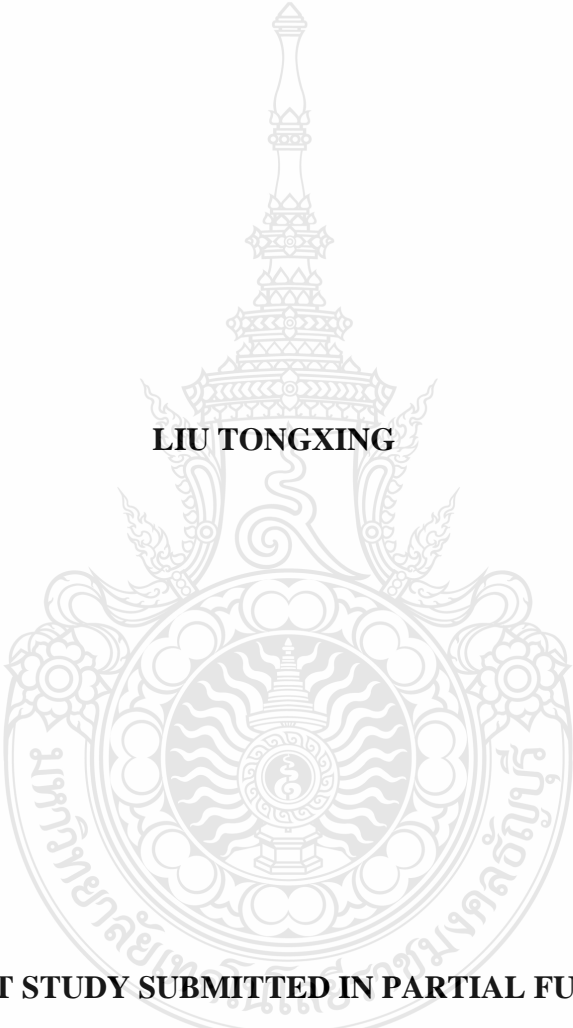


**FACTORS AFFECTING CONSUMERS' PURCHASE INTENTION
OF NEW ENERGY VEHICLES**

LIU TONGXING



**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT OF
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ADMINISTRATION PROGRAM IN GENERAL MANAGEMENT
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Intention of New Energy Vehicles
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Major Subject General Management
Independent Study Advisor Assistant Professor Sirinya Wiroonrath, Ph.D.
Academic Year 2023

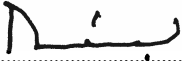
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ABSTRACT

This independent study aimed to investigate: 1) the factors affecting people's willingness to buy new energy vehicles, 2) which of the factors highly affect people's willingness to buy new energy vehicles, 3) the development status and existing defects of new energy vehicles, and 4) whether the factors influencing people's purchase of new energy vehicles can be attributed to the inherent prejudice of consumers for the new energy vehicles or the defects of the new energy vehicles.

The population of this study consisted of people who are willing to buy new energy vehicles, and the sample group, selected by purposive sampling, included 420 potential consumers. The research tool used to collect data was a questionnaire. Data were analyzed using frequency, percentage, standard deviation, and simple regression analysis.

The study results revealed that demographic factors consisting of gender, monthly income, educational achievement, and age have no significant impact on the purchase intention; and the high cost-performance of new energy vehicles, high-quality new energy vehicle brands, consumers' attitudes towards protecting the environment, consumers' good experience of driving, and government incentive policies, all had significant impacts on the purchase intention.

Keywords: purchase intention, new energy vehicles, consumers' attitudes

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Tongxing Liu



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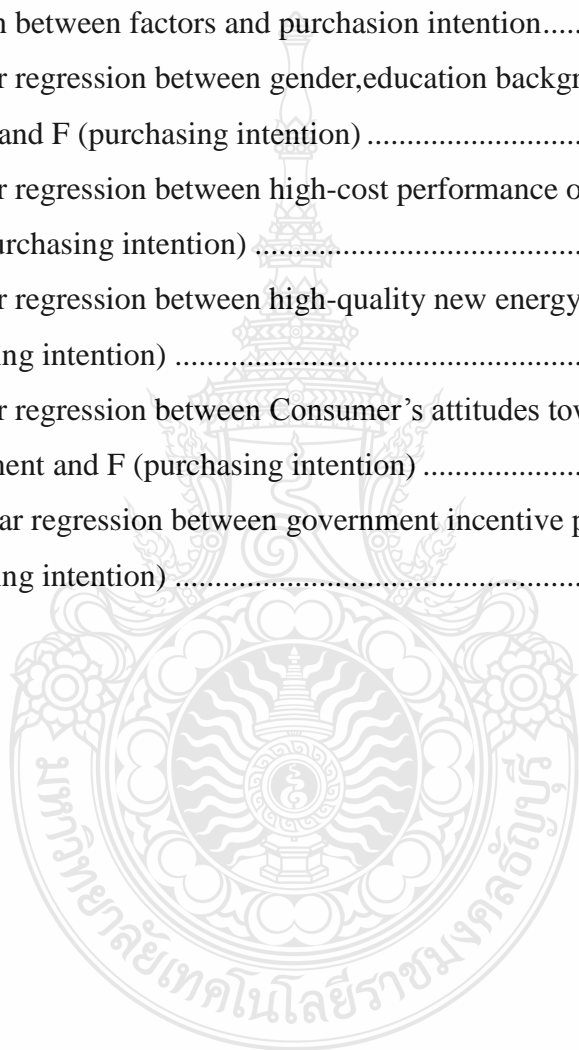
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CHAPTER 1

INTRODUCTION

1.1 Background and Statement of Problem

China is vigorously developing the new energy vehicle industry. In 2020, the new energy vehicle industry has become the leading industry of the national economy. With the government stimulating the market with strong policies, various car companies, whether emerging or established car companies, have entered the new energy vehicle industry, hoping to seize the opportunity and share the policy dividend. Policy-driven market is to stimulate the supply side, conducive to car enterprises research new energy, new technology.

In 2022, China's new energy vehicle industry has maintained a rapid development momentum, and the market size is leading in the world. In 2022, the production and sales of new energy vehicles completed 7.058 million and 6.887 million units respectively, with year-on-year growth of 96.9% and 93.4% respectively, maintaining the first in the world for 8 consecutive years; the sales of new energy vehicles reached 25.6% of the total sales of new vehicles. The development momentum of new energy vehicles is still very strong.

Despite the impressive production and sales figures, doubts remain about choosing to buy new energy vehicles. When choosing automobile products, consumers will consider many factors more rationally, especially in the choice of new energy vehicles and fuel vehicles, and people still prefer to choose fuel vehicles.

The official definition of new energy vehicles is to use unconventional vehicle fuel as the power source, mainly including: pure electric vehicles, hybrid electric vehicles, fuel cell electric vehicles, hydrogen engine vehicles and so on. In the current market, pure trams have clearly become the representative of new energy vehicles, and hybrid and fuel cell lines go hand in hand.

New energy is in the stage of high-speed development, although facing the battery, safety, but with the reduction of petrochemical and air pollution, and the country of new energy (Hainan has put forward in 2030 global banned fuel cars) support, new energy will be the trend of automobile development, but need a long process, not overnight.

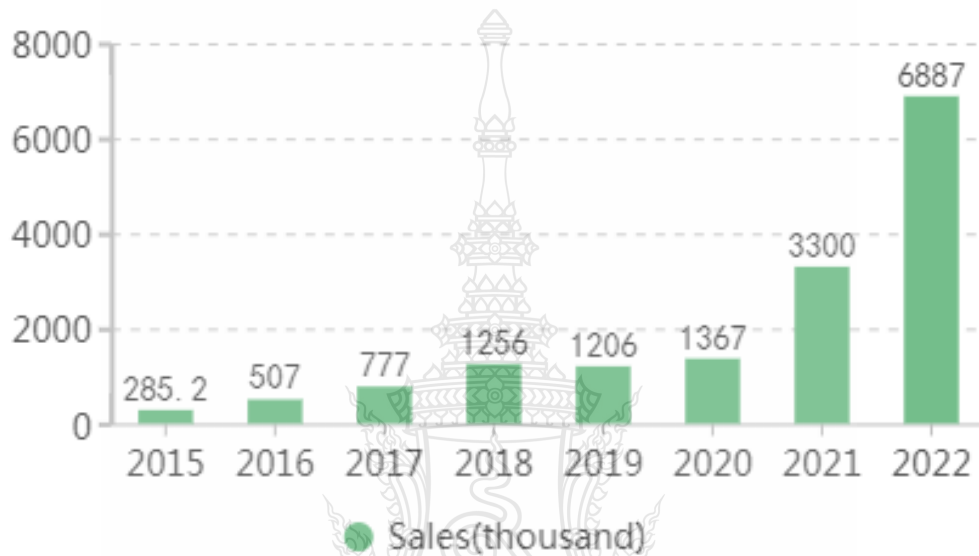


Figure 1.1 China's new energy vehicle sales statistic over the years

Data source: China association of automobile manufacture

From figure 1, The sales volume of new energy vehicles in China rose from 285,200 in 2012 to 6.887 million in 2022, with only seven years of development. This means that China's new energy vehicle market is developing very rapidly, which will be of great help to the future development of energy-saving society.

1.2 Statement of the Problem

It is necessary to understand consumers' intention to buy new energy vehicles. The large-scale implementation of new energy vehicles is an inevitable trend, especially after the implementation of energy conservation and emission reduction in China, and the strengthening of environmental protection. The maturity of new energy vehicle

technology is bound to promote the transformation of energy development. Change people's persistence and dependence on fuel vehicles, and there is a tendency to choose new energy vehicles still has a long way to go. In the study report, researchers hope to find out the factors that affect consumers' willingness to buy new energy vehicles.

