

#### **Doctoral Thesis**

# The Moderation of Income and Environmental Concern and Organic Food of Millennials in Vietnam

Změny v příjmech a přístupu k problematice životního prostředí a biopotravin u generace mileniálů ve Vietnamu

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### **ABSTRACT**

The study follows the positivism paradigm and has used primary data to examine the theory of planned behavior extension and organic food of millennials in Vietnam. The main aim of this research is to investigate millennials' income and environmental concern for organic food purchase intention by applying the theory of planned behavior. The cluster and snowball technique were applied to collect data from southern, central, and northern Vietnam. Data were analyzed with the help of structural equation modeling (SEM) from the Smart-PLS tool and moderation analysis with the SPSS tool. The results show the positive effect of attitude, subjective norms, and perceived behavioral control on Vietnamese millennials' purchase intention toward organic food. Moreover, income was found to be the moderator of the relationship between subjective norms and purchase intention, attitude and purchase intention. Income did not moderate the relationship between perceived behavioral control and purchase intention. Environmental concern was the moderator of the relationship between perceived behavioral control and purchase intention, subjective norms and purchase intention, attitude and purchase intention. Last but not least, there was a threeway interactive effect of environmental concern, income, and attitude on purchase intention. The three strongest influences of attitude on purchase intention toward organic food are the condition of the high value of environmental concern and income level from 10 million to 20 million VND (the strongest influence); income level of more than 40 million VND (the second strongest influence); income level from 20 to 30 million VND (the third strongest influence). Under the condition of income of less than 30 million VND and low value of environmental concern, attitude did not predict purchase intention.

### **ABSTRACT**

Studie vychází z pozitivistického paradigmatu a využívá primární data k rozšířenému zkoumání teorie plánovaného chování a biopotravin u mileniálů ve Vietnamu. Hlavním cílem tohoto výzkumu je prozkoumat a ověřit záměr mileniálů nakupovat biopotraviny z hlediska jejich příjmů a zájmu o životní prostředí s využitím teorie plánovaného chování. Ke sběru dat z jižního, středního a severního Vietnamu byla použita technika shluku a sněhové koule. Data byla analyzována pomocí modelování strukturálních rovnic (SEM) s využitím nástroje Smart-PLS a analýzy moderace pomocí nástroje SPSS. Výsledky poukazují na pozitivní vliv postoje, subjektivních norem a kontroly chování na záměr vietnamských mileniálů nakupovat biopotraviny. Navíc bylo zjištěno, že příjem funguje jako moderátor vztahu mezi subjektivními normami a záměrem nakupovat, postojem a záměrem nakupovat. Příjem však nebyl moderátorem ve vztahu mezi kontrolou chování a nákupním záměrem. Zájem o životní prostředí byl shledán jako moderátor vztahu mezi kontrolou chování a záměrem nakupovat, subjektivními normami a záměrem nakupovat, postojem a záměrem nakupovat. V neposlední řadě byl zjištěn trojstranný interaktivní efekt zájmu o životní prostředí, příjmu a záměru nakupovat. Tři nejsilnější aspekty ovlivňující záměr nakupovat biopotraviny jsou vysoký zájem o životní prostředí a výše příjmu od 10 do 20 milionů VND (nejsilnější faktor); výše příjmu nad 40 milionů VND (druhý nejsilnější faktor); výše příjmu od 20 do 30 milionů VND (třetí nejsilnější faktor). V případě příjmu nižšího než 30 milionů VND a nízkého zájmu o životní prostředí se záměr nakupovat nepředpokládal.

