

THE IMPACTS OF ATTITUDE, SUBJECT NORM, AND PERCEIVED  
BEHAVIORAL CONTROL TOWARDS GREEN PURCHASE INTENTION OF  
NEW ENERGY VEHICLES IN BEIJING, CHINA



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### **ABSTRACT**

The aim of this research study was to investigate the impacts of attitude, subjective norm, and perceived behavioral control towards green purchase intention of new energy vehicles in Beijing, China. The population of this study were people living in Beijing, China, and purchased new energy vehicles. The research questionnaires were spread out to the 400 consumers from selected three companies (Build Your Dream, Tesla, and Wuling) by using convenience sampling method. Data analysis was analyzed using descriptive statistics (frequency, percentage, mean, and standard deviation) and multiple linear regression analysis.

These three hypotheses are supported by the findings, suggesting a positive correlation between the independent variables (attitude, subjective norm, and perceived behavioral control) and dependent variable (green purchase intention) at the statistical significant level of 0.05.

*Keywords: Attitude, Subjective Norm, Perceived Behavioral Control, Green Purchase Intention*

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## CHAPTER 1

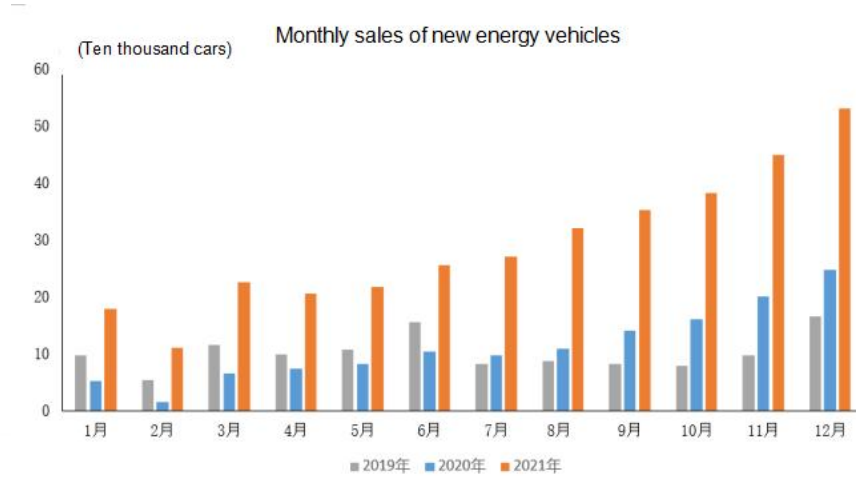
### INTRODUCTION

#### 1.1 The Importance and Problem of the Study

With the emergence of many environmental problems such as environmental pollution, resource scarcity and climate deterioration, the human living environment and the healthy development of economy have been seriously threatened. Huge economic expansion will lead to overuse or even depletion of natural resources, which has attracted environmental concerns from people from all walks of life around the world (Kumar, Luthra, Khandelwal, Mehta, Chaudhary, & Bhatia, 2017). The development goal of one-sided pursuit of economic benefits or ecological stability has lagged behind the process of times, and how to solve the contradiction between the two has become the focus of all countries in the world. In recent years, many countries have put forward green development strategies, to call society to pay attention to environmental issues and manufactures change their production and consumers' consumption patterns. Therefore, the solid "green" foundation can better maintain the ecological environment. It is an important way to solve environmental problems for consumers to change their consumption mode and adjust their consumption structure. Exploring the influencing factors of their green purchase intention are effective countermeasures to promote consumers to actively adopt green purchase intention.

In the current IT scenario, continuous production of green products is ongoing to meet consumer demand to provide new products with advanced features, and gradually replacing the existing products (Kautish & Sharma, 2018). With the continuous increase of car ownership, China has become the world's largest automobile production and marketing country, and the automobile production and sales volume will maintain a strong growth momentum for a long period in the future (Ma, 2022). According to the statistical analysis of the China Association of Automobile Manufacturers, as shown in figure 1.1, by the end of December 2021, China's automobile produced 26.082 million units and sales completed 26.275 million units (China Association of Automobile Manufacturers [CAAM], 2022). Sales of new energy vehicles, by 2021, the production of new energy vehicles reached 3.545 million and sales of new energy vehicles reached 3.521 million units (CAAM, 2022).

Figure 1.1: Monthly sales of new energy vehicles (2019-2021)



Source: China Association of Automobile Manufacturers (2022). *In 2021, the market share of new energy vehicles in China exceeded 3.5 million units to 13.4%*. Retrieved from <https://news.cnstock.com/news,bwqx-202201-4811292.htm>

The contradiction between environmental pollution caused by automobile growth and energy supply and demand is becoming more and more significant. Therefore, it must to solve the problem of large energy consumption and serious pollution of traditional energy vehicles. The breakthrough to solve many problems is to vigorously develop energy-saving new energy vehicles, and it is also an inevitable choice to realize the structural transformation and upgrading of China's auto industry. But in 2021, the production of new energy vehicles accounted for only 13.59% of the vehicle production, and 13.40% of the sales volume (CAAM, 2022). The shortage of automobile production and supply and the oversupply of new energy vehicles indicate that China's acceptance of new energy vehicles needs to be improved. China has introduced a series of policies to encourage residents to travel green and guide consumers to choose new energy vehicles, and has been promoted to a national strategic position. In order to ensure the steady growth of the sales volume of new energy vehicles, to have a deeper understanding of the Chinese consumers' purchase intention of new energy vehicles and to study the key factors affecting the green purchase intention is necessary. In 2021, China's new energy vehicle manufacturers ranked first

in retail sales is Build Your Dream (BYD) new energy vehicles, it has sold 584,000 units (China Institute of Commercial Industry, 2022). And in 2021, BYD's new energy vehicles sales of the top three in all cities in China in Shenzhen, Shanghai and Beijing (China Institute of Commercial Industry, 2022). Therefore, the new energy vehicle is selected in this study as a research.

In the past five years, many scholars have studied the influence of green purchase intention from different factors. From psychological factor, The extended model of value-attitude-behavior theory was proposed by Cheung, To(2019), to explain the influence of psychological factors on consumers 'green purchase intention, and consumers' attitudes have a positive impact on their green purchase intention. Xu, Hua, Wang, & Xu (2020) chose the planned behavior model theory as the basic theoretical model to study the impact of psychological factor on consumers' green purchase intention, the results shows that attitude have direct influence on purchase intention. Zaremohzzabieh, Ismail, Ahrari & Abu (2021) studied the effect of attitudes on green purchase intentions and explained the importance of the theory on the relationship between attitudes and intention. Therefore, this study can analyze how to improve green purchase intention from the perspective of attitude.

Subjective norm factor is one of the other factors that affect the green purchase intention. Subjective norms are considered as predictors of consumers' intention to buy green products (Biswas & Roy, 2015). Wahid, Rahbar, Shyan (2011) agree that subjective norms are one of the main factors influencing behavioral intentions. Subjective norm reveals the degree to which one feels morally responsible to others when buying green products, and how important a positive social image is to consumers (Barber, Bishop, & Gruen, 2014). Subjective norm has a direct and significant relationship with customers' attitudes towards buying green products, perceived behavioral control, and purchase intention (Kim & Karpova, 2010). When purchasing green products, information from other groups may influence consumers, so it is important to study subjective norm for green purchase intentions.

Perceived behavioral control is directly related to the intention and behavior toward green products. Many studies have shown that perceived behavioral control has a positive influence on intention in a variety of research settings. Behavioral control will enhance consumers' willingness to buy green products because it is positively

associated with both behavioral intention and actual behavior (Ajzen, 1991). The study of Kim and Chung (2011) confirmed that consumers' perceived behavioral control of purchasing organic products has a positive impact on their purchase intention. When a consumers think that other people around them may not agree to the purchase of green product, they may encounter a psychological barrier that shows a person's perceived behavioral control that suppresses their purchase intention (Kim & Karpova, 2010). Therefore, this study uses perceived behavioral control as one of the factors to study green purchase intention.

This study aims to use the theory of reasoned action by Fishbein and Ajzen (1975) and the theory of planned behavior (Ajzen, 1985), based on the purchase intention of consumers for new energy vehicles in Beijing, China, to explore the influencing factors of green purchase intention from psychological factors. Attitude factor includes affective, conative, cognitive. Subjective norm factor includes three dimensions: The family's influence, the friends' influence, social pressure. Three sub-variables in perceived behavioral control factor are self-efficacy, technology, and government support.

## **1.2 Research Problems**

- 1.2.1 Does attitude has an influence on green purchase intention?
- 1.2.2 Does subjective norm has an influence on green purchase intention?
- 1.2.3 Does perceived behavioral control has an influence on green purchase intention?

## **1.3 Objectives of the Study**

1.3.1 To study the relationship between attitude (affective, conative, and cognitive) and green purchase intention in new energy vehicles in Beijing, China.

1.3.2 To study the impact of subjective norm (the family's influence, the friends' influence, and social pressure) on green purchase intention in new energy vehicles in Beijing, China.

1.3.3 To study the influence of perceived behavioral control (self-efficacy, technology, and government support) on green purchase intention in new energy vehicles in Beijing, China.

#### **1.4 Method of Study**

The methods of the study are quantitative analysis. The questionnaire was designed using closed questions suitable for quantitative analysis, and convenience sampling method to send questionnaire via Online form for research, because of the high incidence of covid-19 in Beijing in the past three years, China has certain control policy. Data collected from the online forms were entered into the statistical software, followed by data analysis and summary of the results.

#### **1.5 Tools and Statistics Used**

Empirical studies were carried out through the questionnaire design. The questionnaire was designed using closed questions suitable for quantitative analysis, the measurement scale included questions about the demographic information of the respondents, questions about the respondents' behavior, which was used to assess the questionnaire is the Likert scale, and send questionnaire via questionnaire form for research. Data correlation analysis and regression tests were performed with computerized software. Descriptive statistics and multiple linear regression analyses were used for the statistical analysis of the quantitative methods to test the effect of the independent variables on the dependent variable.

#### **1.6 Scope of the Study**

##### **1.6.1 Independent Variables:**

###### **1.6.1.1 Attitude:**

Affective

Conative

Cognitive

###### **1.6.1.2 Subjective norm:**

The family's influence

The friends' influence

Social pressure

###### **1.6.1.3 Perceived behavioral control:**

Self-efficacy

Technology

Government support

**1.6.2 Dependent Variables:** Green purchase intention

**1.6.3 Population:** The population of this study is settled people living in Beijing, China, and have purchased new energy vehicles.

