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Factors Influencing Car Purchasing Intention: A Study among Vietnamese Consumers

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Abstract – *This study explored factors influencing the intention of buying a car among Vietnamese consumers. This quantitative study administered questionnaire surveys to 242 respondents in Ho Chi Minh City, Vietnam. The linear regression analysis revealed five factors influencing the car purchasing intention: brand, perceived quality, technology, the performance of the car and customers' purchasing capacity (i.e. value and income). As the strongest contribution to the car purchasing intention, the car brand contributed the most to customers' decision-making process. Surprisingly, consumers considered safety and security very minimally when deciding to purchase their cars. Concerns and potential benefits of the results were discussed from the perspective of consumers, manufacturers, and policymakers.*

Keywords: Car purchasing intention, brand, quality, performance, technology, safety, income, value, Vietnam

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1.0 INTRODUCTION

The purchasing intention plays a major role in marketing to predict customers' buying behaviour. Car buying intention frameworks are no exception. Cars are valuable goods, which means people buy a car with the intention of using them as long as possible. It is seldom for people to have this kind of decision making because they do not purchase an automobile each year, hence deciding to buy a car is much more involved and needs more rigorous consideration than everyday shopping like buying detergents (Korhonen et al., 1992). Therefore, customers tend to carefully consider different approaches to assist them in coming to this decision such as seeking the help of professional counsellors, considering personal standards, and assessing different options based on different criteria. The intention of purchasing cars has been studied by several previous researchers (Dodds et al., 1991; Shaharudin et al., 2011; Belgiawan et al., 2014; Lee and Govindan, 2014; CheeSeng and Husin, 2015). The majority of the previous

research pertaining to car purchase intention mainly focused on some notable criteria; for instance, based on income and economic, social, technical, and personal attitudes towards automobile design and gender. In some countries, foreign automobiles have been discouraged or even banned to facilitate domestic car production and development by introducing heavy tariffs custom in automobile import. These policies bring about an abundance of spare parts and a drastic reduction in foreign-automobile after-sales support. In contrast, domestic manufacturers dominate the market by running more advertisements, product promotions, product warranty, strengthening after-sales services and extending financial facilities.

As the competition between different car manufacturers becomes more intense, manufacturers are committed to making improvements to satisfy their customers. In Vietnam, the dominance of this industry involves Honda, Toyota, Mitsubishi, Mazda, Hyundai, Kia, Ford, Nissan, BMW, and Mercedes-Benz. All these brands come in different sizes, qualities, and prices. Many customers seek out advice and opinions from car experts or their friends when it comes to buying a car. As buying a car normally is not a common decision – not even annually – people tend to mull things over before purchasing. Therefore, an effective decision-making method benefits to not only the customers but also the manufacturers as it reduces the dealer's burden and help to boost the sales. There are characteristics behind every buying decision of customers that can come from cultural, social, personal or product factors, etc. Marketers can use these factors to improve their products and to promote the appropriate policy to potential customers. The goal of the study was to explore the factors affecting car purchasing intention in Vietnam.

1.1 The Research Context

Since the1st of January 2018, Vietnam has abolished the import tax for cars imported from ASEAN countries to promote the growth of Vietnam's car market. In fact, according to the findings of the Vietnam Automobile Manufacturers Association (VAMA) in the first seven months of 2019, the number of sold cars reached 128,200 units – an increase of 31,700 relatives to last year – and approximately 43,000 units more as compared to when the car import tax was still effective. Despite this rise, Vietnam's car sales still progressed sluggishly than expected. A potential reason for this was the prices for the cars were still not as low as expected. Nevertheless, as the Vietnamese now are having more access to buy imported cars due to the removal of import tax for cars in ASEAN, many imported cars from Thailand and Indonesia have been brought into Vietnam with lower costs despite the brand origins are Japanese, Korean or the USA. According to the report from General Department of Vietnam Customs, from the beginning of 2019 to the end of June 2019, the number of CBU cars imported into Vietnam from the USA, Germany, Japan, and Korea were 690, 770, 1,600 and 600, respectively, whereas the number of imported cars from Thailand and Indonesia in the same period experienced a skyrocketing increase, attaining up to 66,000. This figure accounted for approximately 90 % in terms of quantities amongst the seven biggest car importers in Vietnam.

Over the last five recent years (from 2015 to 2018), car sales in Vietnam saw an overall rise (see Figure 1). As can be seen from the figure, the highest number of sales was in 2018 with 195,502 units (Vietnamnet, 2019), while the lowest number of sales was in 2014 with 131,047 units (Vietnamnet, 2019). In the next future, with the tax exemption of cars from ASEAN, and possible negotiations between Vietnam and other countries such as the USA or in the Europe, it is expected to reduce the cost of the cars, which can consequently increase the sales of the cars in Vietnam.