# TABLE OF CONTENT

ACKN	OWLEDGEMENTS	3
ABSTI	RACT IN ENGLISH	4
ABSTI	RACT IN CZECH	5
LIST (	OF TABLES	9
LIST (	OF FIGURES	9
ABBR	EBIATIONS	10
1. IN'	TRODUCTION	11
1.1	Study background	11
1.2	Research gaps	12
1.3	Research problems	15
1.4	Research questions	16
1.5	Research objectives	16
2. BA	ACKGROUND	18
2.1	Theory of planned behavior (TPB)	18
2.2	Definition of constructs in this thesis	
2.2	.1 Attitude	
	2.2 Subjective norms	
	3 Perceived behavioral control	
	.4 Intention	
	5 Income	
	2.6 Environmental concern	
2.3	Hypotheses development	25
	1.1 Attitude, subjective norms, perceived behavioral control and ention toward organic food	-
	2.2 Income	
	3.3 Environmental concern	
2.4	Organic food and organic market in Vietnam	43
3. HY	POTHESES AND MODEL	
3.1	Study model	
3.2	Hypotheses for this thesis	
	ETHODOLOGY	
4.1	Research design	

	4.2	Data collection method	51
		2.1 Sampling	
		2.2 Sample size	
	4.2	2.3 Questionnaire design	52
	4.3	Measurement scale of variables	53
	4.3	1.1 Attitude (ATT)	53
		3.2 Subjective norms (SN)	
		3.3 Perceived behavioral control (PBC)	
		4.4 Income (IC)	
		5.5 Environmental concern (EC)	
		6.6 Purchase intention (PI)	
		Method of analysis	
		1 Analysis by SPSS	
		-2 Analysis by Smart PLS-SEM	
	4.4	3 Moderation relationship analysis	57
	4.5	Pilot-test	58
5.	. RE	SULTS	61
	5.1		
		1	
	5.2	Assessment of measurement model	
		2.1 Internal consistency reliability	
		2.2 Convergent validity	
		2.3 Discriminant validity	
	5.3		
		1.1 Path coefficients	
		2. Moderation effect of income	
		3.3 Moderation effect of environmental concern	
		3.4 Three-way interactive effect	
		6.6 Coefficient of determination (R2)	
		5.7 Effect size f2	
		5.8 Blindfolding and predictive relevance Q2	
6.		SCUSSION	
/	. IM	PLICATIONS	
	7.1	Theoretical contributions	86
	7.2	Practical contributions	86
8	CC	ONCLUSIONS	88
	8.1	Conclusions	
	8.2	Limitations of the study	. 88

8.3	Future research suggestions	88
REFE	RENCES	89
AUTH	IOR'S PROFESSIONAL CURRICULUM VITAE	97
APPE	NDIX - QUESTIONNAIRE	101

# LIST OF TABLES

Table 2.1: Attitude, subjective norms, and perceived behavioral control based	
Table 2.2. Income with the application of the theory of planned behavior	
Table 2.2: Income with the application of the theory of planned behavior	
Table 4.1: Research stages	
Table 4.3: Measurement scales for this thesis	52 51
Table 4.4: Descriptive analysis for a pilot study	
Table 4.5: Reliability and KMO for pilot study	
Table 5.1: Descriptive statistic	
Table 5.2: Internal consistency reliability for this study	
Table 5.3: Factor loading	
Table 5.4: Discriminant validity (Fornell - Larcker criterion)	0 <del>1</del> 66
Table 5.5: Discriminant validity- Heterotrait - Monotrait Ration (HTMT)	
Table 5.6: Hypotheses testing	
Table 5.7: Table summary	
Table 5.8: Three-way interaction: Attitude*Income*Environmental concern.	
Table 5.9: Conditional effects on the value of the moderators	
Table 5.10: Multicollinearity evaluation (VIF)	
Table 5.11: Coefficient of determination $(R^2)$	
Table 5.12: Effect size f <sup>2</sup>	
Table 5.13: Blindfolding and predictive relevance Q <sup>2</sup>	
LIST OF FIGURES	
Eig 2.1. The Theory of Decree 1 Agricus	20
Fig. 2.1: The Theory of Reasoned Action	
Fig. 2.2: The Theory of Planned Behavior	
Fig. 2.4: Vietnam GDP Box Conits 2011 2021	
Fig. 2.4: Vietnam GDP Per Capita 2011-2021Fig. 2.5: Top GDP Per Capita of Cities in Vietnam in 2020	
Fig. 2.6: United State organic agriculture exports to Vietnam	
Fig. 3.1: Proposed model 1	
Fig. 4.1: Research procedure	
Fig. 5.1: Path coefficients for the study	
Fig. 5.2: Hypotheses testing results (From H1 to H9)	
Fig. 5.3: Effect of interaction between attitude and income on purchase inten	
11g. 5.5. Effect of interaction between attitude and income on purchase inter	
Fig. 5.4: Effect of interaction between subjective norms and income on purch	
intention	