**1.6.4 Sample:** The Cochran's (1977) formula was used to calculate the sample size for the unknown populations and to determine the appropriate sample size for this study, which is as follows:

$$n = \frac{z^2 p * q}{e^2}$$

Where,

n= sample size,

z= z value at reliability level or significance level,

p= the estimated proportion of an attribute that is present in the population,

q= 1-p

e= acceptable sampling error

1.96 for a 95 percent confidence level. Selected the maximum variability which means  $p = 0.5$ ,  $q = (1-0.5) = 0.5$ ,  $e = \pm 0.05$ , the calculation for sample size of the study is as follows:

$$n = \frac{z^2 p * q}{e^2} = \frac{(1.96)^2 (0.5) * (0.5)}{(0.05)^2} = 385$$

Thus, the appropriate sample size is 385 and it round up to 400.

**1.6.5 Sampling Method:** For the sampling method, this study used convenience sampling to collect primary data by sending questionnaire form online.

**1.6.6 Time:** January, 2023-August, 2023

**1.6.7 Place:** Beijing, China

**1.6.8 Statistic:** The statistical methods used in this study are focused on quantitative methods, descriptive statistical methods including frequency, mean, and standard deviation. Inferential statistic are correlation and multiple linear regression.

## 1.7 Benefits of the Research

In terms of theory, this study will sort out and summarize the current research

on the purchase intention of new energy vehicles. Based on the theory of rational action (TRA), the theory of planned behavior (TPB), and the theory of value-attitude-behavior (VAB), the framework of relevant factors affecting consumers' intention to purchase new energy vehicles is established, design the relevant scales and questionnaires, and distribute the questionnaires online among consumers in Beijing, in-depth understanding of Beijing consumers' purchase intention of new energy vehicles, and explore the psychological factor affecting green purchase intention of new energy vehicles, including attitude factor, subjective norm factor, and perceived behavioral control factor. Analyze the influence mode and influence of these factors on the purchase intention of new energy vehicles, and explore whether internal and external factors will affect the green purchase intention of new energy vehicles. The empirical basis of the existing research is expanded through the conclusion of the empirical factors affecting the purchase intention of new energy vehicles, to enrich China's relevant research on the purchase intention of new energy vehicles, and make up for the lack of research on the internal and external factors of new energy vehicles, and effectively supplement the research field of green purchase intention through the research of new energy vehicles, a green product.

### **1.8 Limitations of the Research**

Due to the continuous impact of Covid-19, this study could only collect data through online questionnaires, instead of using interviews offline, this will make many respondents reluctant to be asked questions. Due to the geographical and time constraints, this study will only focus only on the green consumption willingness in Beijing, China, which may limit the breadth of the findings. At present, China's green purchase intention has just started, the overall level of green purchase intention in society is not high, consumers' awareness of environmental protection is generally weak, and they lack of consciousness and initiative of green purchasing.

### **1.9 Definition of Terms**

**Green purchase intention:** Green purchase intention refers to the likelihood that a consumer will purchase a particular product or brand because of its environmental needs (Chen & Chang, 2012).



**Attitude:** Attitude is a tendency to express a behavior, and this tendency is based on personal experience and beliefs (Ajzen, 1985).

**Subjective norm:** Subjective norms mean that a person should do that particular behavior because of the pressure from important others or groups (such as parents, spouses, friends, colleagues, etc.) when taking a particular behavior (Ajzen, 1991).

**Perceived behavioral control:** Perceived behavioral control is defined as the tendency of individuals to control a behavior, which is the consumers' judgment of the degree of control of consumption behavior (Ajzen, 1985).



## CHAPTER 2

### LITERATURE REVIEW

This chapter will identify where the literature is not studied and how research can help fill the gaps. For the research project, entitled “The impact of attitude, subjective norm, and perceived behavioral control towards green purchase intention of the new energy vehicles in Beijing, China”. This chapter will be divided into nine elements. Its content is as follows:

- 2.1 The Background of new energy vehicles in Beijing, China
- 2.2 Theories/Academic Concepts and Other Relevant Research Studies of Green Purchase Intention
- 2.3 Theories/Academic Concepts and Other Relevant Research Studies of Attitude
- 2.4 Theories/Academic Concepts and Other Relevant Research Studies of Subjective Norm
- 2.5 Theories/Academic Concepts and Other Relevant Research Studies of Perceived Behavioral Control
- 2.6 Relevant Researches
- 2.7 Hypotheses
- 2.8 Conceptual Framework
- 2.9 Conclusion

#### **2.1 The Background of New Energy Vehicles in Beijing, China**

Beijing is one of the first pilot promotion cities of Industry and Information Technology of the Ministry of New energy vehicles. Beijing consumers can get the maximum subsidies when purchasing new energy vehicles of 10,000 CNY (Beijing Municipal Bureau of Commerce, 2022). The subsidy policy can make Beijing consumers get preferential treatment when buying cars, and Beijing consumers have a higher understanding of new energy vehicles. But for new energy vehicles, the Beijing Municipal Commission of Transport gave a relatively loose policy, in October 2015, the relevant departments of Beijing issued regulations, canceled the new energy vehicles license plate, meet the provisions of the new energy vehicle applicants can directly get

the license plate. Beijing's air has been seriously affected by the smog, making more and more Beijing residents concerned about environmental protection issues, among China's major cities, Beijing ranks first in motor vehicle pollution emissions. Therefore, to improve the ecological environment and social consensus of Beijing's environment, it can promote and use new energy vehicles. Consumers in Beijing are concerned about the quality of the surrounding environment, so they are more likely to purchase new energy vehicles. Among the first-tier cities, Beijing has gathered talents from China and even around the world, so the cultural quality and income level of Beijing's consumer groups are higher than those of other cities in China. They have enough consumption power for new energy vehicles, and they are easy to accept and recognize new things (Jiang, 2021). Beijing has not yet reached a saturated market. Beijing has a strong consumption potential, and the acceptance of new energy vehicles is constantly rising. Beijing consumer group structure has international characteristics, easy to their cognition of new things and their consumption concept to its relatives and friends located all over the country, therefore, Beijing consumer new energy vehicles purchase intention factors influence the result of the study, can be the national new energy vehicle promotion, marketing activities play an important role.

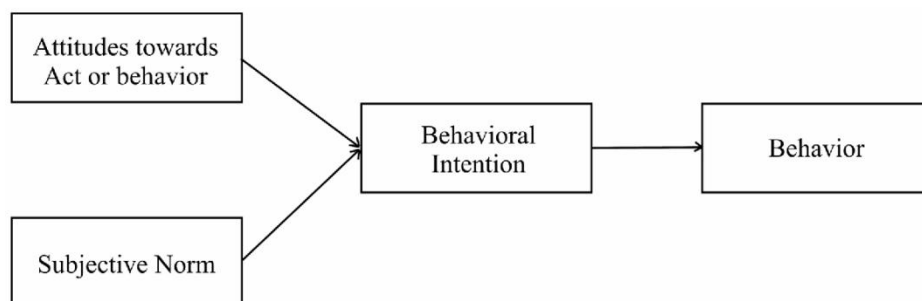
## **2.2 Theories/ Academic Concepts and Other Relevant Research Studies of Green Purchase Intention**

When studying the green purchase intention, the theoretical model is mainly the theory of reasoning behavior (TRA) and the related theory of planning behavior (TPB) are two theoretical models for reference. The influence of individual factors and external factors on green purchase intention has been studied by many scholars, and mainly using TRA. Ajzen's planned behavior theory starts from the behavioral psychological level and is widely used in the field of purchase intention research. Ajzen, Fishbein (1980) demonstrated that intention is considered two fundamental determinants: the individual's overall evaluation of executive behavior and the perceived expectation of other external factors of the individual's performance-related behavior. Therefore, this study is based on the following theory to investigate attitudes and the influence of subjective normative factors and perceived behavior control factors on the green purchase intention.

### Theory of Reasoned Action

TRA is an expectation model theory that predicts behavioral intention, covering attitude prediction and behavioral prediction. It was proposed by Fishbein and Ajzen (1975). TRA stems from social psychological studies of attitudes and attitudinal-behavioral relationships. The theory of rational behavior holds that will and intent can be considered when predicting behavior. According to the TRA, if people rate the proposed behavior as a positive attitude, and they believe that others want them to perform this behavior (subjective norms), then they will have higher intentions. Intention is considered to be two fundamental determinants: attitudes towards behavior (the individual's overall evaluation of executive behavior) and subjective norm (the perceived expectations of other external factors). Individual choice of green consumption largely depends on the influence of psychological factors, and individual outcome expectation is an important factor affecting psychological motivation. As shown in Figure 2.1, Fishbein and Ajzen (1975) built theory of reasoned action (TRA) consumer buying model, the relationship between TRA and purchase intention was confirmed.

Figure 2.1: Theory of Reasoned Action (TRA) Model.

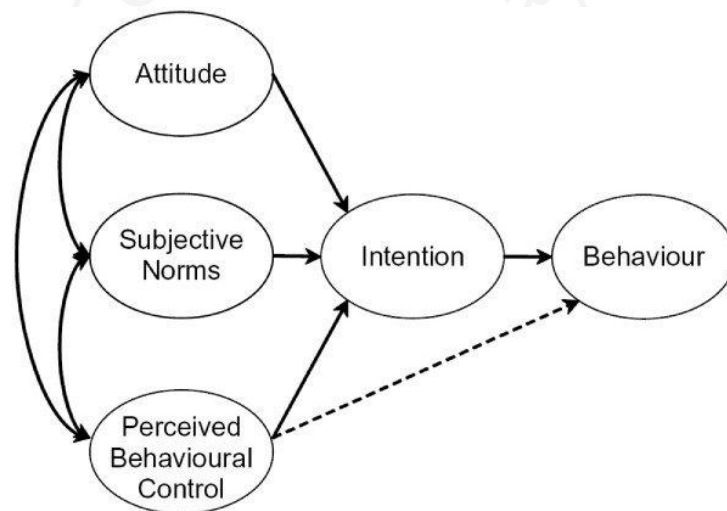


Source: Fishbein, M. & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to theory and research*. Reading, MA: Addison-Wesley Publishing Company.

### Theory of Planned Behavior

Theory of planned behavior (TPB) was proposed by Ajzen (1985) and evolved from the theory of reasoned action proposed by Fishbein & Ajzen in 1975. When analyzing behavior intention and actual behavior, the theory of planned behavior is not only influenced by "attitude" and "subjective norm", but also influenced by "perceptual behavior control knowledge". Ajzen (1985) states that individuals' experiences and beliefs form their attitudes (tendency to express behavior), subjective norms (tendency to be influenced by social norms or stress) and perceived behavioral control (individual tendency to control behavior) form the intention to perform. The three main prerequisite factors linking TPB with green purchase intention are attitude, subjective norm, and perceived behavioral control (Nguyen & Hoang, 2019).

Figure 2.2: Theory of Planned Behavior Model.