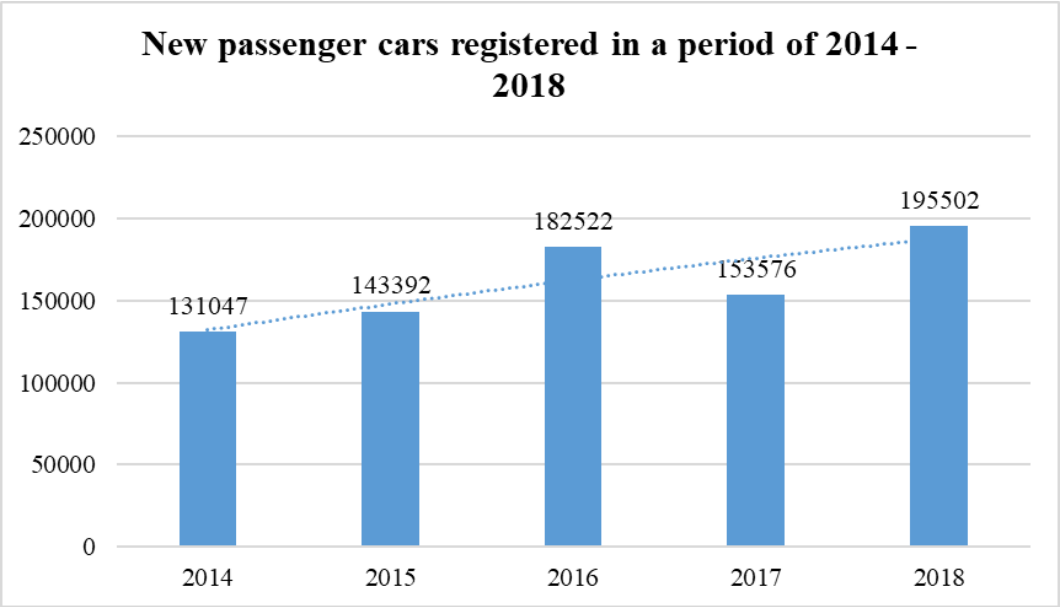

Figure 1: The number of new passenger cars registered in a period of 2014 – 2018

2.0 LITERATURE REVIEW

2.1 Purchase Intention

Purchase intention is widely defined as a tendency (Yoo, 2000), or willingness to buy a product or service of a consumer (Dodd and Supa, 2011; Sam and Tahir, 2009). It refers to an individual conscious plan to attempt to purchase a certain brand (Spears and Singh, 2004). The concept of buying intention stemmed from psychological studies and is extensively used in research on consumer behavior (Dodd and Supa, 2011). Purchase intention is the characteristic of the behavioural tendency for buying the goods by consumers (Monroe and Krishnan, 1985) and an important key for the actual purchasing decision (Tan, 1999). Li et al. (2002) revealed that the effectiveness of purchase behavior measured by the purchasing intention of customers.

According to Diallo (2012), there are four measures to evaluate purchase intention: planning to buy, having a budgeted money to buy, considering to buy, and having the tendency to buy. Purchase intention is regarded as the conscious plan of buying goods or services in the future based on the ability to commit (Warshaw and Davis, 1985). Thanks to examining the intensity of the purchase intention, the possibility of customers purchasing a product can be predictable, the stronger the purchase intention, the higher chances of buying the products (Dodds et. al. 1991; Schiffman and Kanuk, 2000).

2.2 Factors Affecting Automobile Purchase Intention

The study of the factors affecting the intention to buy a car had been conducted by many prior researchers in various countries. The following table summarizes the typical research results related to this article:

Table 1: The Summary of related studies

Authors	Country	Sample size	Findings
Kaushal (2014)	Uttar Pradesh (India)	400	Safety, quality, performance, value and technology had affected to car purchasing intention.
Musyoki (2012)	Africa	180	Price, quality, socio-culture, brand and income had an influence on automobile purchasing intention.
David and Banumathi (2014)	Puduchery (India)	100	Technical, performance, safety, convenience, beauty, environment, social had influenced on the purchase decision.
Yousefi and Hadi-Vencheh (2010)	Iran	126	Safety and economic factors influenced the purchase decision of a car.
Mirzaei & Ruzdar, (2010)	Tabriz (Iran)	261	Fuel consumption, quality, safety and size of the family had determined the purchase decision.
Nezakati et al., (2011)	Malaysia	210	Value, quality, risk averseness, beliefs had affected on intention to purchase an imported car.
Byun (2001)	Korea	35	Brand model, braking efficiency, repairing time, fitting are the major factors.
Mairesse et al., (2012)	Belgium	74	Vehicle weight, financial position and driving experience had influenced to buy a car.
Khan and Supinit (2015)	Thailand	300	Brand and price were found to be the most influence and colour, model and safety the least influence.

Based on previous research findings, the factors taken into consideration in a car purchasing intention in this study include ‘Safety and Security’, ‘Quality’, ‘Performance’, ‘Value’, ‘Income’, ‘Technology’, ‘Socio-culture’, and ‘Brand’.

2.3 The Related Concepts

2.3.1 Safety and Security

Efficacy and safety of cars and consumer products including toys, electronics, and household items, have resulted in issues associated with health, injury, and even death (Marucheck et al 2011). Product safety is referred to as a decrease in the probability that the usage of a product will lead to sickness, injury, fatality or negative impacts on people, property or equipment. Product security defined as the delivery of a product that is uncompromised by intentional pollution, damage, or diversion within the supply chain. Safety issues about manufacturing defects are usually included in larger quality problems that have been carefully studied. So far, the relationship between learn manufacturing and increased levels of safety issues is the main concern.

According to Kaushal (2014), when safety and security are taken into consideration, buyers spend more for extra product attributes, such as engine capacity, brakes, and airbags. Consumers consider the probable values of such additional attributes and are happy to pay more for them if the mileages of such added attributes outweigh the extra cost. Nonetheless, consumers’ decisions heavily rely on how different options are framed. Standard economics

try to gain insights into car purchasing behaviour with the assumption that individuals consider the relative benefits from buying a car with a known set of attributes against the lifetime expense, as compared to other purchase options. It is assumed that buyers grade different purchase options drawn on their personal preferences, and they will buy the one with the highest score. As a vehicle has been picked, consumers are usually offered optional accessories such as anti-lock braking systems. Consumers' decision to get additional purchases mainly draws on the perceived additional usefulness they each provide. The current technical issues of concern are increasing energy efficiency, competency of the internal combustion engine, reducing the weight of vehicles, incorporating high-tech safety features, etc.

Safety is defined as properties such as brake, airbag, anti-stick brake system, high-tech feature. It can be said that automobiles are one of the leading industries in innovating and improving the quality of product safety and security. The enhancement of safety is associated with designing a car that can protect the drivers and passengers from possible crashes. The critical safety features are those which help lower the probability of death and intense injuries. Airbags, Anti-lock Braking System (ABS), impact protection systems, trunk safety, seat belts, safety of the body and number of alarm facilities are some of them. Amongst these features, airbags and ABS are two most popular. While airbags provide chest and face detection; ABS permits drivers full steering control and shorter stopping distance in adverse situations (Byun, 2001). Also, according to Yousefi and Hadi-Vencheh (2010), safety includes the number of airbags, back and fore passenger seat belts, braking system quality, ABS, external light system, central locking, and burglar alarm.