Fig. 5.5: Effect of interaction between attitude and environmental concern on	
purchase intention	.73
Fig. 5.6: Effect of interaction between subjective norms and environmental	
concern on purchase intention	.73
Fig. 5.7: Effect of interaction between subjective norms and environmental	
concern on purchase intention	74
Fig. 5.8: Three-way interactive effect	74

## **ABBREBIATIONS**

TPB: Theory of Planned Behavior

ATT: Attitude

SN: Subjective Norms

PBC: Perceived Behavioral Control

IC: Income

EC: Environmental Concern

PI: Purchase Intention

PLS-SEM: Partial Lease Squares Structural Equation Modeling

**GDP:** Gross Domestic Product

USDA: United States Department of Agriculture

GMO: Genetically Modified Organism

TCVN: Vietnamese Standards

### 1. INTRODUCTION

## 1.1 Study background

Economic reforms since 1986, combined with favorable global trends, have rapidly helped Vietnam grow from one of the poorest countries in the world to a lower middle-income country within a short period. The economy not only grows in size, but the quality of growth is also improved, and the people's living standards and spiritual life are significantly improved. Economic growth reached a high speed. After the first period from 1986 to 1990, the average annual GDP growth rate was only 4.4%. In 1996-2000, the GDP growth rate reached 7%. Moreover, the average GDP growth rate in the period 2016-2020 reached 6.8%, reaching the target of an average growth rate of 6.5% to 7%. Due to the influence of Covid, the GDP in 2021 increased by 2.58%. From 2002 to 2020, GDP per capita increased 3.6 times, reaching nearly USD 3,700. The poverty rate (according to the standard of 1.9 USD/day) dropped sharply from more than 32% in 2011 to less than 2%. In 2022, GDP growth is estimated to increase by 6 to 6.5%, GDP per capita reaching USD 3,900 (The World Bank, 2022a).

Along with the development of the economy and people's income, the demand for health care has also increased, especially for food products. In recent years, much unfavorable media coverage of dangerous food has impacted customers' health, either directly or indirectly. For example, thousands of fish were killed due to harmful chemical discharges from Vedan, Formosa; coffee was mixed with battery powder in Dak Nong Province, and so on. According to the report, food safety has become a significant consumer issue (Minh & Nhan, 2020). Furthermore, pesticide exposure has been linked to various illnesses. With pesticide, there are many harmful chemicals in food, including ones that affect the reproductive and nervous systems and can cause cancer (Willer & Lernoud, 2019). For long-term sustainability, it is important to encourage people to eat more sustainable food, especially organic food.

The organic food community has grown all over the world as organic food has become more popular. Organic farming is done in 187 countries, covering an area of about 72.3 million hectares (Mha) (Willer et al., 2021). Australia (35.7 million hectares), Argentina (3.7 million hectares), and Spain (2.4 million hectares) are the three countries with the most land dedicated to organic agriculture. At the end of 2019, it was estimated that the total market for organic food was worth EUR 106,4 billion, with the United States, Germany, and France being the top three markets in terms of value. In 2019, it was thought that more than 5.9 million hectares of land in Asia would be used for organic farming. According to the International Organic Agriculture Research Institute, the amount of organic farmland in Asia grew by 23.5% from 2015 to 2016, and by a total of 41,228 hectares over the last ten years (Willer & Lernoud, 2019). Vietnam's organic market is still in its early stages. It could soon make USD 270 million in retail

sales in the United States and USD 335 million in international sales (Hoanangorganic, 2019; M. Nguyen, 2021).

In addition, the investigation chose the millennials for examination because this generation is the most important in the workforce as well as the significant consumer group, and they make up a big part of the market. In Vietnam, millennials were born between 1980 and 2000 and constitute 35% of Vietnam's population (Prudential Viet Nam, 2020). Understand the need to research millennials regarding organic food in the Vietnamese market context, therefore, this thesis will pay attention to influences of income and environmental concern on millennials' intention to purchase organic food in Vietnam.

