coefficient from Product Design to Trust is 0.299 (T=3.413, P=0.001, and confidence interval [0.129,0.471] does not contain 0), indicating that Product Design has a significant positive impact on Trust, that is, the higher Product Design, the higher the Trust. The path coefficient of Product Quality to Purchase Intention is 0.128 (T=1.746, P=0.081, and the confidence interval [-0.014,0.273] contains 0). This indicates that Product Quality has no significant effect on Purchase Intention. The path coefficient from Product Quality to Trust is 0.38 (T=5.437, P=0.0, and the confidence interval [0.244,0.516] does not contain 0), indicating that Product Quality has a significant positive impact on Trust, that is, the higher the Product Quality, the higher the Trust. The path coefficient of Trust to Purchase Intention is 0.25 (T=3.691, P=0.0, and the confidence interval [0.115,0.382] does not contain 0), indicating that Trust has a significant positive effect on Purchase Intention, that is, the higher the Trust, the higher the Purchase Intention. **Table 12** presents the specific results.

Table 12. Assessment of path coefficient of direct relationships (n=287)

Hypothesis	relationship	path coefficient	T-value	P-value	95%CI	
H1	Brand Image→Purchase Intention	0.323	5.703	0.000	0.209	0.432
H2	Product Quality→Purchase Intention	0.128	1.746	0.081	-0.014	0.273
H3	Product Design→Purchase Intention	0.145	1.714	0.087	-0.024	0.312
H4	Brand Image→Trust	0.086	0.947	0.344	-0.087	0.262
H5	Product Quality→Trust	0.380	5.437	0.000	0.244	0.516
H6	Product Design→Trust	0.299	3.413	0.001	0.129	0.471
H7	Trust→Purchase Intention	0.250	3.691	0.000	0.115	0.382

In this study, the Bootstrap test was used to analyse the mediation effect. According to the test results of the Bootstrap method, for the path "Brand Image→Trust→Purchase Intention", the mediator effect value is 0.021 (T=0.914, P=0.361, and the confidence interval [-0.021,0.072] contains 0). This suggests that Trust has no significant mediating role in the effect of brand image on Purchase Intention. For the path "Product Design→Trust→Purchase Intention", the mediator effect value is 0.075 (T=2.222, P=0.026, and the confidence interval [0.023,0.154] does not contain 0), This indicates that Trust plays a significant mediating role in the effect of Product Design on Purchase Intention. For the path "Product Quality→Trust→Purchase Intention", the mediator effect value is 0.095 (T=3.144, P=0.002, and the confidence interval [0.041,0.16]

does not contain 0), This indicates that Trust plays a significant mediating role in the effect of Product Quality on Purchase Intention. The specific results are shown in **Table 13.**

Table 13. Hypothsis testing For indirect relationship

Hypothsis	Relationship	effect value	T-value	P-value	95%CI	
H8	Brand Image→Trust→Purchase Intention	0.021	0.914	0.361	-0.021	0.072
H9	Product Quality→Trust→Purchase Intention	0.095	3.144	0.002	0.041	0.160
H10	Product Design→Trust→Purchase Intention	0.075	2.222	0.026	0.023	0.154

4.5.3. Step 3: Assessment of the level of R2 (coefficient of determination)

To evaluate the explanatory ability of the model, the determination coefficient (R^2) of the endogenous latent variable is used as a measure. The coefficient of determination is the square of the correlation coefficient between the actual value of a specific endogenous latent variable and its predicted value, representing the proportion of the variation in the endogenous latent variable that can be explained by the exogenous latent variable. Chin et al. [106] believe that when $R^2 \geq 0.67$, the explanatory ability is strong; when $0.33 \leq R^2 < 0.67$, the explanatory ability is average; when $0.19 \leq R^2 < 0.33$, the explanatory ability is weak; when $R^2 < 0.19$, the explanatory ability is very weak. As can be seen from **Table 14**, the coefficient of decision for Purchase Intention is 0.462, which is higher than 0.33, indicating medium explanatory ability. The coefficient of Trust is 0.445, also higher than 0.33, indicating medium explanatory ability. In summary, this paper considers that the model studied has effective explanatory ability.

Table 14. Coefficient of determination (R2) results

	Coefficient of Determination (R2)	Explanatory Power
Purchase Intention	0.462	medium
Trust	0.445	medium

4.5.4. Step 4: Assessment of effect size f2

This study examines the influence of exogenous variables on endogenous variables through effect size f^2, which represents the change in R^2 when a specific exogenous latent variable is deleted from the model. This measure is used to evaluate whether the independent variable has a good explanatory ability for the dependent variable. According to Cohen's [107] evaluation criteria, when f^2 is greater than 0.02, it indicates an effective effect; when $0.02 \leq f^2 \leq 0.15$, the independent variable has a negligible impact on the dependent variable. When $0.15 \leq f^2 \leq 0.35$, the independent variable has moderate influence on the dependent variable. When $f^2 \geq 0.35$, the independent variable has a greater influence on the dependent variable. As can be seen from **Table 15** except that Product Design has no effect on Purchase Intention, Product Quality and Purchase Intention, Brand Image on Trust, the influence of other exogenous variables on endogenous variables (f^2) is within an acceptable range.