Source: Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

The TPB structure can be used as a direct determinant of the green purchase intention (Bong & Jin, 2017; Paul, Modi, & Patel, 2016). Maichum, Parichatnon, & Peng (2016) adopted TRA, TPB for green consumption in Thailand, indicating that consumer attitudes, subjective norms, and perceived behavioral control have a significant direct positive effect on green purchase intention. He et al. (2020) through in-depth interviews, this study uses new energy vehicles to explore the driving factors

of green purchase intention, it applies grounded TRA and TPB for a qualitative analysis, the results of which show that attitude, subjective norm, and perceived behavioral control are the main factors of green purchase intention. Overall, the results of previous studies suggest that the TRA and TPB model has the function of clearly grasping the green purchase intention.

### **2.3 Theories / Academic Concepts and Other Relevant Research Studies of Attitude Factor**

Guagnano, Stern, & Dietz (1995) proposed the attitude-behavior-condition (ABC) theory, they argue that promoting environmental behavior is the result of the interaction between individual attitudes and external conditions. In the ABC model, the alphabet "A" represents the affective component, "B" the behavioral component, and "C" the cognitive component. With the deepening of the study of the relationship between attitude and behavior, the multi-dimensional attributes of attitude began to attract the attention of Berg et al., (2006), Eagly & Chaiken (1998) and Schiffman & Kanuk (2004), they actually distinguish between three components of attitude: affective (feelings), conative (behavior) and cognitive (beliefs). Therefore, this study builds on the ABC theory, attitude will describe into 3 elements: affective, conative, and cognitive. They are as follows:

#### **2.3.1 Affective**

Affective attitude is cited as the degree to which a person has favorable or unfavorable evaluations of related behavior (Ajzen, 1991). Affective is described as a human emotion or emotional behavior (Jain, 2014). A cognitive or affective component of an attitude can be combined with an attitude towards a product or action (Lim & Kim, 2020).

#### **2.3.2 Conative**

Conative attitudes describe the person's intentions based on another person's behavior (Jain, 2014). Consumers will form their behavior according to their conative phase in the affective phase (Qin, Osatuyi & Xu, 2021). Conative is a result of the consumer decision-making process (Lim & Kim, 2020).

#### **2.3.3 Cognitive**

Cognitive attitudes are formed by reasoning-based behavioral beliefs (Jain

2014). The cognitive component includes beliefs, values, thoughts and other information a person has about this object (Qin, Osatuyi, & Xu, 2021).

## **2.4 Theories /Academic Concepts and Other Relevant Research Studies of Subjective Norm Factor**

According to the TRA, subjective norms are the tendency to be influenced by social norms or pressures when performing well under certain circumstances (Ajzen, 1991). Subjective norms are a social factor in which social stress is defined as the perceptions, beliefs, and judgments of other family members and community members related to purchase intention (Ajzen, 1986). According to Ajzen (1991), a person's intention to commit a behavior becomes stronger when he believes that the person involved (family, relatives, friends, and colleagues) will value this particular behavior. Taylor & Todd (1995) decompose the subjective norms into internal and external normative beliefs. However, both ultimately represent subjective norms, including pressure from family (within) and friends (outside). For example, the fact that people live in a society surrounded by others makes them more vulnerable to the influence of certain societies (Ibtissem, 2010). Choi, Jang, & Kandampully (2015) showed that non-volitional factors (subjective norm) influencing consumer decisions can better explain green purchase intention.

This part will describe into 3 elements: The family's influence, the friends' influence, and social pressure. They are as follows:

### **2.4.1 The Family's Influence**

From a social perspective, families interact as a functional unit (Al-Jeraisy, 2008). Al-Nahdi, Habib, Abu, Bahklah, Ghazzawi, & Al-Attas (2015) states that spouses play many roles in influencing purchases, depending on the type of product, even if the wife does not make the final decision. Regarding green products, husbands and wives share their views when deciding to buy them and often consider the child's demands. Al-Jeraisy (2008) observed that even for married couples with children, parents pursue and maintain their influence on family members.

### **2.4.2 The Friends' Influence**

Friends inadvertently put pressure on the buyer, who adjusts their behavior to the friend's preferences, even if he wants different choices (Sangkakoon, 2014). Seo,

Kim, & Shim (2014) explored the study of subjective norms on the purchase intention of processed food from the influence of friends and family. Numraktrakul, Ngarmyarn, & Panichpathom (2012) found and confirmed that consumers are often affected by the information input of friends (who participate in the decision-making of buying green products). Social factors play an important role in choosing to buy green products, and subjective norms affect consumers' intention to buy green products.

### **2.4.3 Social Pressure**

Subjective norms represent the normative influences or perceived social pressure of performing or not performing a behavior (Ajzen, 1991). Strydom (2018) From the perspective of social pressure, the influence of subjective norms on the intention of green recovery was studied according to the TPB theory. Consumers' perception of the social pressure placed on them by others influences their intention to buy the product (Phungwong, 2010).

## **2.5 Theories /Academic Concepts and Previous Studies of Perceived Behavioral Control**

Ajzen (1991) argued that Bandura's theory of self-efficacy is the same as perceived behavioral control in the TPB, in which the combination of controlling belief and perceived power is understood as a person's perceived behavioral control. The perceived behavioral control consisting of two separate components is acknowledged by Ajzen (2002): self-efficacy and perceived control of behavior. The concept of perceived control of behavior is extended in the TPB decomposed by Taylor & Todd (1995), which takes self-efficacy, technology, resources and government support as the most relevant determinants of behavioral control. Pavlou (2002) studied the phenomenon of e-commerce behavior by using TPB theory. The importance of perceived behavioral control in this respect is based on the perception of control will promote the cognitive acquisition of information, because the controlled consumers have cognitive resources to manage the behavioral activities of information acquisition, thus actively affecting the intention of product purchase. The sub-variables of perceived behavioral control selected in this paper are based on the study of Taylor & Todd (1995), on the decomposition and cross effects in the theory of planned behavior, self-efficacy as an internal factor, technology, and government support as external



factors. They are as follows:

### **2.5.1 Self-Efficacy**

Kraft et al. (2005) based on Ajzen (2002) that Self-efficacy is measured by perceived difficulties in performing the behavior in this model, for example, the confidence to perform the behavior, whether it requires more or less effort. According to Grant, Malloy, & Murpty (2009), one's perception of one's abilities based on past performance or experience is a reflection of self-efficacy, which has a crucial impact on future intentions. In this paper, self-efficacy is defined as the consumer's perception of green purchase intention control.

### **2.5.2 Technology**

Shih & Fang (2004) demonstrated the impact of (potential) technology facilitation condition on the perceived behavioral control structure, arguing that most respondents had easy access to technical resources and infrastructure since most were familiar with the Internet. This variable was examined in many technical acceptance studies and found empirical support for effects on perceptual control (Celik, 2008). According to Venkatesh (2000), perceived behavioral control gained more psychological interest than actual control, related to individual perception of cognition, resources, availability, and technology and knowledge needed to perform a specific behavior. Hernandez & Mazzon (2007) showed that perceived behavioral control is associated with self-perceived ability using new technologies.

### **2.5.3 Government Support**

In the diffusion of perceived behavioral control, the government can exert interventionism and leadership roles. (Wang & Kim, 2007). Lee & Ho (2003) recommends that government support may include "regulation to minimize security risks", and "take more concrete actions to encourage higher-level trading in green products to complement its emphasis on a green lifestyle". As a social influence, the support of local government-controlled media, contributes to exposure and can play an important role in shaping intentions (Zolait & Ainin, 2008). From the perspective of Wang & Kim (2007), the higher the government support level perceived by potential users, the more interested they are to purchase green products.

## **2.6 Relevant Researches**

Zaremohzzabieh, et al. (2021) by constructing the meta-analytic structural equation modeling, the effect of consumer attitudes on green purchase intentions was examined. Combining the results of 90 studies, this paper examines the empirical fit of the integrated TPB - green purchase intention framework using meta-analytic structural equation modeling. The results show the mediating role of consumer attitudes in the development of green purchase intentions.

Liao, Wu, & Pham (2020) study aims to combine the relevant factors of green purchase through signaling theory and attitude-behavior-condition (ABC) theory, to test the influence of green customers' attitudes towards green products on green purchase intention. The study included 319 customers who had at least one year of experience in buying green products in Cambodia. The empirical research results reveal that the green product attitude of green customers has a positive impact on the green purchase intention.

Therefore, it comes to conclusion that:

Hypothesis 1: Attitude affects to green purchase intention in new energy vehicles of Beijing, China.

Roh, Seok, & Kim (2022) aims to study organic food consumption based on the perspective of an extended research model by integrating the theory of consumption value and the theory of rational behavior. A partial least square structural equation method (PLS-SEM) was used to test the study model of 251 samples. The results show that subjective norm has a significant positive effect on purchase intention. The main purpose of Jain (2020) study is to use the theory of planned behavior (TPB) to understand the key factors that influence the luxury purchase intention of Gen Y consumers - attitude, subjective norm, perceived behavioral control. Questionnaires were collected by survey methods, obtaining 215 valid responses, confirmatory factor analysis and a structural equation model were used to analyze the data. The results of the study suggest that subjective norm and perceived behavioral control are positively associated with intention to buy luxury goods.

Therefore, it comes to conclusion that:

Hypothesis 2: Subjective norm affects to green purchase intention in new energy vehicles of Beijing, China.

Hsu, Chang, & Yansritakul (2017) applied the theory of planned behavior

(TPB), and this study aimed to explain the effect on green skincare purchase intention (i. e., attitude, subjective norm, and perceived behavioral control). Data collected from 300 respondents in Taiwan were tested against the study model by using structural equation models. The results showed that perceived behavioral control had a significant positive effect on the purchase intention of green skin care products.

Tan, Ooi, & Goh (2017) examine the determinants of consumers purchase intention of energy-efficient household appliances by applying the extension of the theory planning behavior (TPB). A survey of 210 consumers in Malaysia using self-administered questionnaires and partial least squares (PLS) regression was used to test hypotheses. The results show that the consumers' perceived behavioral control over energy-efficient appliances significantly influences consumers' purchase intention of such green products.

Therefore, it comes to conclusion that:

Hypothesis 3: Perceived behavioral control affects to green purchase intention in new energy vehicles of Beijing, China.