## 1.2 Research gaps

# Different income and the intention to purchase organic food of millennials in Vietnam

As is the case with organic food, a customer's income is a crucial component in determining their purchasing decisions. In the theory of planned behavior, the effect of income has been demonstrated by a number of experiments. In particular, a study that was conducted by Kuran and Mihic (2014) investigated the purchase of organic food purchasing with the application of the theory of planned behavior in the Republic of Croatia. The findings of the investigation revealed that household income is found to be a significant factor that affects the intention to purchase organic food. In addition, the theory of planned behavior was utilized in the research conducted by Gundala and Singh (2021), Hansmann et al. (2020), Singh and Verma (2017) to investigate consumers' behaviors in regard to buying organic food. Income is positively related to organic purchase (Hansmann et al., 2020). Moreover, age, education, and income are demographic factors that also impact consumers' buying behavior (Singh & Verma, 2017). Furthermore, there is a study has shown that socio-demographic factors such as age, education, and income were also found to have an impact on actual buying behavior (Gundala & Singh, 2021).

In addition, there are other researches employing alternative theories that reveal a substantial positive link between income and the purchase intention of organic products. These studies support the hypothesis that higher income levels are associated with more organic product consumption. In particular, the research conducted by Irandoust (2016) in Sweden used the proportional odds model and willingness to pay theory to investigate the purchasing behavior of organic food consumers. According to findings of the study, the likelihood that a person will purchase organic food increases with both their willingness to pay and their income level. In addition, Slamet et al. (2016) looked at customers' purchasing patterns and found that those who have a higher income and a smaller family size tend to buy organic vegetables more. In Vietnam, according to research carried out by Trinh (2021), it was discovered that the level of income possessed by customers has a strong and beneficial impact on their decisions about the purchase of organic agricultural goods.

The research that was just provided makes use of income as a predictor variable in order to analyze their purchase behavior in relation to organic food. Another study was conducted with income functioning as the control variable. According to Chen et al. (2014), the use of three theories—the consumer decision-making process, the theory of planned behavior, and the 'hierarchy of effects' model—to study the drivers of organic food purchase intention in mainland China. The research used income as a control variable, and the results showed that income had weak significant correlations with people's intention to purchase organic food.

The previous studies illustrate that income has the direct effect on purchase intention and actual purchase toward organic food. Moreover, income also plays as a control variable. However, there are no studies that have been conducted that use income as a moderator in accordance with the theory of planned behavior in order to investigate the intention of millennials to purchase organic food. The association between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention are not the same for all customers that are millennials. Instead, this relationship will change based on the customer's income. Therefore, the first gap is that different income leads to the different effects of the relationship between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavioral control and purchase intention toward organic food of millennials in Vietnam.

# Different environmental concern and the intention to purchase organic food of millennials in Vietnam

Concern about the environment has increased steadily (Han et al., 2010). It is clear that many unfavorable impacts, including pollution of the air and water as well as threats to public safety, are having an impact on the environment (Carvalho, 2006; Kim & Ikemoto, 2015; Lee, 2014). Excessive exposure to pesticides has been linked to a variety of diseases, including those that damage the reproductive and nervous systems as well as cancer; hence, encouraging more sustainable food consumption is essential to ensuring the planet's continued habitability in the long run (Nguyen et al., 2021). Because the fact that organic food does not contain any traces of pesticides or other chemicals may be too obvious to customers who buy organic food (Lee & Yun, 2015; Lee, 2020). Moreover, organic food is made from healthy, naturally occurring ingredients. The issue of how to best preserve the natural world is becoming increasingly pressing, particularly in less developed nations like Vietnam (Pham et al., 2018). The number of consumers who are concerned about the environment has led to an increase in the demand for environmentally friendly products, and more and more customers are searching for environmentally friendly products to purchase in an effort to better protect the environment and build more sustainable practices (Paul et al., 2016). Because of this condition, there has been a significant increase in interest in organic farming and organic food over the course of the past 15 years

(Chekima, 2018). As a result, it is of vital importance to investigate the environmental concern's impact on the intention of customers to make purchases of organic food in developing nations like Vietnam.