Various factors are hindering the development of new energy vehicles, but also affect the willingness of consumers to buy new energy vehicles. For example, imperfect charging facilities, expensive battery replacement, battery life, and so on. All of these factors are causing consumers to shut out new energy vehicles. In addition, as a fuel car that has existed in the hearts of people for hundreds of years, its deep-rooted position can not be easily shaken.

1.3 Scope of Study

The study will take the new energy vehicle consumption market in Ji'an city, Jiangxi Province, China as the research area. Ji 'an is a prefecture-level city under the jurisdiction of Jiangxi Province, China. Ji' an has jurisdiction over 2 districts, 1 city and 10 counties. The study focuses on people over 18 years old in the central city of Ji'an to understand the people's attitudes and willingness to buy new energy vehicles. The infrastructure of the central city is basically perfect, and people have a high degree of use of cars.

1.4 Research Framework

Independent Variable

Dependent Variable

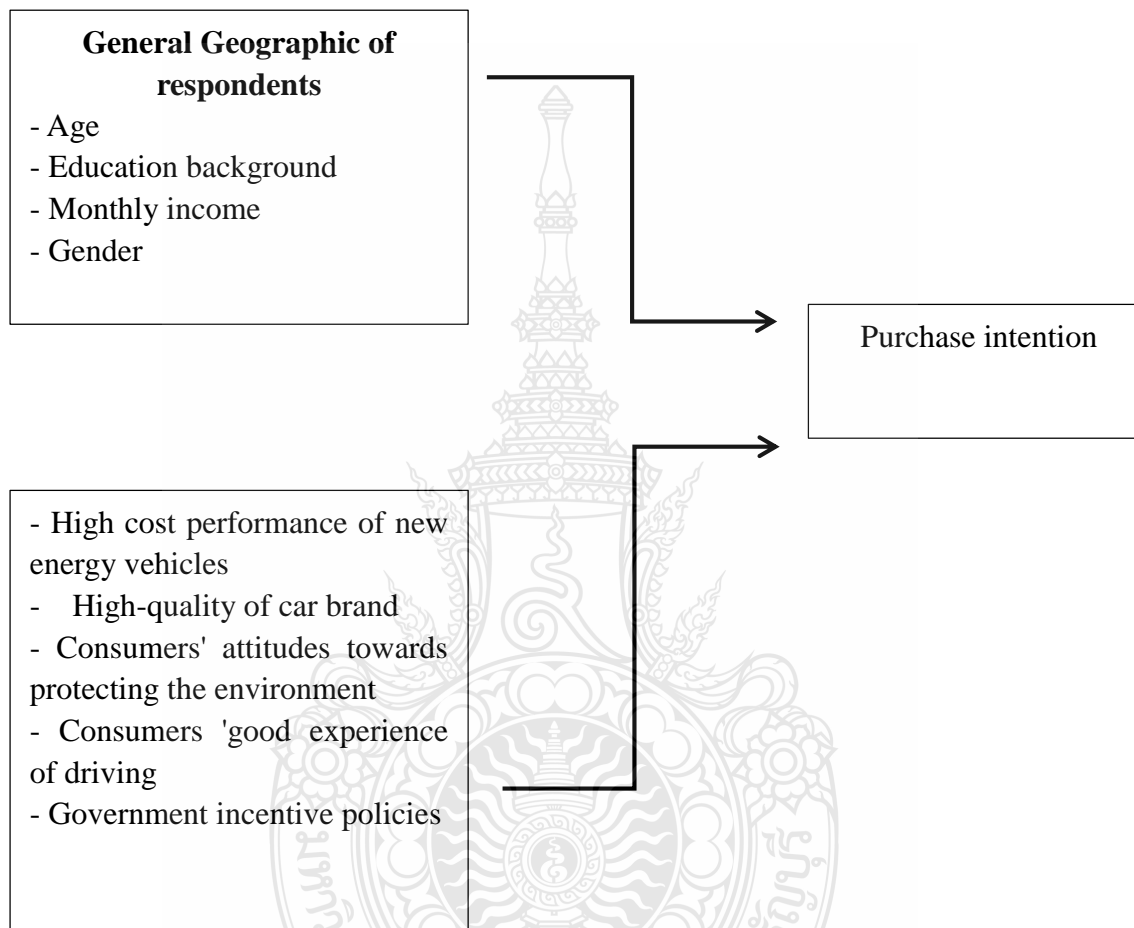


Figure 1.2 Conceptual Framework

1.5 Purpose of study

1.5.1 To Explore the factors affecting people's willingness to buy new energy vehicles

1.5.2 To examine which several factors highly affect people's willingness to buy new energy vehicles.

1.5.3 To examine the development status and existing defects of new energy vehicles

1.5.4 Whether the factors influencing people's purchase of new energy vehicles are the inherent prejudice of consumers for the new energy vehicles or the defects of the new energy vehicles.

1.6 Significant of Study

The study will have some significance for new energy vehicle manufacturers, sellers and relevant government departments. After understanding the factors affecting consumers' willingness to buy new energy vehicles, the government departments are of great significance for promoting the policy formulation of new energy vehicles, the upgrading of new energy vehicle technology and the improvement of sales strategies by sellers.

In addition, new energy vehicles, as the main tool of future commuting, high-quality and rapid development is conducive to global energy conversion and upgrading. Create a good living environment and improve people's happiness index. As we know, new energy vehicles are the development and trend of future vehicles. The researchers' research on the purchase intention of new energy vehicles in a fourth-tier city in China can make policy makers, product developers and producers in other related fields more fully understand the new energy vehicles expected by consumers. When the new energy vehicles in a non-central city develop well, it means that they are also developing well in the central city.

1.7 Hypothesis

Hypothesis 1: Consumers' gender, age, income and educational background have a positive impact on their willingness to buy new energy vehicles.

Hypothesis 2: High cost performance of new energy vehicles have a positive impact on consumers' purchase intentions.

Hypothesis 3: High-quality new energy vehicle brands have a positive impact on consumers' purchase intentions.

Hypothesis 4: Consumers' attitudes towards protecting the environment have a positive impact on consumers' purchase intentions.

Hypothesis 5: Consumers' good experience of driving new energy vehicles has a positive impact on consumers' purchase of new energy vehicles.

Hypothesis 6: Government incentive policies will positively affect consumers' purchase intentions.

1.8 Definition of Terms

Purchase intention: Purchase intention is the willingness of a consumer to buy a product or service. According to Philip Kotler (2000), purchase intention is the intention to buy a product in the evaluation phase of the consumer choosing the brand of a portfolio. Usually the consumer will make decisions according to his purchase intention, but this will also be affected by other factors. The formation of consumers' purchase intention is formed on the basis of the expected household income, the expected price and the expected income (from the products purchased). Gennaro Cuofano (2023). Purchase intention is a measure of the strength of a consumer's intention to perform a specific behavior or make a decision to purchase a product or service. Usually purchase intents are classified according to four types: informational (awareness), investigative intent (consideration), navigational (consideration/conversion), transaction intent (conversion).

New energy vehicles: Refers to the use of a new power system, Cars that are entirely or mainly dependent on new energy sources, With low energy consumption (low energy consumption), less pollutant emission (low pollutant emission) and other characteristics, Mainly including plug-in hybrid electric vehicles (plug g-in hybrid electric vehicle, PHEV for short), pure electric vehicle (battery electric vehicles, BEV for short) and fuel cell vehicles (fuel-cell electric vehicles).



CHAPTER 2

REVIEW OF THE LITERATURE

This chapter introduces the research case of domestic and foreign experts and scholars on consumers' purchase of new energy vehicle and with theory regarding this topic.

2.1 Previous Research

2.1.1 Research situation of foreign scholars

Foreign scholars mainly study the factors affecting the purchase intention of electric vehicles from the aspects of the price and performance of new energy vehicles, policies, and personal attitude towards environmental protection.

Foreign scholars have studied the price of new energy vehicles from different perspectives:

Hyundo and Inha (2010) subdivided the factors affecting the price of consumers' purchase of electric vehicles into the price of electric vehicles, maintenance costs and the oil price of vehicles.

Sun and Quan (2010) compare the life-cycle use costs of gas-powered and electric vehicles.

Carley (2009) The high purchase price is the deficiency of electric vehicles, compared with fuel vehicles, electric vehicles have a unique economic advantage in saving fuel consumption.

Geertje Schuitema And Jillian Anable (2013), based on a survey of British consumers, suggest that the performance of electric vehicles is instrumental, symbolic and entertaining, and it jointly affects consumers' willingness to buy.

Ona Egbue.Suzanna Long (2012) deeply discusses whether there are technical barriers closely related to the performance of electric vehicles, and whether it

will affect the purchase intention of consumers.

Caulfield And Farrell (2010) not only compared the use cost and energy saving and emission reduction effect of electric vehicles and fuel vehicles, but also considered the performance of electric vehicles in terms of reliability, safety and environmental friendliness. Its use cost is low, and the environmentally friendly characteristics can attract consumers to buy.

Thus, environmental friendliness is also a unique attribute of electric vehicles. Claudio O.Delang and Wei-Tung Cheng (2012) investigated Hong Kong consumers from this perspective, and believed that the positive effects of electric vehicles on the environment have attracted the attention of consumers, but consumers are worried about the impact of batteries on the environment;

In addition to the performance and price factors of the car itself, the relevant government policies, the construction of charging infrastructure and other social factors also affect the purchase willingness of consumers.