## **2.7 Hypotheses**

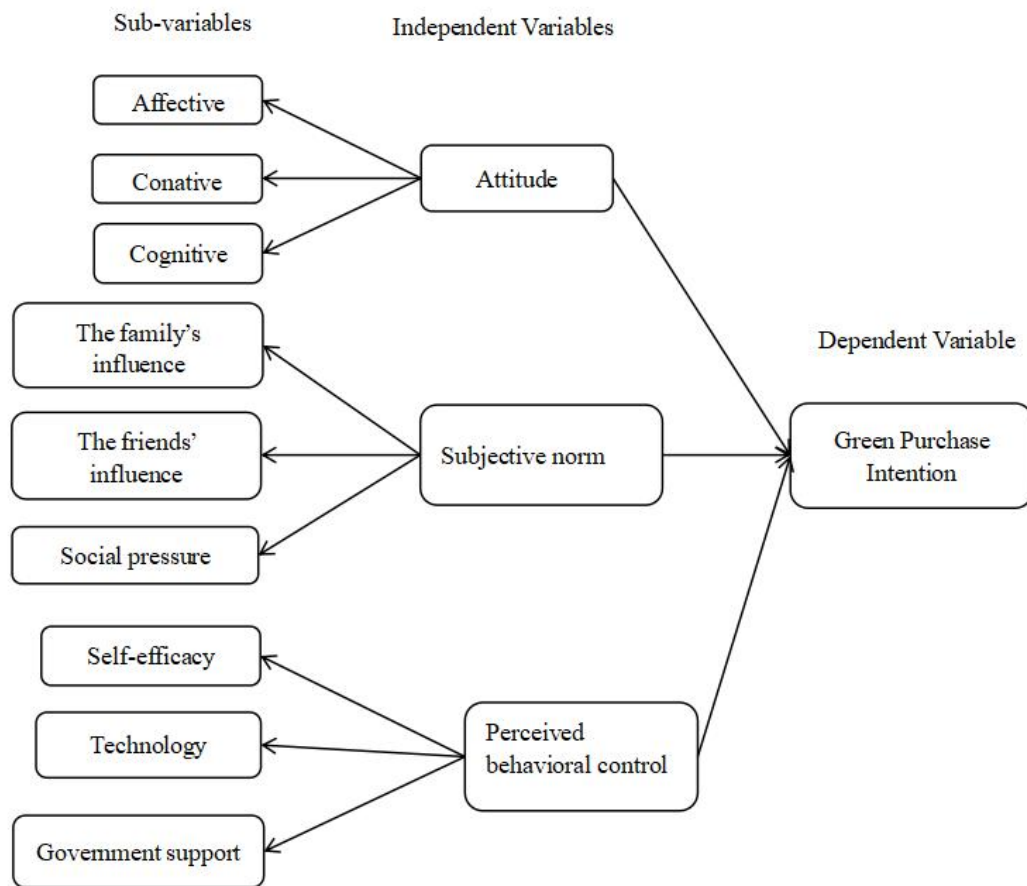
Hypothesis 1: Attitude affects to green purchase intention in new energy vehicles of Beijing, China.

Hypothesis 2: Subjective norm affects to green purchase intention in new energy vehicles of Beijing, China.

Hypothesis 3: Perceived behavioral control affects to green purchase intention in new energy vehicles of Beijing, China.

## **2.8 Conceptual Framework**

Figure 2.3: Conceptual Framework



## 2.9 Conclusion

This study uses a lot of TRA and TPB, based on consumers' intention to purchase new energy vehicles in Beijing, China, to discuss the influencing factors of green purchase intention from consumer personal psychological factors. This paper studies the influence of attitude, subjective norm, and perceived behavioral control on green purchase intention.

## CHAPTER 3

### METHODOLOGY

This chapter will describe the research type and tool, the research design and methods of analysis of studying. The first section will be discussing is the type and tool of the study, including the question composition of the questionnaire. The second section includes the measurement method of the questionnaire, and the statistical type. The third section of the study will also discuss the quality of the research tools, including reliability. The following sections will detail the data collection process, including population and sample, sampling technique, study procedure, and timeline. Finally, it will introduce methods to test hypotheses and analyze the data.

This part will describe into 8 parts. They are as follows:

- The Type of Research and Tool
- The Research Design
- The Quality of the Research Tool
- The Data Collection
- The Population and Sample
- The Sampling Technique
- The Research Procedure and Timeline
- The Hypotheses Test and Data Analysis

#### **3.1 The Type of Research and Tool**

The survey's tools for collecting data on respondents was an online closed questionnaire. The questionnaire is divided into five sections: demographic data questions (9 questions), attitude factor (5 questions), subjective norm factor (8 questions), perceived behavioral control factor (9 questions), and green purchase intention (4 questions), this questionnaire contained questions. This questionnaire used the Likert scale such as 5-completely agree, 4-mostly agree, 3-moderate agree, 2-slightly agree, 1-least agree. The questionnaire consisted of 35 questions.

Part 1: Demographic data questions (9 questions)

This part includes general information about the respondents, such as gender, age, marital status, family member, educational status, occupation, and monthly

income, whether to purchase a new energy vehicle, purchased vehicle brand.

Part 2: Attitude factor (5 questions)

This part includes the analysis of attitude factor. This part has three sub-variables: affective, conative, and cognitive. Affective has two items, conative has two items, cognitive has one item, these questions are illustrated in table below.

Table 3.1: The questions of attitude factor

No.	Sub-variable	Items	Reference
1	Affective	1. I think the new energy vehicles are very attractive. 2. I feel positive toward new energy vehicles.	(Ahn, Back, 2017)
2	Conative	1. I understand about the performance of new energy vehicles. 2. I have some knowledge about how new energy vehicles work.	(Qin, Osatuyi, Xu, 2021)
3	Cognitive	1. I react favorably to new energy vehicles.	(Ahn, Back, 2017)

Part 3: Subjective norm factor (8 questions)

This part includes the analysis of subjective norm factors. This section has three sub-variables: the family's influence, the friends' influence, and social pressure. The family's influence has two items, the friends' influence has three items, social pressure has three items, these questions are shown below.

Table 3.2: The questions of subjective norm factor

No.	Sub-variable	Items	Reference
1	The family's influence	1. My family members would appreciate if I purchase a new energy vehicle rather than a traditional car.	(Aung, 2020)
		2. My family will emphasize to me the importance of purchasing a new energy vehicle.	(San, 2019)
			(Munerah, Koay, Thambiah, 2020)
2	The friends' influence	1. Friends would appreciate if I purchase a new energy vehicle rather than a traditional car. 2. I have the support from my friends to purchase a new energy vehicle. 3. My friends' positive opinion influences me to purchase a new energy vehicle.	(Aung, 2020)
3	Social pressure	1. Most people who are important to me would want me to purchase a new energy vehicle. 2. Many people in my society think that I should drive a new energy vehicle because it is beneficial to the environment. 3. People who I admire to could influence me to purchase a new energy vehicle.	(Choi, Jang, Kandampully, 2015) (Nam, Dong, Lee, 2017)

#### Part 4: Perceived behavioral control factor (9 questions)

This section includes the analysis of perceived behavioral control factors. This section has three sub-variables: self-efficacy, technology, government support. Each sub-variable contains three questions.

Table 3.3: The questions of perceived behavioral control factor

No.	Sub-variable	Items	Reference
1	Self-efficacy	<ol style="list-style-type: none"> <li>1. I feel confident that I should be able to purchase a new energy vehicle.</li> <li>2. Whether or not I purchase a new energy vehicle is entirely up to me.</li> <li>3. I perceived I have adequate skill and knowledge about new energy vehicles.</li> </ol>	(Karatu, Mat, 2015)
2	Technology	<ol style="list-style-type: none"> <li>1. I think new energy vehicles are more technically innovative than traditional cars.</li> <li>2. Technology improves my intention to purchase a new energy vehicle.</li> <li>3. Technology enables me to discover a new energy vehicle and get purchasing intention more quickly.</li> </ol>	(Wang, Zhang, Wong, 2022) (Athapaththu1, Kulathunga, 2018)
3	Government support	<ol style="list-style-type: none"> <li>1. I believe that government's support policy such as tax incentives on purchasing a new energy vehicle increases my intention.</li> <li>2. I believe that government's support policy such as direct grants to consumers on purchasing a new energy vehicle increases my intention.</li> <li>3. I think the government should help to develop green consumption in China.</li> </ol>	(Dutta, Hwang, 2021)

## Part 5: Green purchase intention (4 questions)

This section includes the respondents' green purchase intention.



Table 3.4: The questions of green purchase intention factor

Variable	Items	Reference
Green purchase intention	1. I am willing to purchase a new energy vehicle in future. 2. I will make an effort to purchase a green car in future. 3. I will recommend the use of the new energy vehicle to other people. 4. I will consider a new energy vehicle first when I want to purchase a vehicle.	(Wang, Zhang, Wong, 2022)

### 3.2 The Research Design

The measurement method of the online questionnaire is as follows:

Part 1: the nominal and ordinal scales

Part 2-4: interval scale

Part 5: interval scale

Scale 5 – Completely Agree

Scale 4 – Mostly Agree

Scale 3 – Moderate Agree

Scale 2 - Slightly Agree

Scale 1 - Least Agree

Two types of statistics will be used:

**Descriptive Statistics:** Used to summarize data including frequency, mean, and standard deviation.

**Inferential Statistics:** Using analysis to draw conclusions about relationships between variables, especially multiple regression analysis.

In parts 2-5 of the questionnaire, a 5-point Likert scale was used to explain the statistical mean range of the mean, calculated as follows:

Range = (Maximum - Minimum) / Scale Level

Range =  $5 - 1 / 5 = 0.80$

Class Interval Scale for analyzing average scores from 5 to 1 (Best, 1983).

Table 3.5: The Range of Mean Interpretation

Range	Interpretation
1.00 - 1.80	Least Agree
1.81 - 2.60	Slightly Agree
2.61 - 3.40	Moderate Agree
3.41 - 4.20	Mostly Agree
4.21 - 5.00	Completely Agree

Source: Best, J.W. (1983). *Research in Education*. Englewood Cliffs, New Jersey: Prentice Hall.

### 3.3 The Quality of the Research Tool

The validity of the online questionnaire was checked at pre-test and approved by the advisor Dr. Chutimavadee Thongjeen. The reliability test is carried out on 40 respondents. The questionnaire data were analyzed using Cronbach's alpha. When the alpha value is 0.7-1.00, the questionnaire would be approved (Cronbach, 1951). After analysis using Cronbach's alpha value in statistical software, the attitude factor scale is 0.908, subjective norm factor scale is 0.853, perceived behavioral control scale is 0.850, green purchase intention scale is 0.813, with total reliability of 0.956. From the results, it can be seen that the questionnaire of this study has reached the benchmark and acceptable level.