The TPB has served as the foundation for a growing body of research that has offered substantial evidences. These evidences illustrate a direct effect of environmental concern on various aspects. For example, Li et al. (2019) conducted a study about "influence of environmental concern and knowledge on households' willingness to purchase energy-efficient appliances: a case study in Shanxi, China". According to the findings of the study, people's concern for the environment has a substantial correlation with their readiness to purchase energyefficient home appliances. Moreover, the investigation of green product consumption predicting utilizes the theory of reasoned action and the theory of planned behavior (Paul et al., 2016). This study focuses on the consumption of green products. According to the findings of the study, there is a direct influence of environmental concern on attitude, subjective norms, and perceived behavioral control. The findings of the research conducted by Maichum et al. (2016) also yield results that are similar to studies conducted on green products. In addition, Yadav and Pathak (2016b) investigated young people's intention toward the purchase of green products in a developing country. They did this by extending the TPB. According to research, environmental concern is associated not only with a positive attitude effect but also with an intention to purchase.

There have been many researches that indicate environmental concern has direct effects with the application of the theory of planned behavior for investigating purchasing of organic food. There is a study on the consumption behavior of people in Italy and Pakistan who consume organic foods. According to findings of the research, environmental concern has a positive impact on attitude, subjective norms, and perceived behavioral control (Ishaq et al., 2021). The findings are consistent with the findings of the study by Nguyen et al. (2021). In this study, the primary factors that influence a consumer's decision to purchase organic meat in a developing market such as Vietnam were analyzed. The findings environmental demonstrate that concern has a positive effect customers' attitude.

In terms of the study component of the direct effect, many previous researches show that environmental concern has a direct effect on purchase intention of organic food. The research conducted by Asif et al. (2018) demonstrates the direct effect which the environmental concern has on consumers' intention to purchase organic food. A comparative examination of Iran, Pakistan, and Turkey was used in the research to highlight the factors that influence intention to purchase organic food. Regarding the research findings conducted by Nguyen and Truong (2021), environmental concern has a direct influence on a consumer's intention to purchase organic food in Vietnam. In addition, environmental concern is researched as a mediator in accordance with the TPB in order to investigate organic food's purchase behavior. For instance, in a study about

"purchase intention towards organic food among young consumers using the theory of planned behavior: role of environmental concern" (Ahmed et al., 2021), the researchers found that environmental concern had a significant influence. The findings of this research indicate that environmental concern not only has a direct effect by attitude but also acts as a mediator of interaction between attitude and purchase intention.

Previous studies show the direct effects of environmental concern on purchase intention and actual purchase toward organic food. Moreover, environmental concern also is a mediator of a relationship between attitude and purchase intention. However, there are relatively few studies that use environmental concern as a moderator with the application of the theory of planned behavior. The association between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention are not the same for all customers that are millennials. Instead, these relationships will change based on the environmental concern of millennial customers. Therefore, the second gap is that different environmental concern leads to the different effects of the relationship between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavioral control and purchase intention toward organic food of millennials in Vietnam.

# The three- way interactive effect of income, environmental concern, and attitude

So far, there is no research that combines income and environmental concern as moderators with an application of the theory of planned behavior. The gaps presented above describe the moderation effects of income and environmental concern based on the theory of planned behavior. Specifically, the rise in environmental concern and income leads to increased positive effects of relationships between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention related to organic food. This study will combine environmental concern and income as moderators to investigate the effect of attitude on purchase intention toward organic food of millennials in Vietnam. In other words, the three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam will be examined. Hence, the third gap of this thesis is the different combination of income and environmental concern leads to different effects of attitude on purchase intention toward organic food of millennials in Vietnam.