2.3.2 Quality

According to the American Society for Quality, there are three probable definitions of quality:

- Based on the customer's perceptions of a product/service's design and how well the design matches the original specifications.
- The ability of a product/service to satisfy stated or implied needs.
- Achieved by conforming to established requirements within an organization.

There is a wide variety of ways to define quality. While some of them are subjective, others are objective, but they are generally interdependent. Furthermore, the definitions of quality from many quality experts are heavily dependent on their workplaces as well as personal standards. One of the definitions of quality is a basic tool for an inherent characteristic of a product or service that permits it to be compared with other goods or services of the same type. Despite carrying many meanings, the quality implies the set of inherent characteristics of an object that allows meeting stated or underlying needs. Besides, the quality of a product is the belief that a customer has about it, which means he or she perceives that a particular product or service indeed meet their needs (Enrique, 2014).

According to Stylidis et al., (2014), many authors realize that product quality has a multidimensional structure. In 1984, Garvin presented five approaches of quality definition: transcendent, product-based, user-based, manufacturing-based and value-based. The transcendent approach says "quality cannot be defined precisely" (Garvin, 1984). The product-based approach considers quality as a measurable variable. The user-based approach denotes an idiosyncratic and highly subjective view of quality. The manufacturing-based approach denotes engineering practices, where quality is identified as "fulfilment of the requirements".

The value-based approach sees quality in terms of cost ad price. Also, Garvin (1984) proposed eight basic dimensions in terms of product quality elements:

- Performance (primary product characteristics)
- Features ("bells and whistles"/ secondary attributes that improve product performance and quality)
- Reliability (frequency of failure)
- Conformance (match with specifications)
- Durability (product life)
- Serviceability (speed of repair)
- Aesthetics ("fits and finishes")
- Perceived quality (reputation and intangibles)

The quality of a product or service is often evaluated based on a variety of informational cues associated with the product. Some of those cues are intrinsic to the products, whereas others are extrinsic. Zeithaml (1988) defines cues that are intrinsic concern physical characteristics of the products itself, such as product's performance, features, reliability, conformance, durability, serviceability, and aesthetics. By contrast, extrinsic properties are the cues that are external to the products itself, such as price, brand name, brand image, company reputation, manufacturer's image, retail store image and the country of origin. Brand name, price, and package are major extrinsic cues to assess the quality of product or service (Selnes, 1993). As defined by Parasuraman et al. (1988), the performance quality of an overall evaluation or attitude towards the product or service.

According to Kaushal (2014), quality represents different meanings to different car consumers from reliability to fuel efficiency to utility. In this paper, quality is related to the exterior, interior and features of the car. Buyers' requirements are often influenced by personal preferences and external factors. People want to grow in self-esteem in society, and they believe that possessing a high-class passenger car can help them reinforce their social position. This was conceptualized by Netemeyer et al. (1995).

2.3.3 Performance

Byun (2001) said that performance is in connection with the functioning of the car. It encompasses peak torque, peak speed, fuel tank capacity, braking ability, concerning ability, noises, and travelling comfort.

According to Kaushal (2014), standard economic theory permits a wide range of factors for customers to evaluate or to become the subject of consumer preferences (including functional qualities like cost, fuel efficiency, and performance, as well as more subjective qualities like design preference). However, it does not account for the other cognitive and situational which can affect consumers' considerations in the course of the purchasing of a new car. Behavioural economics and marketing show examples to emphasize many ways in which buyers' preferences can be constrained and overridden by these additional cognitive and situational factors. Performance means speed, acceleration, comfort, and brakes of the car.

2.3.4 Value

Stonewall (1992) referred value as a function of product features, quality issues, delivery, service, price. Also, he said "value is always determined by the consumer, in his or her terms, timing and testaments" and "value is a perception, a view, or understanding made up of measurable components". Value is a "function of the overall quality and price of the firm's products and services compared to the competition" (Mokhtar et al., 2003). Rust and Oliver (1994) conceptualized value as the overall assessment of the service consumption experience and can be seen a certain or long amount of time of global evaluation.

In-store marketing such as special offers is likely to impact the influences that prices exert on customer behaviour by the prices of similar products and by consumer beliefs of changes in price. The policy should deal with retailers to incentivize price promotions on organic products. Though price incentives may initially cause buyers to oppose to the price change, there is a steady change in consumers' valuations of price. This indicates that initial reactions of customers to the price change will die out when they adapt to higher prices. Financial levers rising over time can alleviate this problem. Different factors such as fixed costs, economies of scale, technology and other aspects make pricing of automobiles become a complex problem. Besides, competition and consumer demand also play a major role in this. Recently, price reductions have been known as the main strategic plan to attract consumers by most car manufacturers. To make price reductions, companies have to make several decisions at every stage of production and sales, starting from controlling factors of production and supply chain to negotiation with dealers. The sales variability of products and services is considerably affected by price. Buyers tend to overrate the short-term product and underestimate the future, which means they do not consider the long-term running expenses involved with products (Kaushal, 2014).

2.3.5 Income

The purchasing power of consumers may be measured by income. Alternatively, income can be considered as an index to predict the purchasing behaviour of buyers (Best et al., 2007; Kerin et al., 2003; Peter and Olson, 2008; Schiffman and Kanuk, 2000). According to Wang et al. (2001), it is said that "income is a key factor that determines consumer ability to buy". The kinds and number of goods purchased vary based on the wage of the consumer. The higher-income consumers have, the more luxury goods they purchase. An explanation is given by Taylor (2001) indicates that a drop-in income displaces purchasing behaviour from purchasing normal products to inferior products. Simply put, buyers purchase fewer specialty items such as shoes and clothing, and buy more store-brand items.