Table 3.6: The Reliability Test Results

Variable	N of Items	Cronbach's Alpha
Attitude	5	0.908
Subjective norm	8	0.853

(Continued)

Table 3.6 (Continued): The Reliability Test Results

<b>Variable</b>	<b>N of Items</b>	<b>Cronbach's Alpha</b>
Perceived behavioral control	9	0.850
Green purchase intention	4	0.813
<b>Total</b>	26	0.956

### **3.4 The Data Collection**

Data for the online questionnaire survey was collected from permanent residents living in Beijing, and have purchased new energy vehicles. During the processed data collection, China was having COVID-19 therefore participants could not be reached face to face. Therefore, the survey was conducted online using questionnaire forms. So online questionnaires were used in this data collection.

### **3.5 The Population and Sample**

The resident population living in Beijing, China and purchasing new energy vehicles is the population of this study. The sample selected from the top three new energy vehicle sales ranking brands in Beijing in 2022. They are: build Your Dream, Wuling, Tesla (China Institute of Commercial Industry, 2022). The questionnaires were distributed to the settled people living in Beijing, China, and have purchased new energy vehicles, and the sample size is based on Cochran (1977) of 400 respondents who have a 95% confidence level with a bias equal to 5% (Cochran, 1977).

### **3.6 The Sampling Technique**

The method used to collect data for this study was convenience sampling as a sampling technique. This is a non-probability sampling method suitable for this study to find the results of the participants in this study to get the correct result.

### 3.7 The Research Procedure and Timeline

In terms of theory, this study bases on summarizing secondary data research on the purchase intention of new energy vehicles in the past five years, build a framework for relevant factors affecting purchase intention to new energy vehicles under theories, to analyze the internal factors that affect consumers' purchase intention of new energy vehicles, including attitude factor, subjective norm factor and perceived behavioral control factor. In practice, through the online questionnaire survey for Beijing consumers, to obtain the first data of Beijing consumers' purchase intention to new energy vehicles, through analyzing, the common characteristics and laws of consumers' purchase intention of new energy vehicles are revealed, and the differences of different factors. After completing the reliability test in a sample group of 40 people, Cronbach's Alpha coefficient was used, and the result of Alpha was 0.956, which was used to measure the internal consistency and stability of the structure of Cronbach's coefficient. When supervisors approved a survey of 400 participants in the target unit from and distributed the questionnaires online in July 2023. All questionnaires were organized during for further data processing.

### 3.8 The Hypotheses Test and Data Analysis Hypotheses

H1: Attitude affects to green purchase intention in new energy vehicles of Beijing, China.

H2: Subjective norm affects to green purchase intention in new energy vehicles of Beijing, China.

H3: Perceived behavioral control affects to green purchase intention in new energy vehicles of Beijing, China.

To send questionnaire via questionnaire form for research. After collecting the valid data, data correlation analysis and regression tests were performed with computerized software. Statistical analysis of the quantitative methods was performed using descriptive statistics and multiple linear regression analysis, are used to test the effects of independent variables on the dependent variable.

The statistical tools used for data analysis are presented below:

#### 3.8.1 Descriptive Statistics

Part 1: demographic data questions includes general information about the

respondents, such as gender, age, marital status, family member, educational status, occupation, and monthly income, whether to purchase a new energy vehicle, purchased vehicle brand.

Part 2: this part includes the analysis of attitude factor. This part has three sub-variables: affective, conative, and cognitive. Affective has two items, conative has two items, cognitive has one item. The instrument for measuring the mean and standard deviation is the use of interval scales.

Part 3: this part includes the analysis of subjective norm factors. This section has three sub-variables: the family's influence, the friends' influence, and social pressure. The family's influence has two items, the friends' influence has three items, social pressure has three items.

Part 4: this part includes the analysis of perceived behavioral control factors. This section has three sub-variables: self-efficacy, technology, and government support. Each sub-variable contains three questions.

Part 5: The questionnaire is about measurements of respondents' green purchase intention. The interval scale was used to measure the mean and standard deviation.

### **3.8.2 Inferential statistics**

It is these data that are used to describe the meaning of the data and explain the correlations between various variables. To test hypotheses and explore the relationship between independent variables, the tool used are correlation and multiple regression analysis (attitude factor, subjective norm factor and perceived behavioral control factor) and the dependent variable (green purchase intention).

## CHAPTER 4

### ANALYSIS AND FINDINGS

Data analysis and research results performed using statistical software are presented in this chapter. Data analysis based on a conceptual framework involving 400 respondents. The results of the data analysis are as follows:

- 4.1: Analysis of Demographic Data
- 4.2: Analysis of Attitude Factors
- 4.3: Analysis of Subjective Norm Factors
- 4.4: Analysis of Perceived Behavioral Control Factors
- 4.5: Analysis of Green Purchase Intention
- 4.6: Analysis of the Impacts of Attitude, Subjective Norm, and Perceived Behavioral Control Towards Green Purchase Intention
- 4.7: Results of the Hypothesis Testing

#### 4.1 Analysis of Demographic Data

The following table 4.1 shows the demographic data of the 400 participants, including gender, age, marital status, family member, educational status, occupation, and monthly income, whether to purchase a new energy vehicle, purchased vehicle brand. Analyze and present relevant data by frequency and percentage.

Table 4.1: Demographics Data of 400 respondents

Demographic Data	Frequency	Percent(%)
<b>1. Gender:</b>		
Male	196	49
Female	204	51
Prefer not to say	0	0
Total	400	100

(Continued)

Table 4.1 (Continued): Demographics Data of 400 respondents

Demographic Data	Frequency	Percent(%)
<b>2. Age:</b>		
20-30 years	191	47.75
31-40 years	149	37.25
41-50 years	52	13
51 years and above	8	2
Total	400	100
<b>3. Marital Status:</b>		
Single	128	32
Married	254	63.5
Separated	18	4.5
Other (Please specify.....)	0	0
Total	400	100
<b>4. Family members:</b>		
One	3	0.75
Two	49	12.25
Three-four	201	50.25
Five and above	147	36.75
Total	400	100
<b>5. Education status:</b>		
Lower than high school	91	22.75
Diploma	138	34.5
Bachelor's degree	150	37.5
Higher than Bachelor's degree	21	5.25
Total	400	100
<b>6. Occupation:</b>		
Student	191	47.75
Government officer	9	2.25

(Continued)

Table 4.1 (Continued): Demographics Data of 400 respondents

Demographic Data	Frequency	Percent(%)
Office employee	161	40.25
Business owner/Entrepreneur	20	5
Unemployed	7	1.75
Other (Please specify.....)	12	3
<b>Total</b>	<b>400</b>	<b>100</b>
<b>7. Monthly income:</b>		
0-3000 CNY	206	51.5
3001-6000 CNY	148	37
6001-9000 CNY	28	7
9001-12000 CNY	13	3.25
12001 CNY and above	5	1.25
<b>Total</b>	<b>400</b>	<b>100</b>
<b>8. Whether to purchase a new energy vehicle:</b>		
Yes	400	100
No	0	0
<b>Total</b>	<b>400</b>	<b>100</b>
<b>9. Purchased vehicle brand:</b>		
Build Your Dream	219	54.75
Tesla	119	29.75
Wuling Mini	47	11.75
Toyota	15	3.75
Other (Please specify.....)	0	0
<b>Total</b>	<b>400</b>	<b>100</b>

According to the table 4.1, the result shows that: the gender of the respondents were female (N=204, 51%) and male (N=196, 49%). The respondents' age indicates that 20-30 years old is the highest by 47.75% (N=191), the age of 31-40 years old by



37.25% (N=149), the age of 41-50 years old by 13% (N=52), the age of 51 years old and above by 2% (N=8).

For the marital status, 128 respondents are single status which is equal 32%, married is the most of the respondents that consist of 254 representing 63.5% while separated are 18 respondents accounted for 4.5%, other are 0 respondents that amounts to 0%.

For the family members, only one person is 3 representing 0.75%, two persons are 49 respondents accounted for 12.25%, three to four persons are 201 respondents accounted for 50.25% is the most, five and above are 147 respondents that amounts to 36.75%.

For the education status, lower than high school is 91 respondents which is 22.75%. The diploma degree of respondents 138 which is 34.5% and 150 respondents are Bachelor's degree which is 37.5%. Higher than Bachelor's degree by 21 respondents which is 5.25% of the total of the respondents.

In terms of the type of occupation, 191 respondents are student which is 47.75%, 9 respondents are government officers which accounted for 2.25%, office employees are 161 respondents that amounts to 40.25%, business owners/entrepreneurs are 20 respondents which is 5%, unemployed are 7 respondents accounted for 1.75%, others are 12 respondents which is 3% of the total of the respondents.

The monthly incomes are analyzed, 206 respondents representing 51.5% whose monthly income exists 0-3000 CNY. The monthly income between 3001-6000 CNY is 148 respondents representing 37%, followed by 28 respondents representing 7% whose monthly incomes lies between 6001-9000 CNY, the monthly income between 9001-12000 CNY is 13 respondents representing 3.25%. Finally, 5 respondents which accounting for 1.25% receive above 12001 CNY.

For the question that whether to purchase a new energy vehicle, 400 respondents said "Yes" accounting for 100%, demonstrated that the 400 questionnaires were valid.

In terms of the type of purchased vehicle brand, it was found that 54.75% (N=219) respondents purchased Build Your Dream, 29.75% (N=119) respondents purchased Tesla, 11.75% (N=47) respondents purchased Wuling Mini, 3.75% (N=15)

respondents purchased Toyota. Build Your Dream is the most purchased vehicle for respondents.

#### 4.2 Analysis of Attitude Factors

In Table 4.2 below, the mean, standard deviation and results of the interpretation and analysis of the attitudinal factors are given.

Table 4.2: Attitude

Attitude Factors	Mean	S.D.	Interpretation
I think the new energy vehicles are very attractive.	4.01	0.98	Mostly Agree
I feel positive toward new energy vehicles.	4.09	0.95	Mostly Agree
I understand about the performance of new energy vehicles.	4.15	0.90	Mostly Agree
I have some knowledge about how new energy vehicles work.	3.82	1.02	Mostly Agree
I react favorably to new energy vehicles.	4.00	0.91	Mostly Agree
Total	4.01	0.95	Mostly Agree

According to Table 4.2, the attitude overall mean is 4.01 and standard deviation is 0.95, this shows that the responses of the respondents are basically consistent. The highest mean score is “I understand about the performance of new energy vehicles.” (Mean = 4.15, SD = 0.90). It is also found that “I think the new energy vehicles are very attractive” (Mean = 4.01, SD = 0.98), “I feel positive toward new energy vehicles.” (Mean = 4.09, SD = 0.95), “I have some knowledge about how new energy vehicles work” (Mean = 3.82, SD = 1.02), “I react favorably to new energy vehicles” (Mean = 4.00, SD = 0.91).

### 4.3 Analysis of Subjective Norm Factor

The mean, standard deviation and mean explain and describe the analysis of subjective norms, in Table 4.3 below.