Adam Faiers (2007) believes that electric vehicles are an energy-saving and environmentally friendly product, so the loose policy will help encourage consumers to buy them.

A Peters Said that although the state implements price subsidies for electric cars, consumers will not buy electric cars in order to get subsidies.

From the above research situation, consumers are more interested in the experience, practicality and other aspects of new energy vehicles.

2.1.2 Domestic research status

In terms of the research content, domestic scholars pay attention to the comprehensive analysis of the factors affecting consumers' intention to buy electric vehicles from the aspects of electric vehicles, consumers themselves (income, values, etc.), government decision-making, supporting facilities construction, etc.

Rural (2014) It is considered that performance and convenience are the two main factors affecting the purchase intention of consumers.

Yang Jie (2012) regards consumers' income, age, attitude, ecological benefit, industrial policy, perceived quality, perceived price and other factors as independent variables affecting their purchase intention to consumers. The influence degree of each variable is compared from the dimensions of consumers, industrial policies and perceived quality.

Zhou Minjie (2013) built the Logistic model, analyzed and studied the factors affecting the purchase of electric vehicles from the aspects of consumer characteristics, experience and preferences: age characteristics, charging preferences, use preferences, government policies and driving range. And use the model to judge the probability of consumers buying electric cars.

Huang Bing (2015) is based on the binary logit model, taking the price, range, charging mode and subsidy policy of electric vehicles as the model variables to determine its impact on consumers' willingness to buy electric vehicles. The study found that each variable can effectively influence consumers' purchase intention; and male consumers or older consumers are easier to accept electric vehicles.

Li Hongwei (2014) believes that the technology related to electric vehicles also affects the consumption of electric vehicles, and discusses in depth the importance of production and research and development for electric vehicles.

Yin Zhengyuan (2013) combined with consumers' car use behavior and their cognition of new energy vehicles, and the research concluded that the government subsidy policy, product information and consumers' evaluation of the policy all significantly affected their purchase intention. As consumers have a shallow understanding of new energy vehicles and related policies, the government should strengthen relevant publicity.

In addition to the comprehensive consideration of the research content, domestic scholars are also good at comparing different models. Scholars Ma Jun and Feng Qing (2010) compare the characteristics of electric vehicles and fuel vehicles, so that social class, values, purchasing psychology, awareness of transportation environmental protection can influence consumers' willingness to buy pure electric vehicles and travel demand.

Zhao Bin (2010) used a questionnaire survey to compare the purchase demand of hybrid power and electric vehicles.

Ren Yulong (2009) estimated the retention cost of electric vehicles by establishing the full life cycle cost model of electric vehicles. Compared with the cost of fuel and steam season, he found that the life cycle cost of electric vehicles was relatively low, and comprehensively considered the factors affecting consumers' purchase intention from the aspects of consumers' environmental awareness and educational background. Some scholars also pay attention to consumers' perception and psychological factors.

Wang Ying (2010) introduced the perceived risk and the degree of involvement in the research process that influenced consumers' willingness to buy new energy vehicles.

Xu Tian (2012) took the social exchange relationship as the theory basis, and put forward the conclusion that consumers are more concerned about the service benefits, practical benefits and psychological wealth brought by electric vehicles at the present stage.

Huang Weifang (2012) believes that the purchase intention of electric vehicles is positively influenced by attitude, herd psychology, perceptual behavior control, moral obligation and self-identity, among which the most significant influence is attitude, followed by perceptual behavior control, and the least influence is the herd psychology.

2.2 Theory

2.2.1 Consumer behavior

Different researchers have different cognition and definitions of the cognition of consumer behavior. This paper holds that the consumer behavior is: The various actions taken by people in order to obtain the consumer goods they need and to use and dispose of such consumer goods, and the decision process that determines these actions. Here is a collection and list of consumer behavior by some scholars:

Table 2.1 A Overview of the definition of consumer behavior

	Source	Definition
1	Wood	A series of actions are taken to get what they need, including activities like the purchase, comparison, purchase, use and evaluation of goods
2	Schiffman, Kanuk	All the behaviors of consumers in seeking, buying, using, and evaluating and dealing with goods or services that want to meet their needs
3	Engel	The various actions taken by people in order to obtain the consumer goods they need and to use and dispose of such consumer goods, and the decision process that determines these actions
4	American Marketing Association	The basis of human beings to perform the transaction function in social life is influenced by individual perception, cognition and environmental factors
5	The Encyclopedia of China	Various actions implemented by consumers in order to obtain, use or dispose of their own goods and services that they need, including both the specific action process and the decision-making process before the action

2.2.2 Model of consumer behavior

2.2.2.1 EKB Model of consumer behavior

Engel-Kollat-Blackwell.EKB model, EKB model, also known as Engel model, is a relatively complete and clear theory in current consumer behavior. It was proposed by Engel and Kollat and Blackwell in 1968. From the analysis of consumer purchase decision-making process, EKB model believes that consumer decision-making process has five steps:

- Problem cognition
- gather information
- Scheme evaluation
- Selection scheme
- Decision making in purchasing

Consumers are influenced by both external and internal stimuli to make purchase decisions.

2.2.2.2 Hawkins' Model of the consumer decision process

American consumer psychology and behavior scientist D.I. Hawkins consumer decision-making process model is about consumer psychology and behavior model, known as the best model of psychology and marketing strategy integration, it describes consumer characteristics provides a basic structure and process or conceptual model, also reflects today's people of consumer psychology and behavior of belief and understanding.

According to Hawkins model, consumers form self-concept (image) and lifestyle under the influence of internal and external factors, and then consumers' self-concept and lifestyle lead to the generation of consistent needs and desires, and most of these needs and desires demand the satisfaction and experience of consumption behavior (obtaining products). At the same time, these will also affect the future consumer psychology and behavior, especially on the adjustment and change of

self-concept and lifestyle. Two parts of the subjective factors (self-concept): internal factors and external factors.

Internal influence factor is driven: Focusing on self-perception, behavior is often determined by the individual independently, not relying on external influences. The external world is often non-existent or only informative for the individual. The meaning of consumption lies in meeting the various needs of individuals, in consumption is only whether the individual's efforts can be satisfactory return.

External influence factor is driven: People driven by such factors often need to gain their own sense of existence in the affirmation of others. The behavior of shopping is completely to prove oneself, more to meet the needs of interpersonal communication, the need of status value, the need of love, warmth and friendship. The concern in spending is what others would think about doing this. The choice of lifestyle reflects the concept of self. The products we choose to buy and use and how to evaluate them are ultimately determined by the comprehensive thoughts and emotions about things and ourselves.

2.2.2.3 AIDMA model

The AIDMA model is one of the mature theoretical models in the field of consumer behavior, which was proposed by American advertisscientist E.S. Lewis in 1898. According to the theory, consumers go through five stages from access to information to final purchase:

1. A: Attention—— to attract attention
2. I: Interest —— is of interest
3. D: Desire (arousing desire)
4. M: Memory (leave a memory)
5. A: Action (Purchase Action)

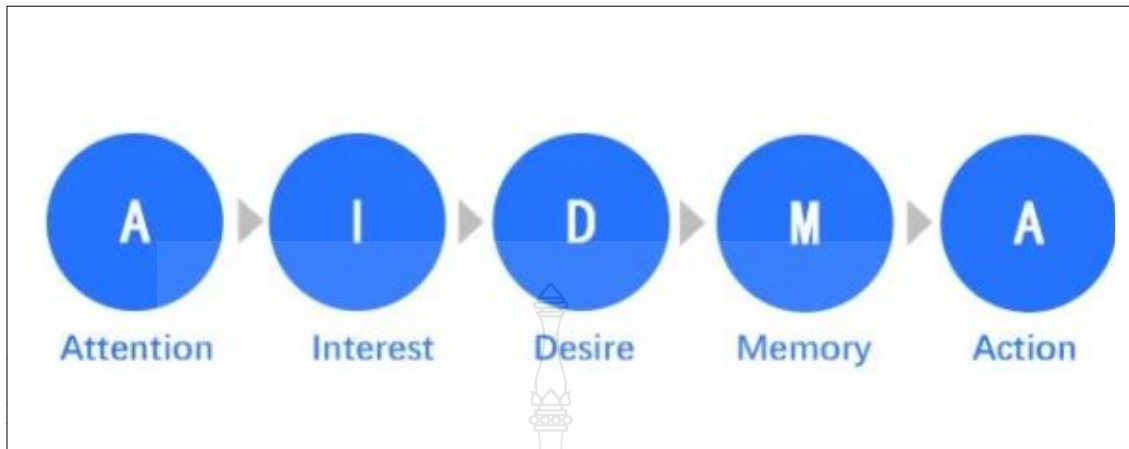


Figure 2.1 The process of purchase decision making

The theory was not specifically refined to different commodity categories, which laid the foundation for the generation of the later AISAS model.