Regarding purchasing durable goods like housing and automobiles, household income is usually adopted as a means to study consumer behaviour. In the study of Wang et al. (2001), they concluded that what influence the intention of consumers to buy a house are their household income, attitude toward debt, and their optimistic/pessimistic view of economic conditions. Similar research was conducted by Portolese Dias (2004), but he studied the purchasing behaviour of consumers for different products such as automobile, electronics, clothing, and household goods based on the age of consumers. The outcome of Portolese Dias (2004) showed that the income of buyers influenced their automobile and clothing purchase. Nevertheless, the purchase of household goods and electronics were not impacted by the income of consumers.

2.3.6 Technology

Technological improvements have enabled automobile manufacturers to cut down on automotive emissions and enhance fuel efficiency per vehicle in the last few decades. Nevertheless, unless manufacturers produce emission-free vehicles, vehicles will be one of the causes of air pollution. Furthermore, because of the growth in population and wealth and relatively low fuel costs, demand for personal transport and vehicle will likely rise. Without being controlled by a restrictive environment, it opens doors for the industry to restructure, adopt the latest technologies, empower the global developments, and be aware of its potential. Also, this has considerably increased the industry's contribution to overall industrial growth in the economy. The firms have resorted to common platforms, modular assemblies, and systems integration of component suppliers. Cutting-edge technologies are integrated into modern automobiles with sophisticated entertainment and safety systems, several hybrid power trains, fuel economy, and low emissions. According to Kaushal (2014), the entertainment system is also added to provide an increasing array of music playback, voice recognition, and connectivity features.

2.3.7 Socio-Cultural

According to Musyoki (2012), culture is one of the external factors that influence the consumers because culture stands for influences that are subjected to the consumer by other individuals. Culture is defined as "that complex whole which includes knowledge, belief, art, morals, custom, and any other capabilities and habits acquired by man person as a member of society" (Kileba, 2001). Culture is a combination of values, ideas, attitudes and other meaningful symbols which permit human to communicate, interpret and evaluate as members of society (Blackwell et al., 2001). It is the chief underlying reason behind a person's desire and behaviour. The degree to which culture affects the consumer's purchasing behaviour can change from country to country because different social groups have their own culture. Each cultural group can be broken down into groups making up people with common life experiences and situations, also known as sub-cultures such as nationality, racial groups, religion, and geographical areas (Kotler, 2005). The third cultural factor is social class, which is composed of other variables: occupation, income, education, and wealth (Blackwell et al., 2001).

2.3.8 Brand

Mooij (2018) described brand is a name in every consumer's mind, and it is characterized by a noticeable name or symbol which can distinguish the goods and services from the rivals (Aaker, 1991; Keller et al., 2011). Apart from a particular brand name, a brand is also made up of products, packaging, promotion, advertising as well as its overall presentation (Murphy and Hart, 1998). Moreover, brand is a guarantor of reliability and qualifying consumer products under the viewpoint of consumers (Roman et al., 2003). Besides, consumers tend to purchase and use brand-name goods that feature their personality in different situational contexts (Aaker, 1999; Fennis and Pruyn, 2007).

A brand can be an unending and profitable asset as long as it is preserved in a good manner that can keep meeting consumers' needs (Batchelor, 1998). Although successful brands can be different in nature, they have something in common, for example, reasonably-priced products and consistent qualities (Murphy and Hart, 1998). According to Levitt (1983), the success of a brand is defined by four elements that are tangible product, basic brand, augmented

brand and potential brand. While tangible product refers to the commodity that meets the essential needs of the customers, basic brand relates to the packaging of the tangible product to attract the attention of the prospective customers. The brand can be even extended further by the provision of credibility, effective after-sales services and the like. Of four elements, a potential brand is the most important because it is established through engendering customer's preference and loyalty. Thanks to this, customers bear the brand name in their minds.

Aaker (2002) defined brand is a kind grade, or make, as indicated by a trademark of the car, whereas Hellier et al. (2003) characterized brand reputation is the perception of quality associated with the brand name. It is an argument that brand reputation and customer satisfaction imply the same constructs. For business, the brand name seems to be more essential. The key function of brand is that will be unique and the intrinsic cues or attributes are hard to employ. The intrinsic cues mean the physical or technical components of a product. On the contrary, if a brand name is defined as an extrinsic cue, it means the attribute must be associated with the product but not the physical part of the product itself. Direct experiences of customers impacted brand reputation. Brand reputation can be occurred by a positive attitude followed by consumption (Selnes, 1993).

2.4 Research Model

This study proposed the research model as follow:

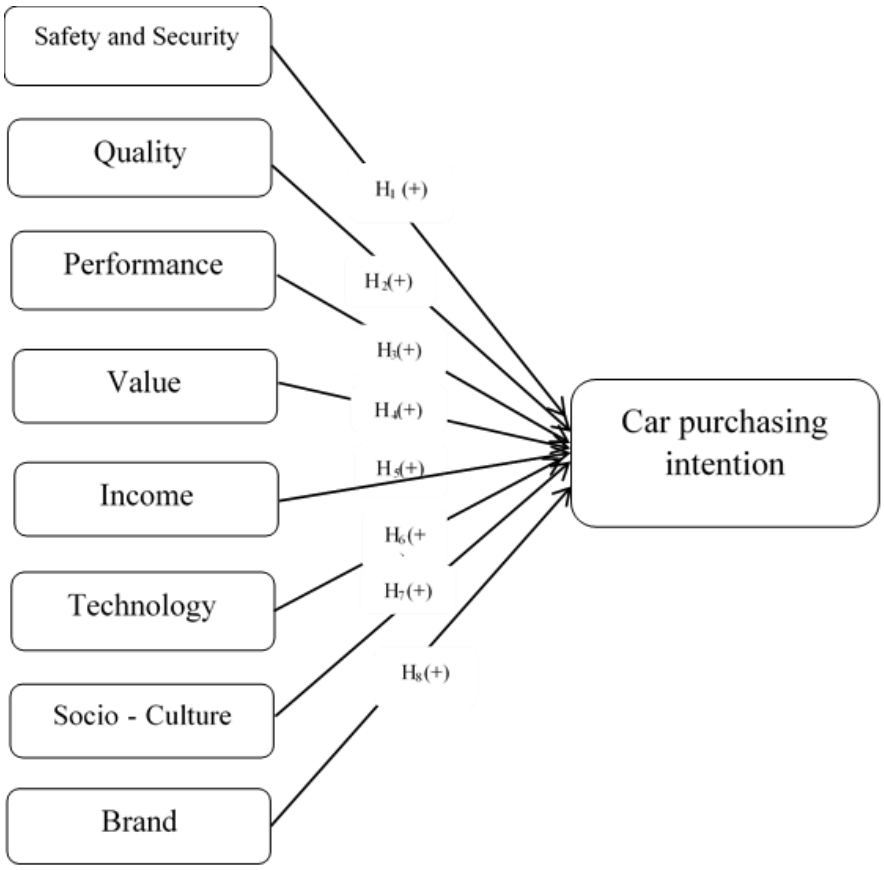

Figure 2: Research model

Hypotheses:

H1: There is a positive relationship between the safety of a car and the car purchasing intention.
H2: There is a positive relationship between the quality of a car and the car purchasing intention.
H3: There is a positive relationship between the performance of a car and the car purchasing intention.
H4: There is a positive relationship between the value of a car and the car purchasing intention.
H5: There is a positive relationship between the income of consumers and car purchasing intention.
H6: There is a positive relationship between the technology of a car and the car purchasing intention.
H7: There is a positive relationship between society and the car purchasing intention.
H8: There is a positive relationship between the brand of a car and the car purchasing intention.

3.0 METHODOLOGY

The study used the quantitative method to test models and hypotheses. The data was collected via a survey with participants who intend to buy a new car in Ho Chi Minh City at showrooms, car exhibitions, driver license testing centres by the convenient sampling method. A structured questionnaire was used to collect data with a 5-point Likert scale with the anchor of (1) 'strongly disagree' to (5) 'strongly agree'. The scales are inherited from previous studies, then modified (through preliminary qualitative research steps) to correspond with the research context. The Exploratory Factor Analysis (EFA) method, multivariate linear regression analysis was employed to analyse.

Table 2: Measurement scale sources

Factors	Variables	References
Safety and Security	3	Kaushal (2014)
Quality	3	
Performance	3	
Value	6	
Income	3	Rahman (2017)
Technology	2	Kaushal (2014)
Society - Culture	3	Musyoki (2012)
Brand	4	Sainy (2014)
Purchasing Intention	3	San Martín & Herrero (2012)

4.0 RESULTS

4.1 Sample Profiles

The survey sample comprised 242 customers who intend to buy a car in HCM city, meeting the requirements for a minimum sample size of 180 for statistical studies as this research (Hair et al., 1998). Information on the demographic characteristics of the sample in terms of gender, age, education, occupation, and monthly income is provided in Table 3.

Table 3: Sample profiles

Elements	Frequencies	%	Elements	Frequencies	%
Gender			*Occupation*		
- Male	165	68.2	- Small trader	40	16.5
- Female	77	31.8	- Officer in private companies	46	19.0
Age			- Public servant	48	19.8
- Below 24	30	12.4	- Retiree	24	9.9
- 25 - 35	86	35.5	- Businessman	68	28.1
- 36 - 45	89	36.8	- Others	16	6.6
- 46 - 55	29	12.0			
- Above 55	8	3.3	*Monthly Income (million VND)*		
Education			- Below 20	4	1.7
- High school	23	9.5	- 20 - 30	21	8.7
- Vocational degree	32	13.2	- 30 - 40	71	29.3
- College	33	13.6	- 41- 50	70	28.9
- Bachelor	107	44.2	- 50 - 60	42	17.4
- Master	47	19.4	- Above 60	34	14.0

4.2 Other Information from Respondents

In this section, the information that clients consider before buying a car summarized the following.

4.2.1 Time to Buy a Car

The decision-making process for buying a car is more complicated than the process of buying a regular product. The interviewees indicated that recognition of the needs of a new car as the first step, followed by related information search about brand, performance, features, price, payment, and company's policy among various automobile models and manufacturers. Then, they thoroughly consider car types that matched with their family and income. After comparison and evaluation between alternatives based on their knowledge to choose a new favourite car. Even they analyse costs and benefits, strengths and weaknesses by reading customer reviews on the website about technology and the performance of different types of cars before visiting a car showroom and making the final decision.

Therefore, it takes a long time to learn about them. So, time to buy a car of respondents in the future as follows:

- Within 1 month: 6. 6 %
- 2 months – 6 months: 31 %
- 6 months – 1 year: 27.3 %
- Over 1 year: 35.1 %

Purpose of a car purchase: For customers, the first thing to consider when buying a car is knowing their exact purpose of buying it. When they know and understand their purpose of buying a car, it will be easier for them to plan what type of car they want to buy, how much budget that they have to spend and other things related to it. Here are some of the common purposes of buying a car in the survey sample:

- Working / Studying: 44 %
- Visiting relatives / Travelling: 33.5 %
- Commerce: 16.2 %
- Show up: 6.3 %

Information sources: Because a car is a high-value product, so customers need much time to absolutely understand the related information to cars. Several sources of information help consumers to learn more about a product and decide between competing brands. In other words, interview results also suggested that the opinion of family and friends, even reviews from the media, including magazines, newspapers, and online reviews, meaningfully affected and influenced the way that they behaved and made their purchasing decisions. Findings indicate that the source of information that customers approach from:

- Relatives/friends/colleagues: 24.3 %
- Car exhibitions: 24.1 %
- Social networking sites: 22.5 %
- Advertising on TV, radio, leaflets, internet: 24.7 %

Therefore, automobile manufacturers need to pay attention to these channels in order to have product communication strategies and sales policies to customers.