Table 4.3: Subjective norm

Subjective norm factors	Mean	S.D.	Interpretation
My family members would appreciate if I purchase a new energy vehicle rather than a traditional car.	3.94	0.94	Mostly Agree
My family will emphasize to me the importance of purchasing a new energy vehicle.	3.95	1.00	Mostly Agree
Friends would appreciate if I purchase a new energy vehicle rather than a traditional car.	4.03	0.96	Mostly Agree
I have the support from my friends to purchase a new energy vehicle.	3.76	1.04	Mostly Agree
My friends' positive opinion influences me to purchase a new energy vehicle.	3.96	1.00	Mostly Agree
Most people who are important to me would want me to purchase a new energy vehicle.	4.06	0.89	Mostly Agree
Many people in my society think that I should drive a new energy vehicle because it is beneficial to the environment.	3.78	1.00	Mostly Agree
People who I admire to could influence me to purchase a new energy vehicle.	4.07	0.94	Mostly Agree
Total	3.94	0.97	Mostly Agree

It can be seen from Table 4.3 that the responses of the respondents are basically the same, the overall average score of subjective norms is 3.94 points, and the standard deviation is 0.97 points. The following is a detailed description of the results for each of the questions: “My family members would appreciate if I purchase a new energy vehicle rather than a traditional car”, the result shows a mostly agree response from the respondents, the mean score is 3.94, with a standard deviation of 0.94. “My family will emphasize to me the importance of purchasing a new energy vehicle”, the mean score is 3.95, Sd of 1.00. “Friends would appreciate if I purchase a new energy vehicle rather than a traditional car”, result shows a mostly agree response from the respondents, the mean score is 4.03, Sd is 0.96. “I have the support from my friends to purchase a new energy vehicle”, the mean score is 3.76, and the standard deviation of 1.04, indicating a mostly agree response from the respondents. “My friends’ positive opinion influences me to purchase a new energy vehicle”, the mean score is 3.96, with a standard deviation of 1.00, indicating a mostly agree response from the respondents. “Most people who are important to me would want me to purchase a new energy vehicle”, the mean score is 4.06, with a standard deviation of 0.89, indicating a mostly agree response from the respondents. “Many people in my society think that I should drive a new energy vehicle because it is beneficial to the environment”, the mean score is 3.78, with a standard deviation of 1.00. “People who I admire to could influence me to purchase a new energy vehicle”, it is the highest mean score is 4.07, a mostly agree response from the respondents with a standard deviation of 0.94.

#### 4.4 Analysis of Perceived Behavioral Control Factor

The following table describes the mean, standard deviation and mean-to-attitudinal factors analysis and interpretation, see Table 4.4 below.

Table 4.4: Perceived behavioral control

<b>Perceived behavioral control factors</b>	<b>Mean</b>	<b>S.D.</b>	<b>Interpretation</b>
I feel confident that I should be able to purchase a new energy vehicle.	3.87	1.11	Mostly Agree

(Continued)

Table 4.4 (Continued): Perceived behavioral control

<b>Perceived behavioral control factors</b>	<b>Mean</b>	<b>S.D.</b>	<b>Interpretation</b>
Whether or not I purchase a new energy vehicle is entirely up to me.	3.8	1.19	Mostly Agree
I perceived I have adequate skill and knowledge about new energy vehicles.	3.76	1.10	Mostly Agree
I think new energy vehicles are more technically innovative than traditional cars.	3.93	1.12	Mostly Agree
Technology improves my intention to purchase a new energy vehicle.	3.61	1.26	Mostly Agree
Technology enables me to discover a new energy vehicle and get purchasing intention more quickly.	3.72	1.11	Mostly Agree
I believe that government's support policy such as tax incentives on purchasing a new energy vehicle increases my intention.	3.96	1.03	Mostly Agree
I believe that government's support policy such as direct grants to consumers on purchasing a new energy vehicle increases my intention.	3.74	1.27	Mostly Agree
I think the government should help to develop green consumption in China.	3.72	1.28	Mostly Agree
<b>Total</b>	<b>3.79</b>	<b>1.16</b>	<b>Mostly Agree</b>

Table 4.4 shows the results of the analysis of nine questions related to perceived behavioral control. Overall interpreted as "mostly agree", the overall mean of responses was 3.79 with a standard deviation of 1.16. The question "I feel confident that I should be able to purchase a new energy vehicle", had a mean score 3.87, standard deviation is 1.11. "Whether or not I purchase a new energy vehicle is entirely up to me", had a mean score 3.8, standard deviation is 1.19. "I perceived I have adequate skill and knowledge about new energy vehicles", the mean score is 3.76, with a standard

deviation of 1.10. “I think new energy vehicles are more technically innovative than traditional cars”, the mean score is 3.93, with a standard deviation of 1.12.

“Technology improves my intention to purchase a new energy vehicle”, the mean score is 3.61, with a standard deviation of 1.11. “Technology enables me to discover a new energy vehicle and get purchasing intention more quickly”, the mean score is 3.72, with a standard deviation of 1.26. “I believe that government’s support policy such as tax incentives on purchasing a new energy vehicle increases my intention”, the mean score is 3.96 which is the highest mean score of perceived behavioral control factors, with a standard deviation of 1.03. “I believe that government’s support policy such as direct grants to consumers on purchasing a new energy vehicle increases my intention”, the mean score is 3.74, with a standard deviation of 1.27. “I think the government should help to develop green consumption in China”, the mean score is 3.72, with a standard deviation of 1.28.

The responses to each question were mostly agree by the overall mean of each question.

#### 4.5 Analysis of Green Purchase Intention

The mean, standard deviation and mean interpretation of the table below depicts the analysis of green buying intentions. See Table 4.5 below.

Table 4.5: Green purchase intention

<b>Green purchase intention factors</b>	<b>Mean</b>	<b>S.D.</b>	<b>Interpretation</b>
I am willing to purchase a new energy vehicle in future.	3.87	1.11	Mostly Agree
I will make an effort to purchase a green car in future.	3.8	1.19	Mostly Agree
I will recommend the use of the new energy vehicle to other people.	3.76	1.10	Mostly Agree

(Continued)

Table 4.5 (Continued): Green purchase intention

Green purchase intention factors	Mean	S.D.	Interpretation
I will consider a new energy vehicle first when I want to purchase a vehicle.	3.93	1.12	Mostly Agree
Total	3.84	1.13	Mostly Agree

Table 4.5 shows the results of the analysis of questions related to perceived behavioral control. The overall interpretation of the responses was "mostly agree", with a mean of 3.84 and a standard deviation of 1.13. The highest mean score is "I will consider a new energy vehicle first when I want to purchase a vehicle" (Mean = 3.93, SD = 1.12). It is also found that "I am willing to purchase a new energy vehicle in future" (Mean = 3.87, SD = 1.11), "I will make an effort to purchase a green car in future" (Mean = 3.8, SD = 1.19), "I will recommend the use of the new energy vehicle to other people" (Mean = 3.76, SD = 1.10).

#### 4.6 Analysis of the Impacts of Attitude, Subjective Norm, and Perceived Behavioral Control Towards Green Purchase Intention

This part analysis the relationship between the independent variables which are attitude, subjective norm, perceived behavioral control and green purchase intention. This part uses the method of correlation and multiple linear regression to analyze this kind of relationship. The findings are as follows:

Table 4.6: Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.530 <sup>a</sup>	0.281	0.275	0.700

a Predictors: (Constant), PBC, SN, Attitude

Table 4.7: Anova

**ANOVA<sup>a</sup>**

<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	75.771	3	25.257	51.475	.000 <sup>b</sup>
	Residual	194.306	396	.491		
	Total	270.077	399			

a Dependent Variable: GPI

b Predictors: (Constant), PBC, SN, Attitude

Table 4.8: Correlation

**Correlations**

		GPI	Attitude	SN	PBC
<b>Pearson Correlation</b>	GPI	1.000	0.373	0.327	0.369
	Attitude	0.373	1.000	0.206	0.224
	SN	0.327	0.206	1.000	0.114
	PBC	0.369	0.224	0.114	1.000
<b>Sig. (1-tailed)</b>	GPI		0.000	0.000	0.000
	Attitude	0.000		0.000	0.000
	SN	0.000	0.000		0.011
	PBC	0.000	0.000	0.011	



Table 4.9: Coefficients<sup>a</sup>

Coefficients <sup>a</sup>						
Model		Unstandardized		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.973	0.265		3.675	0.000
	Attitude	0.267	0.046	0.260	5.846	0.000*
	SN	0.257	0.047	0.241	5.519	0.000*
	PBC	0.280	0.043	0.283	6.466	0.000*

a Dependent Variable: GPI

\*P $\leq$ 0.05

The results of regression analysis indicated the R square is 0.281, which means that these three independent variables could explain 28.1% of the variation in the dependent variable. After adjusting for the number of predictors used, the adjusted R-squared was 0.275, indicating that the model explained 27.5% of the variance in green purchase intentions. The standard error of the estimate is the average deviation of the measured observations from the predicted value as 0.700. The predictors used in this model are attitude, subjective norm, perceived behavioral control and green purchase intention, the results show that the data studied in this paper are statistically significant, and the joint effects of attitude, subjective norm (SN) and perceived behavioral control (PBC) on green purchase intention (GPI) are all positive, with a coefficient of 0.530 (R= 0.530<sup>a</sup>).

The tool used to test the statistical significance of the relationship between predictors and dependent variables is analysis of variance, the results of analysis of variance are shown in Table 4.7, the model is statistically significant, F (3,396) = 75.771, p<0.000 which is less than (P < 0.05).

Table 4.8 shows the correlation coefficients between attitude, subjective norm, perceived behavioral control and green purchase intention. For green purchase intention, the Pearson correlation coefficient of attitude is 0.373 (p<0.05), subjective

norm is 0.327 ( $p < 0.05$ ), perceived behavioral control is 0.369 ( $p < 0.05$ ). From the results, attitude and green purchase intention showed the strongest correlation, followed by perceived behavioral control, subjective norm. Each predictor is positively correlated with green purchase intention, this implies that higher levels of attitude, subjective norm, and perceived behavioral control are associated with higher levels of green purchase intention.

Results of the multiple regression analysis are shown in Table 4.9, as following:

The first hypothesis investigated the relationship between attitude and green purchase intention. It was found that for every unit increase in attitude, the green purchase intention will increase by 0.267 units. Because the coefficient B value between the independent variable (attitude) and the dependent variable (green purchase intention) is 0.267, the significant level is 0.000 at the 0.05 significant level. Therefore, it can be determined that attitude affect to green purchase intention in new energy vehicles of Beijing, China.