2.3 The Process of purchase new energy vehicles

According to the above consumer behavior theory and purchase decision theory model, the researchers of this paper believe that the decision-making process of consumers to buy new energy vehicles is roughly like this:

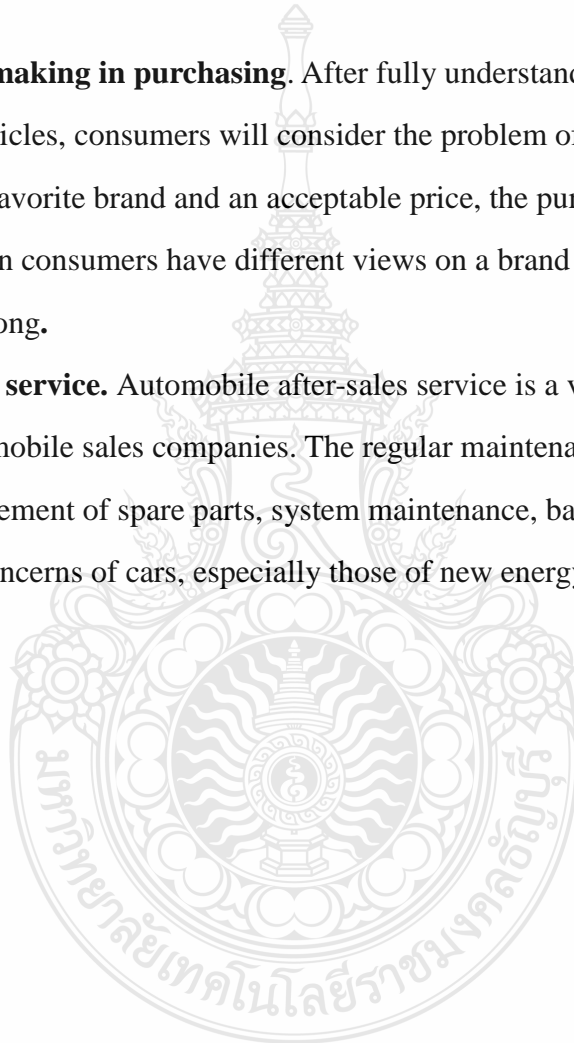
Get attention and get interest. As a new product, new energy vehicles will undoubtedly attract the attention of many consumers, which is the beginning of consumers to make decisions to buy new energy vehicles. Whether from the concept or the use of new energy, it is new things. For consumers, new energy vehicle advertising, new energy vehicles driving on the road may cause consumers to buy new energy vehicles idea.

Understand the product and policy information. After being interested in the new energy vehicles, they will learn more about the brand, performance and characteristics of all kinds of new energy vehicles. At the same time, they will also collect the relevant policy information on the government's subsidies for the purchase of new energy vehicles.

Firsthand experience. After becoming interested in new energy vehicles and understanding the relevant product and policy information, consumers will go to the corresponding sales entity stores to have a detailed understanding of the appearance, accessories and price of the car. The in-person driving experience is more attractive to consumers, especially when the experience can also be professionally introduced by the sales staff.

Decision making in purchasing. After fully understanding and experiencing the new energy vehicles, consumers will consider the problem of purchase. When consumers have a favorite brand and an acceptable price, the purchase decision is often made quickly. When consumers have different views on a brand or a price, the decision time is often very long.

After-sale service. Automobile after-sales service is a very important indicator for the test of automobile sales companies. The regular maintenance of new energy vehicles, the replacement of spare parts, system maintenance, battery maintenance and so on, are all the concerns of cars, especially those of new energy vehicles consumers.



Based on the calculation above the size consisted of 400 employees. The researchers further added 20 more employees; therefore, the total number of sample size is equal to 420 respondents.

3.3 Research instrument

Due to the extensive sample divisions of this study, one-to-one interviews through the field will be inconvenient and time-consuming. Due to the short time of this study, the researchers collected relevant data through an online questionnaire survey. In order to ensure that the collected data was as effective as possible and reflect the true thoughts of the interviewees, the researchers collected it through the online questionnaire platform. By setting the reward task, the respondents can receive some rewards when the respondents completes the online questionnaire and passes the online questionnaire platform.

3.4 Design of questionnaire

The researchers divided the questionnaire into Three parts, one is Demographics, and the other is the factors that may affect the willingness to buy new energy vehicles. The last one is purchasing intention

3.4.1 Demographic

As a large item, cars need a certain amount of financial resources, so in the statistical design part, researchers set this part into multiple choices, mainly including the designer's gender, age, income and the highest educational background. By collecting this part of the information, it is more helpful for the researchers to analyze the basic characteristics of the respondents.

3.4.2 Factors affect the willingness

This part mainly divides the relevant influencing factors into five parts, namely, the cost performance of new energy vehicles, car brands, attitude to the

environment, driving experience and policy influence. Each section has set up multiple questions as specific influencing factors. The investigator rated these questions with the “Likert Scale” which has 5 levels as follow:

1 means Strongly disagree

2 means Disagree

3 means Neutral

4 means Agree

5 means Strongly agree

3.4.3 Purchasing intention

The purchase intention part is set with a single question, that is, after the respondents complete all the previous options, they need to answer the final question, whether they are willing to buy new energy vehicles.

The answer scale will be a Likert Scale which has 5 levels as follows:

1 means Strongly disagree

2 means Disagree

3 means Neutral

4 means Agree

5 means Strongly agree

Due to the long expression of the influencing factors, the researchers used the corresponding number instead in order to analyze and study the data more simply. Which shows as below:

The cost performance of new energy vehicles:

A1 means: I will consider whether the range of new energy vehicles meets the travel problem.

A2 means: I will consider whether the charging time of new energy vehicles affects travel.

A3 means: With the same performance, the cost of buying and using an

electric car is cheaper than a fuel car to drive a new energy car than a fuel car.

Car brand

B1 means : I chose the company's new energy vehicle because of its high sales volume.

B2 means : I chose new energy vehicles because their brand awareness is very high.

B3 means : The brand has many car models.

B4 means : The quality of the brand's new energy vehicles is generally very good.

B5 means : The company's car 4s shop is equipped with intelligent charging equipment.

B6 means : Can provide high-quality after-sales service.

Attitude towards environment

C1 means: I think driving new energy vehicles can reduce environmental pollution.

C2 means: I think driving new energy vehicles can improve air quality.

C3 means: I think driving new energy vehicles can save oil resources.

The experience of driving a new energy vehicle

D1 means: I think driving a new energy vehicle can meet my travel needs.

D2 means: I think driving new energy vehicles can improve travel efficiency.

D3 means: I think it is easy to drive new energy vehicles.

Policy perception impact

E1 means: Perfect charging facilities and other infrastructure.

E2 means: Existing charging infrastructure is reasonably distributed.

E3 means: Existing charging infrastructure is easy to charge.

E4 means: Government subsidies and tax policies have reduced the cost of buying cars.

E5 means: The government encourages the purchase of new energy vehicles and will strengthen the willingness to buy new energy vehicles.

Purchasing intention

F means: I will consider buying new energy vehicles.

3.4.4 Reliability

Reliability analysis:

Reliability analysis is a measurement that could let the researcher scrutinize on the reliability of measurement scales propertied and the items. Researcher by computing Cronbach's alpha coefficients to determine the scale reliability. If the value of alpha is greater than or equal to 0.80, it implied sufficiency of reliability. The reliability for this study that contains 25 questions is shown in table 3.1

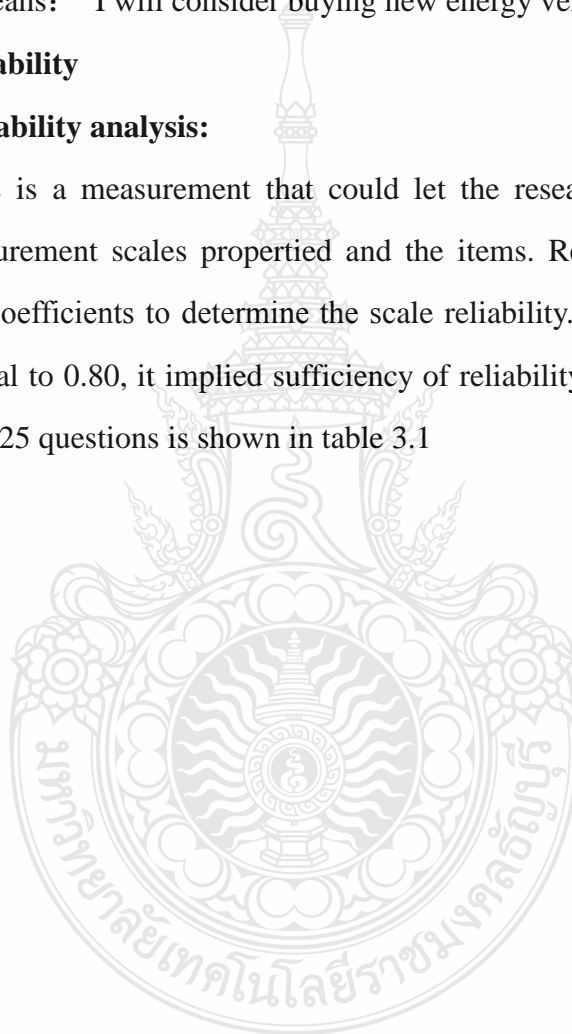


Table 3.1 The reliability analysis of the questionnaire from testing question's

Cronbach's Alpha

Reliability Statistics (Cronbach Alpha)			
Items	Corrected Item-Total Correlation (CITC)	Cronbach Alpha if Item Deleted	Cronbach α
A1	0.647	0.965	
B5	0.741	0.964	
B1	0.754	0.963	
E5	0.799	0.963	
E4	0.696	0.964	
F	0.797	0.963	
B2	0.776	0.963	
B3	0.759	0.963	
C2	0.762	0.963	
B6	0.763	0.963	
B4	0.763	0.963	0.965
C1	0.775	0.963	
A2	0.681	0.964	
E3	0.782	0.963	
E2	0.681	0.964	
D2	0.782	0.963	
D1	0.698	0.964	
A3	0.757	0.963	
C3	0.75	0.963	
D3	0.733	0.964	
E1	0.768	0.963	

Cronbach α (Standardized): 0.966

It can be seen from the above table that the reliability coefficient value is 0.965, greater than 0.9, thus indicating that the reliability quality of the research data is very high. For the " α coefficient that has been deleted", the reliability coefficient will not increase significantly after any item is deleted, so it means that the item should not be deleted. For "CITC value", the CITC value of analysis items is greater than 0.4, which

indicates a good correlation between analysis items and a good reliability level. In conclusion, the reliability coefficient value of the research data is higher than 0.9, which comprehensively indicates that the data reliability quality is high and can be used for further analysis.