4.2.2 Company's Sale Policy

When asking about the company's sale policies, 32.6 % of respondents are interested in discount policy, 26.4 % of samples like the instalment, while warranty and promotion policy is about 23.1 % and 17.8 %, respectively.

4.2.3 Colour

For eastern people in Vietnam, it is also important to decide on the colour of a car. Most people simply go with their favourite colour, while others will put their logical thinking-cap, brood over the selection of colour choices by considering the different practical factors such as the climate, dirt visibility, colour that match their age. According to Vietnamnet (2019), white was the best-selling car colour in the world in 2017, especially in the Asia-Pacific market, the white choice rates up to 44 %, followed by black at 19 % in North American and 16 % in Asia-Pacific region. The third and fourth positions are silver and grey with 12 % and 10 %, respectively.

Survey results with 242 customers in Ho Chi Minh City show that the colour which customers want to buy is black, accounting for 38.8 %, the next to white and silver make up 36 % and 8.7 %, respectively, and other colours (red, bronze, brown, yellow, blue, orange...) only with 6.6 %. This result is also quite similar to that of the Asia-Pacific market. In addition, the selection of car colours depends on the resale value after using and colours such as black, white and silver are at least easier to sell compared to others (Vietnamnet, 2019).

4.2.4 The Type of Car

What type of cars which customers prefer to buy?

- Sedan: 39.3 %
- SUV or CUV*: 25.2 % *(*Crossover Utility Vehicle)*
- Hatchback: 12.4 %
- MPV/Minivan: 7 %
- Couple: 6.6 %
- Pickup truck: 5.8 %
- Others: 3.7 %

4.2.5 Segments

As can be seen from Table 4, the percentage of the sample that is interested in C-segment is nearly 30.2 %, followed by D-segment (14.9 %) and B-segment (14 %).

Table 4: Types of favourite segments in Vietnam

Segments	Frequency	Percent	Valid Percent	Cumulative Percent
A	6	2.5	2.5	2.5
B	34	14.0	14.0	16.5
C	73	30.2	30.2	46.7
D	36	14.9	14.9	61.6
E	20	8.3	8.3	69.8
F	11	4.5	4.5	74.4
M	15	6.2	6.2	80.6
SUV or CUV	35	14.5	14.5	95.0
Pickup truck	12	5.0	5.0	100.0
Total	**242**	**100.0**	**100.0**	

4.2.6 Price

According to survey data, 94.6 % of customers want to buy a new car, and customers are willing to pay a new car in a price range as follows:

- 400 million - 600 million: 22.7 %
- 600 million -800 million: 31 %
- 800 million -1.2 billion: 30.2 %

This result is consistent with the average price that Vietnamese people spend 764.5 million VN on a car (VNEXPRESS, 2015). Only 5 % of customers will buy a car with below 400 million VND, 11.2 % of the samples are more likely to purchase an automobile with the price of over 1.2 billion VND, which is the price for high-income people.

4.2.7 Payments

More than 50 percent of customers will choose to pay with instalments when buying a car, 45 % of people pay in cash. With the income of many Vietnamese people, the payment could make it difficult to afford their car once when buying. Although there are no exact statistics, according to preliminary assessment, 8 out of 10 car buyers, only have about half the money, but they still want to buy cars with relatively high prices (VNEXPRESS, 2015). Therefore, buying a car on instalments, a bank loan may be a better option if you don't have enough money to purchase your favourite car - either the car may be too expensive or you may have fewer savings or you may be interested in keeping your savings intact.

4.2.8 Brand

The most valuable automobile brands towards Vietnamese customers are Toyota, up to 27.7 % of those who will opt that brand for their car. Honda is the second with 16.9 %, the next one is Hyundai and Mitsubishi (about 11.6 % and 11.2 %, respectively). The following table that represents types of favourite brands in Vietnam:

Table 5: Types of favourite brands in Vietnam

Brands	Frequency	Percent	Valid Percent	Cumulative Percent
Toyota	67	27.7	27.7	27.7
Honda	41	16.9	16.9	44.6
Hyundai	28	11.6	11.6	56.2
Mitsubishi	27	11.2	11.2	67.4
Ford	26	10.7	10.7	78.1
KIA	20	8.3	8.3	86.4
Other brands (Audi, BMW, Chevrolet, Mazda…)	19	7.9	7.9	94.2
VinFast	14	5.8	5.8	100.0
Total	242	100.0	100.0	

4.2.9 Ranking Factor

Among seven factors, this statistic shows that brand is the most important factor for the choice of cars while quality is second only to the brand, followed by safety with the third rank. But technology, resale value, performance, and social culture were given the least importance during the purchase of a car.

Table 6: Ranking Factors

Factors	N	Rank	Mean	Std. Deviation
Brand	242	1	1.88	.887
Quality	242	2	1.99	.768
Safety	242	3	2.15	.828
Advanced technology	242	4	3.56	1.556
Price drops after the purchase	242	5	4.60	1.285
Performance	242	6	4.83	1.197
Social culture	242	7	6.04	1.293
Valid N (listwise)	242			

4.2.10 Technology

62.8 % of customers prefer AEB technology in cars, followed by cruise control technology (20.7 %), autonomous driving (14 %), other technologies only account for 2.5 %.

4.2.11 ASEAN NCAP

When asking about the ASEAN NCAP rating, 35.1 % of interviewees did not know this rating program. For those who know this organization, only 14.5 % of people are interested in the program's car safety rating, 28.5 % only get safety rating information as a reference. The remaining 21.9 % of the sample do not care about the car safety rating in the buying process. They often decide what type of car based on the collected information.