Table 15. Effect size (f2) results

	Purchase Intention	Trust
Brand Image	0.139	0.010
Product Design	0.019	0.085
Product Quality	0.014	0.141
Trust	0.065	

4.5.5. Step 5: Assessment of Predictive Relevance (Q2)

The Q2 statistic, also known as the predictive relevance measure, assesses the model's ability to predict endogenous constructs in Partial Least Squares Structural Equation Modelling (PLS-SEM). A Q2 value greater than zero indicates that the model has predictive relevance for the endogenous construct, while values of zero or less suggest a lack of predictive relevance. Guidelines suggest that Q2 values above 0.35, 0.15, and 0.02 indicate large, medium, and small predictive relevance, respectively[105]. This statistic is crucial for validating the model's predictive accuracy and ensuring its applicability in real-world contexts. As can be seen from **Table 16**, the Q^2 values of all exogenous constructs (i.e., trust and purchase intention) are greater than 0.35, indicating a large predictive relevance and validity of the model .

Table 16. Predictive relevance (Q^2 value) results

Construct	Predictive Relevance (Q2)
Purchase Intention	0.403
Trust	0.411

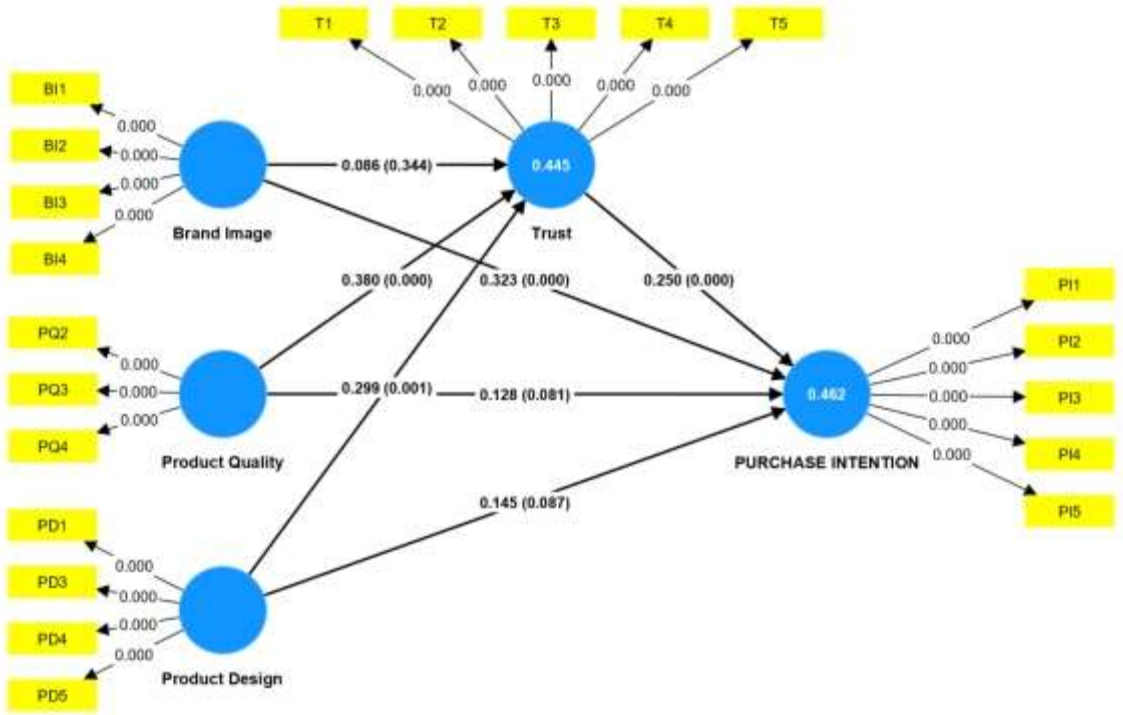

Figure 8. Structural model

4.6. Overall result for hypotheses

This section presents a summary of the hypothesis results, based on the analysis outlined in the previous section. The hypothesised direct relationships were evaluated through path coefficient analysis in the structural model, utilising the bootstrapping technique. **Table 17** provides a summary of the hypothesis evaluations.