Table 4.1 Distribution of respondents by age dimension

Age	Frequency	Percent
18-30 years old	70	16.67%
31-40 years old	143	34.05%
41-50 years old	133	31.67%
51-60 years old	45	10.71%
Over 60 years old	29	6.9%
Total	420	100%

The result from Table 4.1 1 reveals that the majority of the respondent are aged between 18-30 years old with 46.8%,,, follows by 31-40 years with 33.8%, 41-50 years with 11.9%, 51-60 years with 6.0%, over 60 years with 2.0% respectively.

Gender

The gender distribution of the respondents in the survey of consumer purchase intentions is shown in Table 4.2.

Table 4.2 Distribution of respondents by gender dimension

Gender	Frequency	Percent
Male	214	50.95%
Female	206	49.05%
Total	420	100%

The result from Table 4.2 shows that the major respondents in this group are Male (214 respondents) who accounted for 50.95% of the total respondents. The rest are Female (206 respondents) who accounted for 49.05% of the total respondents.

Education Background

Education Background was divided into 5 ranges, including range 1 (Middle school), range 2 (High school), range 3 (Junior college), range 4 (Bachelor's Degree), range 5 (Master's Degree and above)). Table 4.3 show frequency distribution by education background of the respondents.

Table 4.3 Distribution of respondents by education background dimension

Education	Frequency	Percent
Middle school	50	11.9%
High school	111	26.43%
Junior college	120	28.57%
Bachelor Degree	134	31.9%
Master Degree and above	5	1.19%
Total	420	100%

The descriptive analysis result from Table 4.3 indicates that the majority of the respondents held bachelor degree 31.9% , follows by Junior college with 28.57%,High School with 26.43%, middle school 11.9%,master Degree and above 1.19% .

Income

According to the monthly salary, the income level is divided into 5 dimensions: dimension 1 (3000 below), dimension 2 (3000-5000 RMB), dimension 3 (5000-10000 RMB) dimension 4 (10000-20000 RMB) and dimension 5 (above 20000)。

Table 4.4 Distribution of respondents by income dimension

Income	Frequency	Percent
3000 below	72	17.14%
3000-5000 RMB	134	31.9%
5000-10000 RMB	167	39.76%
10000- 20000 RMB	47	11.19%
20000 and above	0	0
Total	420	100%

The descriptive analysis result from Table 4.4 indicates that the majority of the respondents held 5000-10000 RMB 39.76%, follows by with 3000-5000 RMB 31.9%, 3000 below with 17.14%, 10000-20000RMB 11.19%,20000 and above with 0.

4.2.2 Correlation test

Table 4.5 Correlation between factors and purchasing intention

Pearson Correlation	
	F
A1	0.551**
A2	0.547**
A3	0.633**
B1	0.628**
B2	0.667**
B3	0.636**
B4	0.659**
B5	0.580**
B6	0.618**
C1	0.618**
C2	0.623**

Table 4.5 Correlation between factors and purchasing intention

	Pearson Correlation
C3	0.606**
D1	0.593**
D2	0.642**
D3	0.592**
E1	0.638**
E2	0.551**
E3	0.670**
E4	0.561**
E5	0.674**

* p<0.05 ** p<0.01

According to the above table, correlation analysis was used to study the correlation between F, A1, A2, A3, B1, B2, B 2, B3, B4, B5, B6, C1, C2, C3, D1, D2, D3, E3, E1, E2, E 3, E 3, E4, E5, and the Pearson correlation coefficient was used to indicate the strength of the correlation. Specific analysis shows that:

The correlation coefficient value between F and A1 is 0.551 and shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and A1. The correlation coefficient value between F and A2 is 0.547 and shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and A2. The correlation coefficient value between F and A3 is 0.633 and shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and A3.

The correlation coefficient value between F and B1 is 0.628, and it shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and B1. The correlation coefficient value between F and B2 is 0.667, and it shows a 0.01 level of significance, thus indicating that there is a significant positive

correlation between F and B2. The correlation coefficient value between F and B3 is 0.636, and the 0.01 level is significant, thus indicating that there is a significant positive correlation between F and B3. The correlation coefficient value between F and B4 is 0.659, and the 0.01 level is significant, thus indicating that there is a significant positive correlation between F and B4. The correlation coefficient value between F and B5 is 0.580, and the 0.01 level is significant, thus indicating that there is a significant positive correlation between F and B5. The correlation coefficient value between F and B6 is 0.618, and it is 0.01-level significant, thus indicating that there is a significant positive correlation between F and B6.

The correlation coefficient value between F and C1 is 0.618, and it shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and C1. The correlation coefficient value between F and C2 is 0.623 and shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and C2. The correlation coefficient value between F and C3 is 0.606 and shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and C3.

The correlation coefficient value between F and D1 is 0.593, and it shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and D1. The correlation coefficient value between F and D2 is 0.642, and the 0.01 level is significant, thus indicating a significant positive correlation between F and D2. The correlation coefficient value between F and D3 is 0.592, and it is 0.01-level significant, thus indicating that there is a significant positive correlation between F and D3.

The correlation coefficient value between F and E1 is 0.638, and the 0.01 level is significant, thus indicating a significant positive correlation between F and E1. The correlation coefficient value between F and E2 is 0.551 and shows 0.01 level significance, indicating that there is a significant positive correlation between F and E2.

The correlation coefficient value between F and E3 is 0.670, and the 0.01 level is significant, thus indicating that there is a significant positive correlation between F and E3. The correlation coefficient value between F and E4 is 0.561, and it shows a 0.01 level of significance, thus indicating that there is a significant positive correlation between F and E4. The correlation coefficient value between F and E5 is 0.674, and the 0.01 level is significant, thus indicating that there is a significant positive correlation between F and E5.

4.3 Hypothesis test

4.3.1 The researcher use linear regression test the positive impact between basic information of respondents and purchasing intention.

Hypothesis 1: Consumers' gender, age, income and educational background have a positive impact on their willingness to buy new energy vehicles.

H_0 : Consumers' gender, age, income and educational background have no positive impact on their willingness to buy new energy vehicles.

H_1 : Consumers' gender, age, income and educational background have a positive impact on their willingness to buy new energy vehicles.

Table 4.6 The linear regression between gender, education background, age, income monthly and F(purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constant	4.326	0.284	-	15.23	0.000	-
				3	**	
Gender	-0.037	0.104	-0.018	-0.359	0.72	1.01
						4
Education background	0.05	0.05	0.049	1.003	0.317	1.00
						4
Age	-0.039	0.048	-0.04	-0.816	0.415	1.01
						7
Income monthly	-0.04	0.057	-0.034	-0.694	0.488	1.00
						1
R ²			0.006			
Adj R ²			-0.004			
F			F (4,415)=0.634,p=0.638			
D-W 值			1.916			
Dependent Variable: F						
* p<0.05 ** p<0.01						

As can be seen from the above table, Gender, Education background, Age and Income monthly are analyzed as independent variables and F as the dependent variable. It can be seen from the above table that the model formula is:

$$F=4.326-0.037*Gender + 0.050*Education \text{ background} -0.039*Age-0.040*Income \text{ monthly}.$$

The model R square value of 0.006 means that Gender, Education background, Age, and Income monthly can explain 0.6% of the change in F. In the F test of the model, it was found that the model did not pass the F test ($F=0.634$, $p=0.638 > 0.05$), which means that Gender, Education background, Age, Income monthly did not affect F(purchasing intention), so the influence of independent variables on dependent variables cannot be specifically analyzed.

4.3.2 The researcher use linear regression test the positive impact between high cost performance of new energy vehicles of respondents and purchasing intention.

Hypothesis 2: High cost performance of new energy vehicles have a positive impact on consumers' purchase intentions.

H_0 :High cost performance of new energy vehicles have a positive impact on consumers' purchase intentions.

H_1 :High cost performance of new energy vehicles have no positive impact on consumers' purchase intentions.