4.3 Research Results

4.3.1 Exploratory Factor Analysis (EFA)

Before testing Exploratory Factor Analysis (EFA), measurement items for each construct in the proposed research model should be tested for reliability (Table 7). Alpha of all scales was rather high (the minimum was 0.771) and the item-total correlations were also high (the minimum is 0.597). Thus, all items were satisfied with EFA. The EFA is used to evaluate the discriminant value and convergence value of the measurement scale. In this study, the factor extraction method is Principal Axis Factoring with Promax Rotation. EFA results extracted seven factors from 32 items. However, there are four items (S6, V3, I2, T5) eliminated from the analysis because of low factor loading (< 0.5). Factor loadings of 32 variables are between 0.521 and 0.890 (>0.5). The KMO index is 0.925 with a statistical significance of 0.000 indicates that the EFA of independent components is appropriate. A total extracted variance of constructs is 73.945 %. Observable variables in intention to buy a car are well explained (78.417 %). Yet, value and income factors are combined in one factor and the model should be revised (Figure 3).

4.3.2 Reliability Analysis

After testing EFA, new factors are tested for reliability again. The reliability analysis results reveal that these scales were promising (alpha ranges from 0.807 to 0.917) and item-total correlations are relatively high compared to the accepted level (>0.3).

Table 7: Results of EFA

Constructs	Factor Loadings	Alpha	Eigenvalues
Safety and Security		0.917	12.149
S1	0.890	0.756	
S2	0.864	0.833	
S3	0.779	0.737	
S4	0.781	0.791	
S5	0.807	0.752	
S7	0.702	0.733	
Quality		0.867	1.158
Q1	0.868	0.734	
Q2	0.824	0.766	
Q3	0.770	0.738	
Performance		0.848	1.583
P1	0.619	0.687	
P2	0.641	0.732	
P3	0.725	0.630	
P4	0.810	0.703	
Value - Income		0.839	1.391
V1	0.721	0.669	
V2	0.819	0.612	
I1	0.657	0.719	
I3	0.586	0.686	
Technology		0.871	2.410
T1	0.692	0.706	
T2	0.857	0.731	
T3	0.715	0.709	
T4	0.691	0.715	
T6	0.601	0.623	
Socio-Culture		0.807	1.094
SC1	0.806	0.657	
SC2	0.820	0.720	
SC3	0.521	0.594	
Brand		0.901	1.658
B1	0.718	0.810	
B2	0.673	0.791	
B3	0.885	0.792	
B4	0.828	0.731	
Intention		0.862	2.353
I1	0.853	0.759	
I2	0.820	0.738	
I3	0.794	0.720	

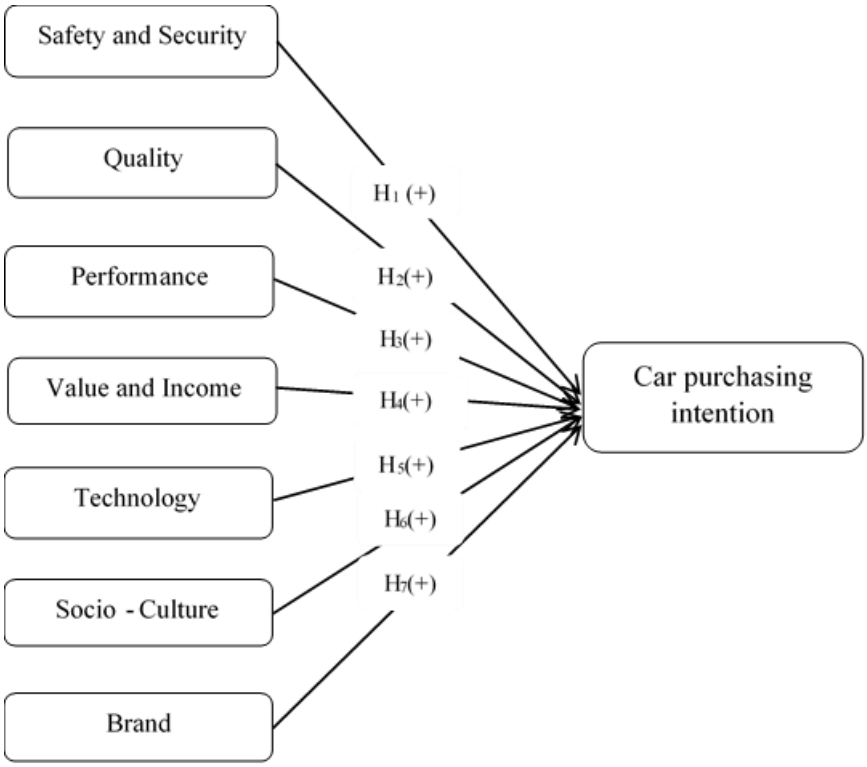

Figure 3: The modified research model

So, hypothesis H4 and H5 should be combined together. The modified hypotheses will be:

H1: There is a positive relationship between the safety of a car and the car purchasing intention.

H2: There is a positive relationship between the quality of a car and the car purchasing intention.

H3: There is a positive relationship between the performance of a car and the car purchasing intention.

H4: There is a positive relationship between the value of a car, the income of customers and the car purchasing intention.

H5: There is a positive relationship between the technology of a car and the car purchasing intention.

H6: There is a positive relationship between society and the car purchasing intention.

H7: There is a positive relationship between the brand of a car and the car purchasing intention.

4.3.3 Correlation Analysis

Based on the results of correlation analysis, Pearson coefficients indicated that all independent variables have a relationship with the dependent variable at 5 % significant level. Therefore, they could be used for regression analysis.

4.3.4 Regression Analysis and Hypothesis Test

This article used the enter method in the regression model to analyse the relationship between independent factors and the dependent factor. The following Table 8 summarized the results of the regression analysis.

Table 8: Results of the regression analysis

Hypotheses	Relationship	Standardized beta	P-value	Result	
				P = 5 %	P = 10 %
H_1	Safety → Purchase Intention	0.086	0.236	Not supported	Not supported
H_2	Quality → Purchase Intention	0.197	0.004	Supported	Supported
H_3	Performance → Purchase Intention	0.113	0.080	Not supported	Supported
H_4	Value and Income→ Purchase Intention	0.102	0.099	Not supported	Supported
H_5	Technology → Purchase Intention	0.124	0.047	Supported	Supported
H_6	Socio-Culture → Purchase Intention	0.082	0.150	Not supported	Not supported
H_7	Brand → Purchase Intention	0.198	0.004	Supported	Supported
Adjusted R square: 0.478					

Based on the regression analysis results in Table 8, at the 5 % significant level, hypotheses H1, H3, H4, H6 are all not supported (p-value > 0.05), other hypotheses H2, H5, H7 are supported. At a 10 % significant level, only two hypotheses H1 and H6 are not supported (p-value > 0.1). Adjusted R squared at an average of over 40 % (47.8 %).