# 1.3 Research problems

The average income of Vietnamese citizens is rising in tandem with the nation's overall economic expansion. People are becoming more concerned about maintaining a healthy lifestyle through using safe food products and in the environmentally responsible development of their communities. Because of this, people's interest in organic food has become increasingly important. Moreover, there is a significant population of about 100 million people (Worldometers,

2022), of which millennials make up the majority and significantly contribute to the country's overall economic development. In today's world, businesses selling organic food will find themselves against an increasingly competitive industry. Companies have a greater need to comprehend their customers, particularly millennials, in order to serve the requirements of customers better. The theory of planned behavior can adequately explain customers' purchase intention, which is an applicable theory. However, very little study has been done in Vietnam based on the theory of planned behavior on the influence of millennials' income and environmental concern on purchase intention regarding organic food. Moreover, there is no research that combines income and environmental concern as moderators with an application of the theory of planned behavior.

### 1.4 Research questions

From research gaps and problems, the main research question of this thesis is "How do millennials' income and environmental concern influence their intention to purchase organic food based on the theory of planned behavior in Vietnam?"

The sub-research questions were developed as follow:

- **Research question 1**: How to predict and understand the purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior?
- **Research question 2**: Is there a moderation effect of income on the relationship between attitude and purchase intention, perceived behavioral control and purchase intention, subjective norms and purchase intention of millennials toward organic food based on the theory of planned behavior in Vietnam?
- **Research question 3**: Is there a moderation effect of environmental concern on the relationship between attitude and purchase intention, perceived behavioral control and purchase intention, subjective norms and purchase intention of millennials toward organic food based on the theory of planned behavior in Vietnam?
- **Research question 4**: Is there a three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam based on the theory of planned behavior?

# 1.5 Research objectives

The main aim of this research is to investigate millennials' income and environmental concern for organic food purchase intention by applying the theory of planned behavior. From this, the research objectives for this thesis are as follows:

- **Research objective 1**: To re-examine the direct effect of attitude, subjective norms, and perceived behavioral control on purchase intention toward organic food of millennials in Vietnam;
- **Research objective 2**: To examine the moderation effects of income based on the TPB toward organic food purchase intention of millennials in Vietnam;
- **Research objective 3**: To examine the moderation effects of environmental concern based on the TPB toward organic food purchase intention of millennials in Vietnam;
- **Research objective 4**: To investigate the three-way interactive effect of income, environmental concern and attitude on purchase intention toward organic food of the millennials in Vietnam.

### 2. BACKGROUND

## 2.1 Theory of planned behavior (TPB)

This thesis chooses the theory of planned behavior as a base theory for investigation because this theory can adequately explain customers' purchase intention and this theory shows determinants factors (attitude, subjective norms, and perceived behavioral control).

Since the appearance of the theory of planned behavior, the use of this theory has been applied to explain behavior of individual in many areas, many studies have used this theory to explain the predictive intention and actual behavior for a particular behavior. For instance, Walker, Grimshaw, and Armstrong (2001), in the field of health psychology, applied the theory of planned behavior to investigate intention for antibiotics prescribing sore throat's patients. The research was carried out on patients who presented with a sore throat. In addition, Zemore and Ajzen (2014) employ a new scale that is founded on the theory of planned behavior to predict whether or not an individual will complete treatment for substance abuse. Abrahamse and Steg (2009) demonstrate the examination of how demographic, social, and psychological aspects have direct and indirect association to using and savings energy of household through the utilization of the theory of planned behavior. This research was conducted within the field of environmental behavior. According to Whitmarsh and O'Neill (2010), the study of green identity is investigated. The role of having a self-identity that is environmentally aware in determining whether or not one is consistent throughout various pro-environmental behaviors. According to Lim and An (2021), the theory of planned behavior is applied to studied the intention to purchase wellbeing food among Korean consumers. Their research focused on choosing foods that promote health and well-being. In addition, according to Paul et al. (2016), the theory of planned behavior and reasoned action was utilized in the research project to predict the consumption of green products. The research conducted by Han et al. (2010) is an example of a typical application that makes use of TPB in tourism and green hotel selections