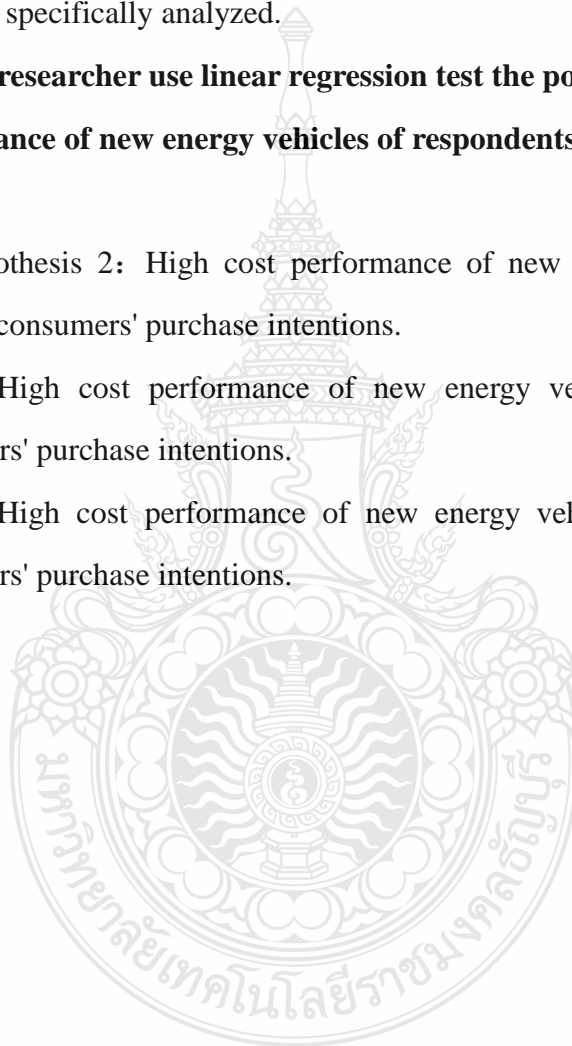


Table 4.7 The linear regression between high-cost performance of new energy vehicles and F(purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constan	0.344	0.191	-	1.802	0.072	-
t						
A1	0.266	0.04	0.271	6.713	0.000**	1.382
A2	0.208	0.04	0.221	5.22	0.000**	1.516
A3	0.487	0.056	0.379	8.692	0.000**	1.618
R ²			0.51			
Adj R ²			0.507			
F			F (3,416)=144.501,p=0.000			
D-W			1.971			
Dependent Variable: F						
* p<0.05 ** p<0.01						

From the above table, A1, A2, A3 as independent variables and F(purchasing intention) as the dependent variable for linear regression analysis, from the above table, the model formula is:

$$F=0.344 + 0.266*A1 + 0.208*A2 + 0.487*A3,$$

The model R square value of 0.510 means that A1, A2, and A3 can explain 51.0% of the change in F. During F test, the model found that the model passed F test (F=144.501, p=0.000 <0.05), which means that at least one of A1, A2 and A3 will have an effect on F. In addition, the multiple collinearity of the model found that all VIF values in the model are less than 5, which means that there is no collinearity problem; and the D-W value is near the number 2, indicating that there is no autocorrelation

between the sample data, and the model is good. The final specific analysis shows that:

The regression coefficient value for A1 was 0.266 ($t=6.713$, $p=0.000 <0.01$), meaning that A1 would have a significant positive effect relationship on F.

The regression coefficient value for A2 was 0.208 ($t=5.220$, $p=0.000 <0.01$), meaning that A2 would have a significant positive effect on F.

The regression coefficient value for A3 was 0.487 ($t=8.692$, $p=0.000 <0.01$), meaning that A3 will have a significant positive effect on F.

Summary analysis shows that A1, A2 and A3 all have significant positive effects on F.

4.3.3 The researcher use linear regression test the positive impact between high-quality new energy vehicle brands and purchasing intention.

Hypothesis 3: High-quality new energy vehicle brands have a positive impact on consumers' purchase intentions.

H_0 :High-quality new energy vehicle brands have a positive impact on consumers' purchase intentions.

H_1 :High-quality new energy vehicle brands have no positive impact on consumers' purchase intentions.

Table 4.8 The linear regression between high-quality new energy vehicle brands and F (purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constant	-0.411	0.186	-	-2.209	0.028*	-
B1	0.224	0.054	0.177	4.124	0.000**	1.975
B2	0.264	0.055	0.22	4.832	0.000**	2.217
B3	0.212	0.052	0.181	4.096	0.000**	2.087
B4	0.281	0.054	0.227	5.161	0.000**	2.071
B5	0.056	0.055	0.045	1.029	0.304	2.073
B6	0.125	0.053	0.107	2.366	0.018*	2.188
R ²			0.615			
Adj R ²			0.609			
F			F (6,413)=109.782,p=0.000			
D-W			2.082			
Dependent Variable: F						
* p<0.05 ** p<0.01						

As can be seen from the above table, B1, B2, B3, B4, B5, and B6 are used as independent variables, and F is used as the dependent variable for linear regression analysis. As can be seen from the above table, the model formula is:

$$F = -0.411 + 0.224*B1 + 0.264*B2 + 0.212*B3 + 0.281*B4 + 0.125*B6,$$

The model R square value of 0.615 means that B1, B2, B3, B4, B5, and B6 can explain 61.5% of the variation in F. The F test of the model found that the model passed the F test (F=109.782, p=0.000 <0.05), namely B1, B2, B3, B4, B5, or B6 will influence the relationship on F. In addition, the multiple collinearity of the model found that all

VIF values in the model are less than 5, which means there is no collinearity problem; and the D-W value is near the number 2, thus indicating that the model has no autocorrelation, and there is no correlation relationship between the sample data, and the model is good.

The final specific analysis shows that:

The regression coefficient value for B1 was 0.224 ($t=4.124$, $p=0.000 < 0.01$), meaning that B1 has a significant positive influence relationship on F.

The regression coefficient value for B2 was 0.264 ($t=4.832$, $p=0.000 < 0.01$), meaning that B2 has a significant positive effect on F.

The regression coefficient value for B3 is 0.212 ($t=4.096$, $p=0.000 < 0.01$), meaning that B3 will have a significant positive effect on F.

The regression coefficient value for B4 was 0.281 ($t=5.161$, $p=0.000 < 0.01$), meaning that B4 has a significant positive influence relationship on F.

The regression coefficient value for B5 is 0.056 ($t=1.029$, $p=0.304 > 0.05$), meaning that B5 does not affect F.

The regression coefficient value for B6 was 0.125 ($t=2.366$, $p=0.018 < 0.05$), which means that B6 has a significant positive effect on F.

Summary analysis shows that B1, B2, B3, B4 and B6 will have significant positive effects on F. But B5 does not have an effect on F. Therefore, the item B5 was removed in the above regression equation.

4.3.4 The researcher use linear regression test Consumers' attitudes towards protecting the environment and purchasing intention.

Hypothesis 4: Consumers' attitudes towards protecting the environment have a positive impact on consumers' purchase intentions.

H_0 :Consumers' attitudes towards protecting the environment have a positive impact on consumers' purchase intentions.

H_1 :Consumers' attitudes towards protecting the environment have no positive impact on consumers' purchase intentions.

Table 4.9 The linear regression between Consumers' attitudes towards protecting the environment and F (purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constant	0.344	0.192	-	1.789	0.074	-
C1	0.339	0.058	0.273	5.796	0.000**	1.9
C2	0.302	0.045	0.305	6.669	0.000**	1.797
C3	0.307	0.055	0.258	5.581	0.000**	1.829
R ²			0.515			
Adj R ²			0.511			
F			F (3,416)=147.187,p=0.000			
D-W			1.993			
Dependent Variable: F						
* p<0.05 ** p<0.01						

As can be seen from the above table, C1, C2 and C3 are used as independent variables and F is used as dependent variables for linear regression analysis. It can be seen from the above table that the model formula is as follows:

$$F=0.344 + 0.339*C1 + 0.302*C2 + 0.307*C3,$$

The model R square value is 0.515, meaning that C1, C2, and C3 can explain 51.5% of the change in F. During the F test, the model found the F test (F=147.187, p=0.000 <0.05), which means that at least one of C1, C2 and C3 will have an effect on F. In addition, the multiple collinearity of the model found that all VIF values in the model are less than 5, which means that there is no collinearity problem; and the D-W value is near the number 2, indicating that there is no autocorrelation in the model and no correlation between the sample data, and the model is good. The final specific analysis

shows that:

The regression coefficient value for C1 was 0.339 ($t=5.796$, $p=0.000 < 0.01$), which means that C1 will have a significant positive effect relationship on F.

The regression coefficient value for C2 was 0.302 ($t=6.669$, $p=0.000 < 0.01$), which means that C2 will have a significant positive effect on F.

The regression coefficient value for C3 was 0.307 ($t=5.581$, $p=0.000 < 0.01$), meaning that C3 will have a significant positive effect relationship on F.

According to the summary analysis, C1, C2 and C3 will have a significant positive effect on F.

4.3.5 The researcher use linear regression test consumers 'good experience of driving and purchasing intention.

Hypothesis 5: Consumers 'good experience of driving new energy vehicles has a positive impact on consumers' purchase of new energy vehicles intentions.

H_0 :Consumers 'good experience of driving new energy vehicles has a positive impact on consumers' purchase of new energy vehicles

H_1 :Consumers 'good experience of driving new energy vehicles has no positive impact on consumers' purchase of new energy vehicles

Table 4.9 The linear regression between consumers 'good experience of driving and F (purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constant	0.063	0.2	-	0.315	0.753	-
D1	0.321	0.055	0.256	5.812	0.000**	1.682
D2	0.413	0.057	0.337	7.25	0.000**	1.867
D3	0.305	0.052	0.256	5.823	0.000**	1.672
R ² □			0.52			
Adj R ²			0.516			
F			F (3,416)=149.982,p=0.000			
D-W value			2.019			
Dependent Variable: F						
* p<0.05 ** p<0.01						

As can be seen from the above table, D1, D2 and D3 are used as independent variables and F is the dependent variable for linear regression analysis. It can be seen from the above table, the model formula is:

$$F=0.063 + 0.321*D1 + 0.413*D2 + 0.305*D3,$$

The model R square value of 0.520 means that D1, D2, and D3 can explain 52.0% of the change in F. When conducting F test, the model found that the model passed F test (F=149.982, p=0.000 <0.05), which means that at least one of D1, D2 and D3 will affect F. Besides, inspection of multiple collinearity of the model found that all VIF values in the model are less than 5, which means that there is no collinearity problem; and the D-W value is near the number 2, indicating that there is no

autocorrelation in the model and no correlation between the sample data, and the model is good. The final specific analysis shows that:

The regression coefficient value for D1 was 0.321 ($t=5.812$, $p=0.000 < 0.01$), meaning that D1 would have a significant positive effect relationship on F.