4.4 Discussion

Understanding factors influencing customer behavioral intention in the decision process of purchasers has long been of enormous attraction to researchers and manufacturers. That is the purpose of this study. Purchasing a new car is a decision-making problem that illustrates customers' preferences and attitudes towards a product. Findings from this research reveal that at 5 % significant level, consumer's intention to purchase a car was affected by 'Brand', 'Quality', and 'Technology'. 'Brand' has the greatest impact on the intention to buy of clients with a standardized beta value of 0.198; the next one is quality (standardized beta = 0.197). The results are quite similar to the ranking of respondents on the importance level of factors when buying cars. 'Quality' is second only to 'Brand' towards the purchasing intention of consumers.

It means that a reputable brand in the marketplace will build trust and loyalty with customers. According to Mooij (1998), a brand is a name in the minds of every consumer and to distinguish goods and services of the seller from those of competitors (Aaker, 1991). Consumers like to buy well-known car brands to show up and the brands they trust. Buyers often believe that brand-products always have high quality. From a consumer's point of view, a brand provides a guarantee by the producer to the consumer of the product quality (Roman et al., 2003); and the normal perception is that a product of a reputable and famous brand will

have a good quality. With high-value products such as cars, quality is always the top concern for many Vietnamese people. Before deciding which one to buy, many people frequently make comparisons among several products. Consumers usually seek the best value in terms of good quality at the lowest price, but many are willing to pay more money to get a brand that they are familiar with.

The next factor with a standardized beta of 0.124 is 'Technology'. Manufacturers always want to produce cars that integrate advanced technologies into additional support features to provide usability, safety for users. According to findings, consumers tend to trust and want to use cars with the latest technology or international cooperation. Because they believe an imported car or a foreign cooperation one is better quality than a locally assembled and manufactured product.

At the significance level of 10 %, two more factors influence customer's intention besides 'Brand', 'Quality', 'Technology' are 'Performance' and 'Value-income'. However, the level of influence of these two factors is not as much as three previous factors. Specifically, 'Performance' has a standardized beta of 0.113 and the 'Value-income' factor has a standardized beta of 0.102.

On the other hand, when buying a car, the attention of customers to 'Performance' is fuel, comfortable driving for long distances, easy-to-replace parts, and convenient facility maintenance. Customers will be more secure when buying an automobile with fuel efficiency and cheap replacement parts. Because owning a car is not like owning other products.

In addition to the large initial purchase, users must also have a monthly payment to maintain and use it. Especially, in the context of Vietnam, the automotive support industry has not been developed and the price of gasoline has been continuously increasing. What is more, Vietnamese are also interested in the car's price and resale value before they determine what kind of car to buy and whether or not to buy a car with their income level. Before buying a new car, people put a lot of thought into their financial conditions and available choices. The possible budget is an essential factor that influences to decide which car to buy. The majority of customers want to buy a cheap car in the same segment. It means that before deciding on buying a car, they will refer to many different types of cars and compare prices between vehicles. With a similar feature, a trend of customers towards a better value such as cheaper price and a higher resale value.

Thus, five out of seven factors affect intention to buyers. Of these five factors, the 'Brand' factor has the strongest impact while the 'Value' factor least impacted customers' intention to buy cars in the research sample. The influence of 'Safety' and 'Socio-culture' on purchase intention is not significant in their decision-making process

5.0 CONCLUSION

The study used a quantitative method to find out factors that influence consumers' automobile purchase intention in Ho Chi Minh City. These findings are consistent with those of many previous studies. In the purchasing decision-making process, factors such as 'Brand', 'Quality', 'Technology', 'Performance' and 'Value-income' influence on buyer intention. In particular, 'Brand' is likely to be the number one priority for customers to make up their minds in choosing an automobile. They are willing to pay much more money to buy a car with a well-known

brand in the same segment. For mass-market cars, 'Brand' helps to determine certain products that a consumer considers to buy. That is the reason why companies need to be aware of the benefits of building the brand image in the customer's mind. Therefore, domestic and foreign automobile manufacturers should build a brand image on top priority. Building brand perception can play an important role in the modern marketplace. People now widely acknowledged that strong brand awareness will create a competitive advantage in the marketing environment that will enhance their overall reputation and reliability.

Customers can recognize a brand through quality and technological differences in cars. Building a good brand awareness and image in the consumer mind is a long process. Hence, automotive producers need to have a long-term strategy by paying attention to quality improvement, customer service, and so on. The survey results also show that factors that car buyers are interested in are 'Technology', 'Performance', and 'Value-income'. Since automobile manufacturers must constantly improve technology (such as mirror adjustment technology, electric seat adjustment technology, windshield technology, etc.) to meet customers' increasing demands and increase competitiveness compared with competitors. However, there is always a constant change in customers' demands and preferences, which led manufacturers to produce new and improved designs. Moreover, to increase sales, companies should facilitate and support customers through sales policies such as discounts, promotion, linked banks for instalments as well as producers supply high-quality automobiles at affordable prices to buyers because the demand for owning a car of families in Vietnam is very huge.

In summary, this study has achieved positive results, but there are still some limitations. Firstly, the study only conducted customers in Ho Chi Minh City. Next studies can be further investigated in other regions such as North and Central Vietnam to have a comprehensive view of the car consumer market in Vietnam. Secondly, further research may also include other factors such as 'Environment' and 'Risk Averseness' into a car purchasing intention model. In general, the findings of this study also outline factors that influence consumer behavior intention in opting for a car as well as help the business of car manufacturers.

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