There have been a great number of research done regarding organic food aspect that uses the theory of planned behavior to investigate the behavior of customers. The study has been expanded to encompass a great deal of new conceptualizations and elaborations on the theory of planned ehavior. For example, Arvola et al. (2008) explored the anticipated intention to purchase organic food with the importance of effective and moral attitude in the theory of planned behavior. The findings indicate that attitude, subjective norms, and moral attitude all contributed to a significant degree in explaining differences in intention. Furthermore, a study of Turkey, Pakistan, and Iran was investigated with the purpose of highlighting the influence factors on consumers' purchase intention of organic food (Asif et al., 2018). Moreover, the gap between intention and behavior, between perceived behavioral control and behavior were examined by Sultan et al. (2020) with the

moderation effects of communication, satisfaction and trust based on the theory of planned behavior toward organic food. Nuttavuthisit and Thøgersen (2017) studied consumer trust in developing a market based on the theory of planned behavior regarding organic food. Additionally, a study of evidence from a developing nation about young customers' intention to purchase organic food is investigated by Yadav and Pathak (2016). Yazdanpanah and Forouzani (2015) utilized the theory of planned behavior to predict if students in Iran will go out of their way to purchase organic food or not. Boobalan et al. (2021) presented empirical research shows that it is possible to understand the psychological benefits of eating organic food. This research expands on the theory of planned pehavior by proposing two additional constructs: warm glow and self-expressive benefits, which could further drive consumer attitude and purchase intention in the context of organic food consumption. According to Sadiq et al. (2021), the originality of the research suggests in its application of individuals' exploratory buying behavior features and food eating values as an extension of the theory of planned behavior in predicting attitude and intention regarding the consumption of organic food. The study conducted by Koklic et al. (2019) investigates the role of past behavior in determining several consequences in the context of organic food consumption. With the interplay of past consumption, attitude, and subjective norms in the purchasing of organic food, this study investigates the role of past behavior in determining organic food consumption. In this study, the links between past consumption of organic food, attitude, environmental concern, subjective norms, and future intention to purchase organic food are investigated. The findings indicate that the intake of organic food in the past had a beneficial influence on attitude about the purchase of organic food, subjective norms, and purchasing intention. Intention to purchase organic food is significantly influenced by a person's attitude as well as their subjective norms, in addition to past consumption. When compared to the effects of other antecedents, the effect of past behavior on an intention is the most significant.

The theory of planned behavior has been the subject of a large number of studies in Vietnam, which have been conducted to investigate consumer behavior around the purchase of organic food. In Ho Chi Minh City of Vietnam, an investigation of Minh and Nhan (2020) presented the factors that customers in that city considered when deciding whether or not to make purchases of organic goods. According to the study's findings, customer attitude, subjective norms, and perceived behavioral control significantly influence consumers' purchasing intention. The study also discovered that health consciousness and food safety, environmental consciousness and consumer knowledge, and the availability of products significantly impact consumers' attitude toward organic food purchasing. Moreover, the investigation of Nguyen et al. (2021) looked at the consumption of organic meat produced sustainably by Vietnamese customers. According to the findings, environmental concern of customers is linked to attitude toward organic food purchases and minimize the importance of financial

barriers connected with those purchases. Furthermore, whereas attitude and guilt associated with purchasing conventional meat had a beneficial effect on the intention to purchase organic meat, perceived financial barriers have a significant negative effect on this intention. Nguyen et al. (2019) studied the association of organic food purchasing and the personal aspects of consumers and the green marketing tactics of food retailers. According to the findings, consumers' worries about the environment, health, and food safety, as well as their knowledge of organic food, all had a significant impact on their attitude toward the purchase behavior of organic meat. Interestingly, their optimistic attitude did not necessarily translate into the purchase of organic meat. In addition, the consumers' actual purchasing behavior was greatly improved by the green marketing tactics that food merchants implemented. On the other hand, the premium prices of organic meat served as a significant barrier to consumers interested in making organic meat purchases.