The regression coefficient value for D2 was 0.413 ($t=7.250$, $p=0.000 < 0.01$), meaning that D2 has a significant positive effect relationship on F.

The regression coefficient value for D3 was 0.305 ($t=5.823$, $p=0.000 < 0.01$), meaning that D3 has a significant positive influence relationship on F.

Summary analysis shows that D1, D2 and D3 all have significant positive effects on F.

4.3.6 The researcher use linear regression test Consumers' attitudes towards protecting the environment and purchasing intention.

Hypothesis 6: Government incentive policies will positively affect consumers' purchase intentions.

H_0 :Government incentive policies will positively affect consumers' purchase intentions.

H_1 :Government incentive policies have no positively affect consumers' purchase intentions.

Table 4.10 The linear regression between government incentive policies and F
(purchasing intention)

Parameter Estimates (n=420)						
	Unstandardized		Standardized	t	p	VIF
	Coefficients		Coefficients			
	B	Std. Error	Beta			
Constant	0.202	0.173	-	1.167	0.244	-
E1	0.206	0.046	0.204	4.534	0.000**	2.076
E2	0.106	0.042	0.103	2.509	0.012*	1.737
E3	0.281	0.044	0.282	6.355	0.000**	2.03
E4	0.092	0.051	0.077	1.81	0.071	1.845
E5	0.279	0.049	0.264	5.668	0.000**	2.228
R ² □			0.597			
Adj R ²			0.592			
F			F (5,414)=122.669,p=0.000			
D-W value			2.058			
Dependent Variable: F						
* p<0.05 ** p<0.01						

As can be seen from the above table, E1, E2, E3, E4, E5 as independent variables and F as dependent variable for linear regression analysis. It can be seen from the above table, the model formula is:

$$F=0.202 + 0.206*E1 + 0.106*E2 + 0.281*E3 + 0.092*E4 + 0.279*E5,$$

The model R square value of 0.597 means that E1, E2, E3, E4, and E5 can explain 59.7% of the variation in F. F test of the model found that the model passed F test (F=122.669, p=0.000 <0.05), indicating that E1, E2, E3 and E4, E5 will affect the F, the multiple collinearity of the model found that all VIF values in the model are less

than 5, which means that there is no collinearity problem; and the D-W value is near the number 2, indicating that the model has no autocorrelation, and there is no correlation between the sample data, and the model is good. The final specific analysis shows that:

The regression coefficient value for E1 was 0.206 ($t=4.534$, $p=0.000 < 0.01$), meaning that E1 would have a significant positive effect relationship on F.

The regression coefficient value for E2 was 0.106 ($t=2.509$, $p=0.012 < 0.05$), meaning that E2 would have a significant positive effect relationship on F.

The regression coefficient value for E3 was 0.281 ($t=6.355$, $p=0.000 < 0.01$), meaning that E3 has a significant positive effect relationship on F.

The regression coefficient value for E4 is 0.092 ($t=1.810$, $p=0.071 > 0.05$), meaning that E4 does not affect F.

The regression coefficient value for E5 was 0.279 ($t=5.668$, $p=0.000 < 0.01$), meaning that E5 has a significant positive effect relationship on F.

Summary analysis shows that E1, E2, E3, and E5 will have significant positive effects on F. But E4 does not affect F. Therefore, the item E4 was removed in the above regression equation.

CHAPTER 5

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

5.1 Introduction

The chapters five is summarizing about the conclusion of the result in summaries and make the discussion by giving the reasons of the result according to the purpose study which researcher had found during the research by using mixed methodology. After that the researcher will give the recommendation through the ideas and the limitation, difficulties during the research study of purchase intention.

On the other hand, this chapter also roughly introduces the government's future policy direction of new energy vehicles and the future positioning and development of automobile manufacturers and sales companies.

5.2 Conclusions

5.2.1 Demographic and purchasing intention

In this survey, the researchers found that there was no obvious correlation between age, monthly income, educational background and gender for the purchase intention of new energy vehicles.

By Pearson's correlation test, the correlation coefficient between gender and purchase intention was -0.023, educational background 0.053, income -0.036, and age and purchase intention -0.046. All correlation coefficient value above are close to zero.

5.2.2 Other factors and purchasing intention

Through the correlation analysis of other factors and purchase intention, the researchers found that the set influencing factors were highly correlated with the purchase intention, which was presented in the Pearson's correlation test in Chapter 3.

High cost performance of new energy vehicles and purchasing intention

The researchers conducted a regression analysis on the variables in the five divided dimensions of influence and presented the regression equation. In the dimension 1 was found in the regression analysis: In high cost performance of new energy vehicles, the three factors under the dimension A1, A2 and A3 all have significant positive effects on F. That means:

I will consider whether the range of new energy vehicles meets the travel problem.

I will consider whether the charging time of new energy vehicles affects travel.

With the same performance, the cost of buying and using an electric car is cheaper than a fuel car to drive a new energy car than a fuel car. This three factors have significant positive effects on purchasing intention.

High-quality new energy vehicle brands and purchasing intention

Under this dimension, as found by the regression analysis that B1, B2, B3, B4 and B6 will have significant positive effects on F. But B5 does not have an effect on F. That means:

I chose the company's new energy vehicle because of its high sales volume.

I chose new energy vehicles because their brand awareness is very high.

The brand has many car models.

The quality of the brand's new energy vehicles is generally very good.

Can provide high-quality after-sales service.

This five factors have significant positive effects on purchasing intention.

And for B5 “The company's car 4s shop is equipped with intelligent charging equipment. “ has no significant positive effects on purchasing intention.

Consumers' attitudes towards protecting the environment and purchasing intention

In this dimension, the paper mainly analyzes the relationship between consumers' attitude towards environmental protection and purchase intention. Found by the regression analysis C1, C2 and C3 have a significant positive effect on F.

Which means:

I think driving new energy vehicles can reduce environmental pollution.

I think driving new energy vehicles can improve air quality.

I think driving new energy vehicles can save oil resources.

All above of the factors have a significant positive effect on purchasing intention.

Consumers 'good experience of driving new energy vehicles

Consumers 'good experience of driving new energy vehicles and purchasing intention

In this dimension shows that D1, D2 and D3 all have significant positive effects on F. that means:

I think driving a new energy vehicle can meet my travel needs.

I think driving new energy vehicles can improve travel efficiency.

I think it is easy to drive new energy vehicles.

All these three factors have significant positive effects on purchasing intention.

Government incentive policies and purchasing intention

In this dimension shows that E1, E2 E3,E4 and E5 all have significant positive effects on F. that means:

Perfect charging facilities and other infrastructure.

Existing charging infrastructure is reasonably distributed.

Existing charging infrastructure is easy to charge.

Government subsidies and tax policies have reduced the cost of buying cars.

The government encourages the purchase of new energy vehicles and will strengthen the willingness to buy new energy vehicles.

All these five factors have significant positive effects on purchasing dimension.

5.3 Discussion

In this study on the factors affecting the purchase of new energy vehicles, the researchers found that the cost performance of new energy vehicles, high-quality car brands, attitude to environmental protection, good driving experience, and positive policy impact basically have a significant positive impact on consumers' purchase of new energy vehicles.

On one hand, as a brand of new energy vehicle enterprises, in the process of development, they should seize their own brand building, quality improvement, service improvement and other aspects of high consumer attention, so as to be more competitive in the future market. On the other hand, active policy stimulus has a significant positive impact on consumers' purchase of new energy vehicles. Therefore, the government can strengthen the means of policy stimulus, such as tax exemption or tax reduction, and provide car purchase subsidies. At the same time, it can increase the infrastructure construction of charging facilities and parking lots and other infrastructure to serve the majority of new energy vehicle owners. The development of new energy vehicles is of great significance to energy conservation and environmental protection.