The second hypothesis the factor between subjective norm and green purchase intention. It was found that with one-unit increase in subjective norm, green purchase intention will increase by 0.257 units. The coefficient B value between the independent variable (subjective norm) and the independent variable (green purchase intention) is 0.257, and the significant level is 0.000 at the 0.05 significant level. Therefore, the influence of subjective norms on the green purchase intention of new energy vehicles in Beijing, China can be determined.

The third hypothesis investigated the relationship between perceived behavioral control and green purchase intention. The results imply that a one-unit increase in perceived behavioral control will increase green purchase intentions by 0.280 units. The coefficient B value between perceived behavior control and the dependent variable green purchase intention is 0.280, the significant level is 0.000, it at the 0.05 significant level. Therefore, the effect of perceived behavioral control on the green purchase intention of new energy vehicles in Beijing, China can be determined.

The regression equation was adopted as a result of the above analysis for the following model:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3$$

Where:  $y$  = Green Purchase Intention

$a$  = Constant

$b$  = Coefficient

$x_1$  = Attitude

$x_2$  = Subjective Norm

$x_3$  = Perceived Behavioral Control

Thus, the regression equation for the relationship between the predictors and green purchase intention is

Green Purchase Intention =  $0.973 + 0.267 \text{ Attitude} + 0.257 \text{ Subjective Norm} + 0.280 \text{ Perceived Behavioral Control}$ .

To sum up, by analyzing the relationship between green purchase intention on attitude, subjective norm, and perceived behavioral control, all explanatory variables have positive effects. Among them, perceived behavioral control is the most influential factor on green purchase intention than the other two variables.

#### 4.7 Results of the Hypotheses Testing

It can be concluded that the three hypotheses of this study are accepted as follows:

Table 4.10: Summary of the Hypothesis Testing

Hypothesis	Result
1. Attitude affects to green purchase intention in new energy vehicles of Beijing, China.	Accepted
2. Subjective norm affects to green purchase intention in new energy vehicles of Beijing, China.	Accepted
3. Perceived behavioral control affects to green purchase intention in new energy vehicles of Beijing, China.	Accepted

## CHAPTER 5

### SUMMARY, CONCLUSION AND DISCUSSION

This chapter summarizes the research results of attitudes, subjective norms, and perceived behavioral control on the green purchase intention of new energy vehicles in Beijing, China. The following are the guiding principles of this study:

1. To analyze the relationship between attitude and green purchase intention in new energy vehicles in Beijing, China.
2. To examine the impact of subjective norm on green purchase intention in new energy vehicles in Beijing, China.
3. To study the influence of perceived behavioral control on green purchase intention in new energy vehicles in Beijing, China.

A closed questionnaire was used to collect data from participants and used a quantitative study design. The population was settled people living in Beijing, China, and had purchased new energy vehicles. And sampling was 400 customers from several new energy vehicle brands participated in the survey and made it available online.

Use descriptive statistics to determine frequencies, percentages, means, and standard deviations for independent and dependent variables. When analyzing the relationship among the three independent variables of attitude, subjective norm, perceived behavioral control and green purchase intention, the tool used is multiple linear regression analysis: attitude, subjective norm, perceived behavioral control and green purchase intention. The conclusions and discussion of this study are divided into three parts:

- 5.1 Conclusions on demographic data, summary of variables and assumed results.
- 5.2 Discussion
- 5.3 Recommendations for implications
- 5.4 Recommendations for future research

#### **5.1 Summary and Conclusion**

##### **5.1.1 Demographic**

The gender of the respondents in this survey was relatively average, with 49% male and 51% female, most respondents are between 20 and 30 years old, relatively younger, and most of them are married, with 3-4 families. Most of the respondents had a bachelor's degree in education. Up to now, the majority of students, office employees ranked second, most of the salary in 0-3000 CNY. Excluding respondents who did not buy a new energy vehicle as invalid questionnaires, the proportion of respondents who bought Build Your Dream was the largest of the 400 respondents.

### **5.1.2 Attitude**

The results of the analysis showed that the respondents were most agree with the attitude variable.

### **5.1.3 Subjective Norm**

The results of the analysis indicated that the subjects were most agree on the subjective norm variable.

### **5.1.4 Perceived Behavioral Control**

Respondents most agreed with this variable based on perceived behavioral control.

### **5.1.5 Green Purchase Intention**

The results of the analysis show that the respondents most agree with the green purchase intention.

### **5.1.6 Results of Hypotheses**

Hypothesis 1: Attitude affects to green purchase intention in new energy vehicles of Beijing, China.

The analysis found a statistically positive relationship between the two variables, as inferred from the positive coefficients between the two variables. The results show that consumers have positive affective for new energy vehicles, stimulate a positive attitude, and then improve consumers' green purchase intention. Consumers will have more knowledge and understanding of new energy vehicles, and the more positive they will have an attitude towards new energy vehicles. The higher the consumer's intention to buy green, because consumers have a more positive attitude towards driving new energy vehicles.

Hypothesis 2: Subjective norm affects to green purchase intention in new energy vehicles of Beijing, China.

The analysis found that there was a statistically positive correlation between these two variables. The survey results show that when consumers' family or friends support consumers to buy and emphasize the importance of purchasing new energy vehicles, it will affect consumers' subjective norm. The people who suppose to follow the majority of people in consumers' society to support consumers to purchase new energy vehicles, or when consumers buy them, they will be very grateful, which will affect consumers' subjective norm, so as to improve consumers' green purchase intention.

Hypothesis 3: Perceived behavioral control affects to green purchase intention in new energy vehicles of Beijing, China.

The results of the analysis found that there was a statistically positive correlation between these two variables. Consumers think they have enough skills and knowledge for new energy vehicles, and are willing and able to buy new energy vehicles, then self-efficiency is high. Technological innovation, the improvement of technology, government support policies can also improve perceived behavioral control. The survey results show that both self-efficacy, technology and government support can increase perceived behavioral control, thus increasing consumers' green purchase intentions.

All three hypotheses were supported and confirmed by the results of the data analysis. Attitude, subjective norm, and perceived behavioral control have an important impact on green purchase intention.

## **5.2 Discussion**

Studies have shown that, between all three independent variables, they are all supported. This implies that attitude, subjective norm, and perceived behavioral control factors all have effects on green purchase intention.

In the literature review of this study, it discusses two theories, theory of reasoned action and theory of planned behavior. Fishbein, Ajzen (1975) stated that behavioral intention is impacted by attitude factors and subjective norm factors in theory of reasoned action. Ajzen (1985) states that attitudes, subjective norms and perceived behavioral control form the intention to perform. Based on these two theories, this study proves that three factors affect the green purchase intention. This study

concluded that the above three factors were positively associated with green purchase intention, and show that all of the hypotheses are supported.

For attitude, the first hypothesis investigated the relationship between attitude and green purchase intention. This hypothesis is based on the attitude- behavior-condition (ABC) theory; the analysis result shows that an increase in attitude by one unit will rise green purchase intention by 0.267 units. Therefore, it can be determined that the impact of attitude on the green purchase intention of new energy vehicles in Beijing is positive. In previous study, Liao, Wu, Pham (2020) study aims to through attitude-behavior-condition theory, to test the influence of green customers' attitudes towards green products on green purchase intention. The empirical research results reveal that the green product attitude of green customers has a positive impact on the green purchase intention. Consistent with the results of previous scholars, the results obtained in this study show the positive impact of attitude on green purchase intention.

For subjective norm, based on theory of reasoned action, the second hypothesis the factor between subjective norm and green purchase intention is accepted, it is found that an increase in subjective norm by one unit will rise green purchase intention by 0.257 units. Therefore, the influence of subjective norms on the green purchase intention of new energy vehicles in Beijing, China can be determined. In previous study, Roh, Seok, Kim (2022) aims to study organic food consumption based on the perspective of an extended research model by integrating the theory of consumption value and the theory of rational behavior, and the results show that subjective norm has a significant positive effect on purchase intention. The present study also proven that there is a positive relationship between subjective norm and green purchase intention.

For perceived behavioral control, through theory of planned behavior, the third hypothesis investigated the relationship between perceived behavioral control and green purchase intention. This study result shows that an increase in perceived behavioral control by one unit will rise green purchase intention by 0.280 units. Therefore, it can be determined that perceived behavioral control positive affect to green purchase intention in new energy vehicles of Beijing, China. Hsu, Chang, Yansritakul (2017) applied the theory of planned behavior (TPB), and this study aimed to explain the effect of perceived behavioral control on green skincare purchase intention, and the results showed that perceived behavioral control had a significant positive effect on the

purchase intention. This study is consistent with the analytical conclusions drawn by scholars of related studies, and also proves it, because it confirms the positive relationship between perceived behavioral control and green purchase intention.

### **5.3 Recommendations for Implications**

Through the analysis of the main influencing factors of consumers' intention to purchase new energy vehicles, there are some suggestion points related to marketing factors.

1. As for attitude, according to ABC theory, there are three factors for consumers to consider, which are affective, conative and and cognitive. According to the results of this study, considering the positive role of attitude in predicting consumers' intention, there are some suggestions to improve customers' attitude towards new energy vehicle purchase intention, and organizations should take some measures to encourage positive conative. This can consider to reduce information differentiation and improve customer knowledge, to provide all relevant information about new energy vehicles in advance, so as to ultimately improve consumers' knowledge and understanding of new energy vehicles. In addition, promoting the basic information of new energy vehicles, including the appearance, performance, the implementation of advertising seems to be a good practice to improve customer conative, thus helping to improve customer attitudes towards new energy vehicles, as a customer with an active conative for the product or service delivery is more likely to purchase.

2. When it comes to subjective norm, it comes from the influence of family, the influence of friends, and social pressure. The results of this paper show that in order to improve subjective norm, the influence of friends must be promoted, because now most people want to be recognized by their friends or people who are more important to them, so the management can use this subjective norm to optimize it through the following methods: organizations can hold customer activities and preferential activities, further, when organizations sell new energy vehicles, they can do some activities to improve the influence of friends, such as customers taking their friends to the store for a test drive, or if customers introduce their friends to the store to buy new energy vehicles, then customers can get gifts or discounts. Furthermore, it is necessary for the



management to consider improving the subjective norms by increasing the influence of the friends, because it can increase the green purchasing power of the customers.

3. From the findings of perceived behavioral control, a greater emphasis on technology is needed. Management needs to consider that: technology can be improved by through oral or video publicity, highlight the highlights of the new technology of new energy vehicles, compared with traditional cars, new energy vehicles have been improved in technology, and they use technology to make innovations, these can increase consumer perceived behavior control and green purchase intention will increase. These results are of great importance for the development of perceived behavior control that can enhance the formation of green purchase intentions. In addition, policy makers should provide effective policies for environmental protection, such as preferential subsidies, technology subsidies for the manufacture of new energy vehicles, in order to keep consistent with the technical attitude and view of consumers on new energy vehicles, so as to increase consumers' perceived behavioral control and improve the purchase intention.