Table 17. Summary result for proposed hypotheses

Hypothesis	Description	Result
H1	There is a relationship between brand image and purchase intention towards foreign automobiles.	Supported
H2	There is a relationship between product quality and purchase intention towards foreign automobiles.	Not Supported
H3	There is a relationship between product design and purchase intention towards foreign automobiles.	Not Supported
H4	There is a relationship between Brand image and trust towards foreign automoniles.	Not Supported
H5	There is a relationship between product quality and trust towards foreign automoniles.	Supported
H6	There is a relationship between product design and trust towards foreign automoniles.	Supported
H7	There is a relationship between trust and purchase intention towards foreign automoniles.	Supported
H8	Trust mediates the relationship between brand image and purchase intention.	Not Supported
H9	Trust mediates the relationship between product quality and purchase intention.	Supported
H10	Trust mediates the relationship between product design and purchase intention.	Supported

4.7. Conclusion

This chapter presented the data analysis methods and key findings. Section 4.2 addressed the reliability test, and Section 4.3 outlined respondent profiling. Section 4.4 evaluated the measurement model, confirming composite reliability, convergent validity, and discriminant validity. Section 4.5 summarized the descriptive and normality test results. In Section 4.6, the structural model was assessed using Hair et al.'s [104] five-step approach. No collinearity issues were found (VIF < 5). Path analysis showed six of ten direct relationships were significant. The R^2 values indicated that exogenous variables explained over 40% of the variance in attitude and purchase intention. Q^2 values were above zero, confirming predictive relevance. Section 4.7 summarized the hypothesis testing results.

5. iscussion and conclusion

5.1. Implications

5.1.1. Theoretical implications

This study employs the Theory of Planned Behaviour (TPB), as discussed earlier, to investigate Malaysians' intentions to purchase foreign vehicles. The study incorporates key variables—brand image, product quality, product design, and trust—within the TPB framework to explain the factors shaping Malaysians' decisions to purchase foreign automobiles. By doing so, the study explores how these variables interact with the dimensions of the theory to provide a more comprehensive understanding of consumer behaviour in the Malaysian market.

By extending the application of the TPB to the underexplored area of foreign automobile purchases in Malaysia, this research contributes to the theoretical understanding of consumer behaviour in emerging markets. It offers a framework for future studies to build on, providing a foundation for analyzing purchase intentions within similar contexts. Additionally, this study underscores the importance of considering cultural and market-specific factors when applying the TPB, as these elements can significantly influence the relationships between variables and consumer behaviour. This research not only makes a valuable contribution to the academic literature but also serves as a practical tool for researchers and marketers seeking to understand and predict purchase intentions in the context of foreign automobiles.

5.1.2. Managerial implications

Results suggest that a stronger brand image leads to higher purchase intentions among consumers. The most important factor affecting consumers' purchase intention is brand image. This study will benefit and contribute to the automotive industry in Malaysia by providing them with guidance, brand image is the most important variable that influences customers' purchasing decisions.

In addition, trust is another important factor affecting consumers' purchase intention. Therefore, local manufacturers must recognize the importance of enhancing customers' trust in local cars in order to increase their willingness to buy domestic cars. This insight carries important managerial implications for companies aiming to enhance their market share and customer loyalty, especially in sectors where competition is fierce, and consumer choices are heavily influenced by perceived risk.

Finally, product quality and product design are not significantly related to the foreign automobile purchase intention. The quality of automobiles is not a significant factor for customers to buy foreign cars, so domestic automakers should focus on improving other aspects of attractiveness while ensuring quality. The fashionable design of the vehicle does not directly affect the customer's purchase intention. As a result, domestic manufacturers can focus on other factors that influence consumers' purchase intention.

5.2. Limitations

Several limitations exist in this study, but it provides a potential excellent opportunity for future research. First of all, the variables examined in this study represent only a portion of the factors influencing Malaysians' purchase intentions, leaving other potential variables unexplored. Secondly, the study's sample size is limited. For more accurate results, the sample size must be focused on a larger sample size. In addition, the survey was conducted in a closed format and did not provide a section for respondents to comment. As a result, respondents were restricted from sharing their personal thoughts or opinions, which led to inconsistent responses and reduced the reliability of the questions.

5.3. Suggestions for future research

First, to further understand the factors influencing Malaysians' purchase intention towards foreign automobiles, future studies may examine the influence of other factors such as product price, service quality, perceived risk, and perceived value. Secondly, future studies should attempt to expand the sample size to include a larger population. It aims to improve understanding of the factors influencing Malaysians' purchase intention towards foreign automobiles, as well as to provide a clearer definition of the study's findings. Finally, future researchers should consider using the interview method, as it can provide respondents with a deeper insight into the relationship between independent and dependent variables.

5.4. Conclusion

The purpose of this study was to examine the factors influencing Malaysians' purchase intentions towards foreign automobiles. Based on the findings, brand image and trust have a significant positive impact on Malaysians' purchase intention towards foreign automobiles. However, product quality, product design have no significant influence on Malaysian's purchase intention towards foreign automobiles. Besides, brand image has no significant effect on trust. Product quality, and product design have a significant positive influence on trust. In addition, trust does not have a significant mediating role in the effect of brand image on purchase intention. Trust plays a significant positive mediating role in the effect of product quality and product design on purchase intention.

Conflict of interest

The authors declare no conflict of interest.

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