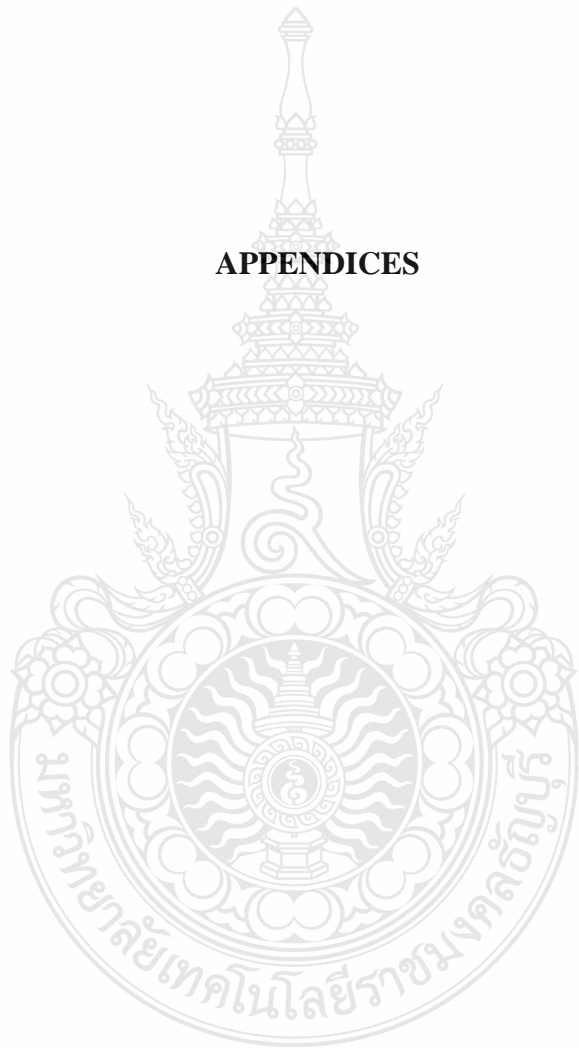
List of Bibliography

- Choi H, Oh I. (2010).Analysis of product efficiency of hybrid vehicles and promotion policies. **Energy Policy**, **38**(5),2262-2271.
- Carley S.(2009). State renewable energy electricity policies: An empirical evaluation of effectiveness. **Energy Policy**, **37**(8),3071-3081.
- Delang C O, Cheng W T. (2012).Consumers' attitudes towards electric cars: A case study of Hong Kong. **Transportation Research Part D Transport & Environment**, **17**(6),492-494.
- Egbue O. (2012).Long S. Barriers to widespread adoption of electric vehicles: An analysis of consumer attitudes and perceptions. **Energy Policy**, **48**(3),717-729.
- Caulfield B, Farrell S, McMahon B. Examining individuals preferences for hybrid electric and alternatively fuelled vehicles. **Transport Policy**,**17**(6),381-387.
- Faiers A, Cook M, Neame C.(2007) Towards a contemporary approach for understanding consumer behaviour in the context of domestic energy use. **Energy Policy**,**35**(8),4381-4390.
- Huang Bing , Gan Hongcheng . Discrete choice analysis of electric vehicle purchase intention.**Journal of he University of Shanghai for Science and Technology**, **2015**(4),392-397.
- Li Hongwei, Yang Caili, Tao Min. (2014).Analysis on the consumption of pure electric vehicles in China. **science and technology Information**, **2014** (2),13-14.
- Ma Jun, Feng Qing.(2014). Research on the factors affecting consumers' purchase of pure electric vehicles . **Shanghai Automobile**, (2), 54-58.
- Peters A, Mueller M G, Haan P D, et al. (2008).Feebates promoting energy-efficient cars:Design options to address more consumers and possible counteracting effects. **Energy Policy**, **36**(4),1355-1365.

List of Bibliography

- Potoglou D, Kanaroglou P S. (2017). Household demand and willingness to pay for clean vehicles. **Transportation Research Part D Transport & Environment**, **12**(4),264-274.
- Ren Yulong, Li Haifeng, Sun Rui, et al.(2009). Full-life-cycle cost model and analysis of electric vehicles based on the perspective of consumers . **Technology economy**, **28** (11),54-58.
- Tian yuan,Zhuo Huijun.(2014)..An empirical study on the influencing factors of electric vehicle consumer purchase decision.**Market weekly theoretical research**,11,37-40.
- Sun Q. (2010).Factors Affecting Consumer Intentions to Acceptance Banking Services in China. *Advances in Wireless Networks and Information Systems*. **Springer Berlin Heidelberg**, 2010,27-34.
- Schuitema G, Anable J, Skippon S, et al.(2013). The role of instrumental, hedonic and symbolic attributes in the intention to adopt electric vehicles. **Transportation Research Part A**, **48**(2),39-49.
- Yin Zhengyuan, Wang Fanghua. (2013).**Comparison of consumers' purchase intentions for new energy vehicles**. **Shanghai Management Science**, **35** (4), 15-19.

APPENDICES



APPENDIX A
QUESTIONNAIRE



Questionnaire survey of the factors affecting the purchase of new energy vehicles

Part One

Classification Problem

1. Your gender?

Male

Female

2. Your degree?

Middle school

High school

College degree

Bachelor degree

Master degree

3. Your monthly income?

Below 3000

3000-5000

5000-10000

10000 -20000

20000 above

4. Your age?

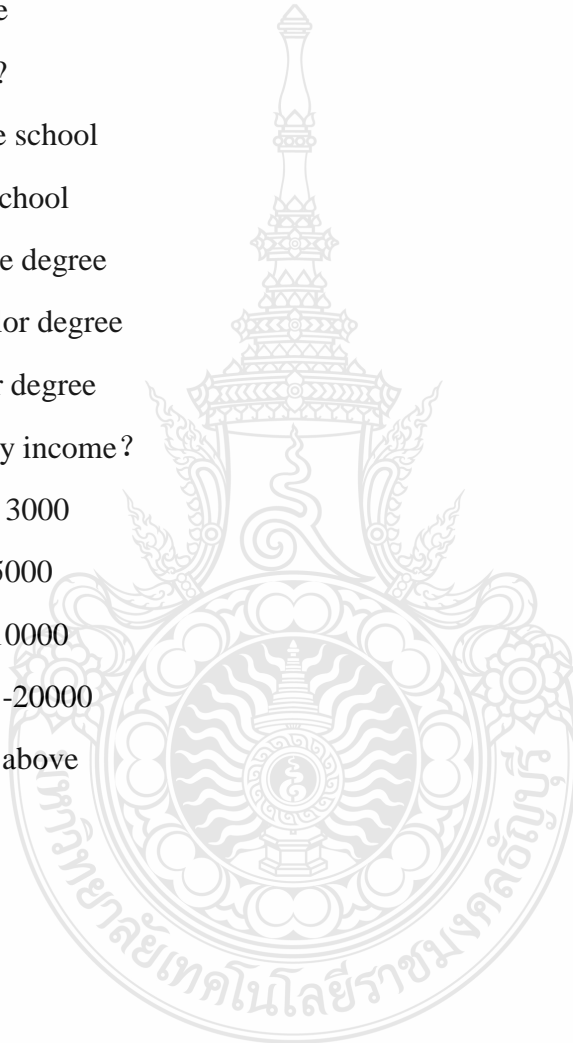
18-30

31-40

41-50

51-60

60 and above



Part Two

The formal question

5. I will consider whether the range of new energy vehicles meets the travel problem

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

6. I will consider whether the charging time of new energy vehicles affects travel

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

7. With the same performance, the cost of buying and using an electric car is cheaper than a fuel car to drive a new energy car than a fuel car.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

8. I chose the company's new energy vehicle because of its high sales volume

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

9.I chose new energy vehicles because their brand awareness is very high.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

10.The brand's cars have many models.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

11.The quality of the brand's new energy vehicles is generally very good.

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

12.I think driving a new energy vehicle can meet my travel needs

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

13. I think driving new energy vehicles can improve travel efficiency

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

14. I think it is easy to drive new energy vehicles

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

15. Perfect charging facilities and other infrastructure

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

16. Existing charging infrastructure is reasonably distributed

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

17. Existing charging infrastructure is easy to charge

- Strongly disagree
- Disagree

- Neutral
- Agree
- Strongly agree

18. Government subsidies and tax policies have reduced the cost of buying cars

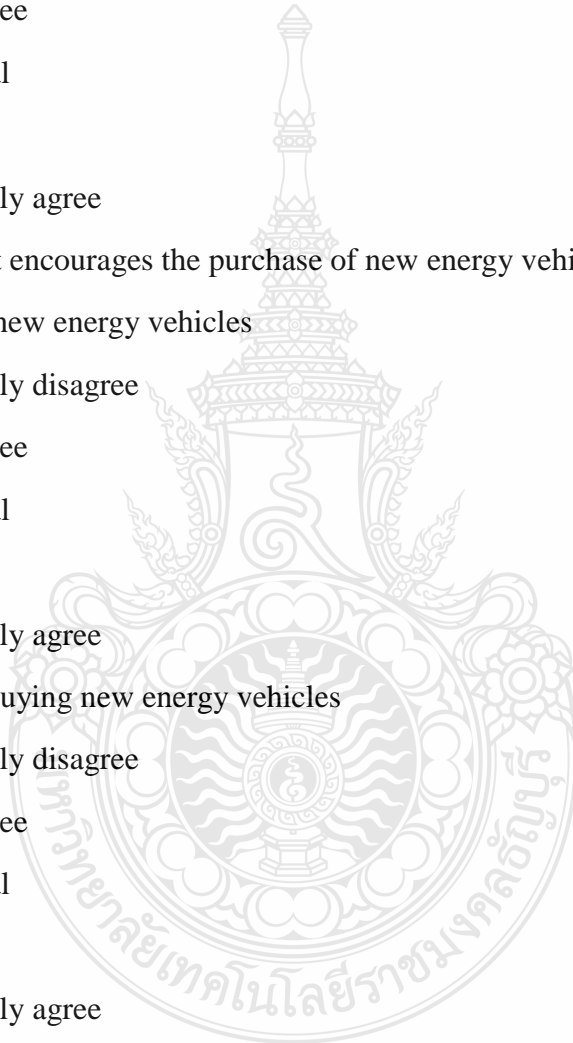
- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

19. The government encourages the purchase of new energy vehicles will strengthen the willingness to buy new energy vehicles

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree

20. I will consider buying new energy vehicles

- Strongly disagree
- Disagree
- Neutral
- Agree
- Strongly agree



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.....*Liu Tongxing*.....
(Mr.Liu Tongxing)



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