4. Theory of reasoned action and theory of planned behavior have been the most widely used consumer theory studied by most scholars, however, the practice based on these theories focuses too much on the psychological factors of consumers and ignores the influence of external factors. To overcome the limitations of the above theory, this study extends the application of external factors in subjective norm and perceived behavioral control. This study finds that consumer behavior inevitably requires contact with the people around them, which determines the external attributes, so people are doomed to make behavioral decisions after being influenced by their social environment and the surrounding groups. Therefore, social media publicity often plays a guiding role in consumers' intention to purchase new energy vehicles. Especially in terms of new energy vehicles, the good reputation established by mass communication is a key factor affecting consumers' intention. Such as the reviews of consumers who have already bought new energy vehicles are the best advertising for retailers, and they have a high degree of credibility for potential consumers. More and more social software applications have become an important reference platform including Youtube, Tik Tok, Instagram for consumers when they want to purchase green products. Recommendation, or popular reviews from social media celebrities are

undoubtedly the strongest driving force for consumers to shop. Therefore, future researchers could try to explain consumer behavior using theories related to external factors to further understand green purchase intention. In the future research of green purchase intention, a variety of valuable and guiding new media should be included in the research scope, so as to explore the deeper consumption intention of consumers.

#### **5.4 Recommendations for Future Research**

Through the analysis and summary of the relevant papers, All hypotheses in this paper are supported, but the study still has many shortcomings to be improved in the future, to obtain more advanced analyses and findings. Since some limitations did exist during the course of this study, some suggestions for future research are presented below.

1. This study was conducted with limited time and resources, and although the Beijing population was very large, the number of respondents was only 400, this survey does not cover the whole district, or even include the whole city's people's intention to purchase new energy vehicles. Therefore, in the future, in order to better understand consumers' intention to purchase new energy vehicles, studies with large sample sizes can be carried out in many different geographical regions of the country to promote the research results.

2. Future studies should include more variables, as suggested by Ajzen (1991). That is, in addition to the variables mentioned in this study, more variables can be added to explain the green purchase intention, such as the impact of income, expectations, and satisfaction can be further studied by green purchase intention. It can also broaden the research field of green purchase intention based on the constant change of these three variables, not only limited to new energy vehicles, but also can be: green food, green clothing, etc., to more fully study the influence areas and factors of green purchase intention.

3. If investigator characteristics could be included in future studies, it might provide a clearer view of what motivated green purchase intentions. A quantitative approach can examine the impact of key factors on consumers' intention to purchase new energy vehicles, but it cannot adequately provide the underlying causes of this phenomenon. In this regard, qualitative research methods help to explore more

detailed reasons to reveal the relationship between variables and green purchase intentions. In order to further understand the influencing factors of green purchase intention in a deeper way, qualitative research can also be included.



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**APPENDIX**  
**ONLINE QUESTIONNAIRE**

The Impact of Attitude, Subjective Norm, and Perceived Behavioral Control Towards  
Green Purchase Intention of New Energy Vehicles In Beijing, China

Dear Participants,

I am Sun Yusha, an MBA student from Bangkok University. As a part of my Independent Study (BA715) at the Graduate School, I am conducting a research survey to examine the impact of attitude, subjective norm, and perceived behavioral control towards green purchase intention of new energy vehicles in Beijing, China.

Participation in this survey is strictly voluntary, and all responses will be confidential. The data collected from this survey will only be used for research purposes and will not be disclosed to third parties.

The survey consists of multiple-choice questions and Likert scale items and is estimated to take approximately 5 minutes to complete.

Participating in this survey allows you to use your responses for research purposes. If you have any questions or concerns regarding the survey, please contact me at [sun.yush@bumail.net](mailto:sun.yush@bumail.net).

Your cooperation is much appreciated!

Sincerely,

Sun.

Part 1: Demographic data questions (9 questions)

1. Gender

Male  Female  Prefer not to say

2. Age

20-30 years  31-40 years  41-50 years  51 years and above

3. Marital status

Single  Married  Separated  Other (Please specify.....)

4. Family members

One  Two  Three-four  Five and above

5. Education status

Lower than high school  Diploma  Bachelor's degree

Higher than Bachelor's degree

6. Occupation

Student  Government officer  Office employee

Business owner/Entrepreneur  Unemployed

Other (Please specify.....)

7. Monthly income

0-3000 CNY  3001-6000 CNY  6001-9000 CNY  9001-12000 CNY

12001 CNY and above

8. Whether to purchase a new energy vehicle

Yes  No

9. purchased vehicle brand

Build Your Dream  Tesla  Wuling Mini  Toyota

Other (Please specify.....)

Part 2: Measurement of attitude factors (5 questions)

Instructions: Please rate the following statements by ticking (✓) only to represent your opinion.

(1= least agree, 2= slightly agree, 3= moderate agree, 4= mostly agree, 5= completely agree)

Attitude						
1	I think the new energy vehicles are very attractive.	1	2	3	4	5
2	I feel positive toward new energy vehicles.	1	2	3	4	5
3	I understand about the performance of new energy vehicles.	1	2	3	4	5
4	I have some knowledge about how new energy vehicles work.	1	2	3	4	5
5	I react favorably to new energy vehicles.	1	2	3	4	5

Part 3: Measurement of subjective norm factors (8 questions)

Instructions: Please rate the following statements by ticking (✓) only to represent your opinion.

(1= least agree, 2= slightly agree, 3= moderate agree, 4= mostly agree, 5= completely agree)

Subjective Norm						
1	My family members would appreciate if I purchase a new energy vehicle rather than a traditional car.	1	2	3	4	5
2	My family will emphasize to me the importance of purchasing a new energy vehicle.	1	2	3	4	5
3	Friends would appreciate if I purchase a new energy vehicle rather than a traditional car.	1	2	3	4	5
4	I have the support from my friends to purchase a new energy vehicle.	1	2	3	4	5
5	My friends' positive opinion influences me to purchase a new energy vehicle.	1	2	3	4	5
6	Most people who are important to me would want me to purchase a new energy vehicle.	1	2	3	4	5
7	Many people in my society think that I should drive a new energy vehicle because it is beneficial to the environment.	1	2	3	4	5
8	People who I admire to could influence me to purchase a new energy vehicle.	1	2	3	4	5

Part 4: Measurement of perceived behavioral control factors (9 questions)

Instructions: Please rate the following statements by ticking (✓) only to represent your opinion.

(1= least agree, 2= slightly agree, 3= moderate agree, 4= mostly agree, 5= completely agree)

Perceived Behavioral Control						
1	I feel confident that I should be able to purchase a new energy vehicle.	1	2	3	4	5
2	Whether or not I purchase a new energy vehicle is entirely up to me.	1	2	3	4	5
3	I perceived I have adequate skill and knowledge about new energy vehicles.	1	2	3	4	5
4	I think new energy vehicles are more technically innovative than traditional cars.	1	2	3	4	5
5	Technology improves my intention to purchase a new energy vehicle.	1	2	3	4	5
6	Technology enables me to discover a new energy vehicle and get purchasing intention more quickly.	1	2	3	4	5
7	I believe that government's support policy such as tax incentives on purchasing a new energy vehicle increases my intention.	1	2	3	4	5
8	I believe that government's support policy such as direct grants to consumers on purchasing a new energy vehicle increases my intention.	1	2	3	4	5
9	I think the government should help to develop green consumption in China.	1	2	3	4	5

Part 5: Measurement of green purchase intention (4 questions)

Instructions: Please rate the following statements by ticking (✓) only to represent your opinion.

(1= least agree, 2= slightly agree, 3= moderate agree, 4= mostly agree, 5= completely agree)

Green Purchase Intention						
1	I am willing to purchase a new energy vehicle in future.	1	2	3	4	5
2	I will make an effort to purchase a green car in future.	1	2	3	4	5
3	I will recommend the use of the new energy vehicle to other people.	1	2	3	4	5
4	I will consider a new energy vehicle first when I want to purchase a vehicle.	1	2	3	4	5

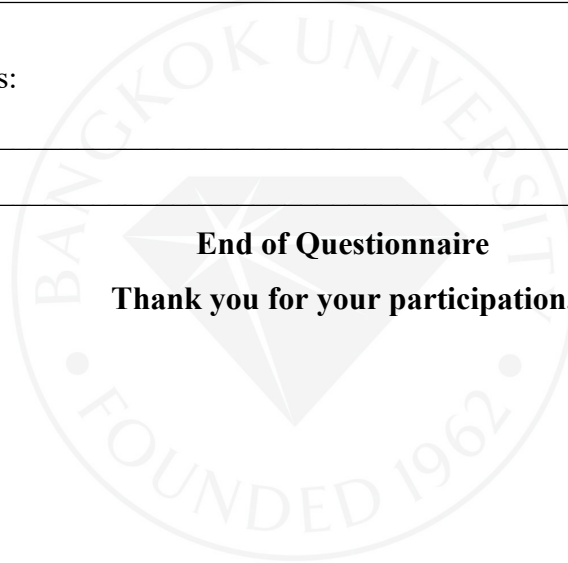
Other Comments:

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**End of Questionnaire**  
**Thank you for your participation.**



## STATISYICAL OUTPUT

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.530 <sup>a</sup>	0.281	0.275	0.700

a Predictors: (Constant), PBC, SN, Attitude

### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.771	3	25.257	51.475	.000 <sup>b</sup>
	Residual	194.306	396	.491		
	Total	270.077	399			

a Dependent Variable: GPI

b Predictors: (Constant), PBC, SN, Attitude

### Correlations

		GPI	Attitude	SN	PBC
<b>Pearson Correlation</b>	GPI	1.000	0.373	0.327	0.369
	Attitude	0.373	1.000	0.206	0.224
	SN	0.327	0.206	1.000	0.114
	PBC	0.369	0.224	0.114	1.000
<b>Sig. (1-tailed)</b>	GPI		0.000	0.000	0.000
	Attitude	0.000		0.000	0.000
	SN	0.000	0.000		0.011
	PBC	0.000	0.000	0.011	



Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.973	0.265		3.675	0.000
	Attitude	0.267	0.046	0.260	5.846	0.000*
	SN	0.257	0.047	0.241	5.519	0.000*
	PBC	0.280	0.043	0.283	6.466	0.000*

a Dependent Variable: GPI

\* $P \leq 0.05$



**BIODATA**

First Name-Last Name	Sun Yusha
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Educational Background	High School at Wenshan First Middle School Bachelor's Degree at Edinburgh Napier University Master Degree at Bangkok University
Experience	Experience in Finance Field