The theory of planned behavior is developed from the theory of reasoned action by (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). This theory describes the relationship between attitude, subjective norm, and behavior and the theory provides support for the concept that individuals do, as a rule, think about the consequences of their behaviors before deciding whether or not to participate in a particular behavior. In other words, behaviors are under volitional control. The figure that follows presents an illustration of the theory of reasoned action:

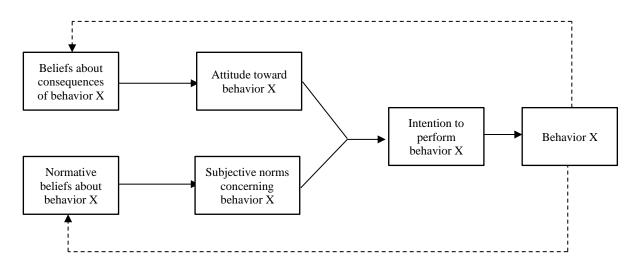


Fig. 2.1: The Theory of Reasoned Action

Source: Fishbein and Ajzen (1975, p 16)

The theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) was developed with the goal of explaining and predicting volitional behavior. The Theory of reasoned action was designed to predict behaviors, and to support in better comprehending the psychological factors that influence such behaviors. A person's intention is said to be a function of two fundamental factors,

one of which is personal in nature, and the other of which reflects social impact, in accordance with the theory of reasoned action (Ajzen, 1985). The evaluation of performing behavior is positive or negative is referred to the attitude of individual toward the behavior. It is important to keep in mind that the focus of the theory of reasoned action is on attitude toward behaviors, rather than the more traditional attitude held toward objects, people, and institutions. The individual's perception of the social pressures that are support to engage in, or abstain from the behavior in issue is the second factor that determines the person's intention. This component is referred to as the subjective norm because it is concerned with perceived prescriptions. People have a greater intention to engage in a certain behavior when they have a positive opinion of it and when they believe that significant individuals consider it to be something they ought to engage in. In many cases, both aspects play a significant role in being able to determine the intention. In addition, the relative importance that each individual attach to the attitudinal and normative elements may differ from person to person. To summarize the discussion of the theory up to this point, the following symbolically encapsulates the discussion(Ajzen, 1985):

## $B \sim I \propto [w_1 A_B + w_2 SN]$

In the equation that was just presented, "B" refers to the behavior that is of interest, "I" refers to the person's intention to perform "B" behavior, "AB" refers to the person's attitude toward "B" behavior, "SN" refers to the person's subjective norm regarding "B" behavior performance, and "W1" and "W2" refer to empirically determined weighting parameters that reflect the relative importance of "AB" and "SN." And the intention itself is shown to be directly proportional to the weighted sum of attitude toward the behavior and subjective norm. The line (~) in the equation suggests that intention is expected to predict behavior. In the equation, the intention is illustrated by the sum of weight of attitude and subjective norms toward the behavior (Ajzen, 1985).

Attitude toward behavior refers to personal evaluations being favorable or unfavorable to perform the behavior (Fishbein & Ajzen, 1975). According to the theory of reasoned action (Ajzen, 1985), an individual's beliefs about a certain behavior are what define their attitude toward that behavior. Each belief establishes a connection between the behavior and some desirable outcome. For instance, a person may think that "consuming organic food" (a behavior) is "good for their health" (outcomes). The individual's judgment of the outcomes associated with the behavior and the strength of these links both have a role in determining the attitude that the person has toward the behavior. To be more specific, the evaluation of each outcome contributes to the attitude in proportion to the person's subjective probability that the behavior will generate the outcome

that is being questioned. Attitude estimation of the behavior based on their beliefs about that behavior can be obtained by first multiplying the belief strength by the outcome evaluation and then adding the results of these two operations. The bellowed equation illustrates the attitude, and  $A_B$  (attitude regarding behavior B), b is the belief of doing behavior B with the outcome I, ei is the outcome I evaluation. In general, a person who thinks that doing a certain behavior will mostly lead to positive results will have a positive attitude about doing the behavior, while a person who thinks that doing the behavior will mostly lead to negative results will have a negative attitude about doing the behavior. Behavioral beliefs are what a person thinks about their own behavior because of what they believe.

$$A_B \propto \sum_{i=1}^n b_i e_i$$

Subjective norms is illustrated in the bellowed equation. There are the person's beliefs about what other people or groups think he should or shouldn't do (Ajzen, 1985). Normative beliefs are the beliefs that make up the subjective norm. In general, a person will feel social pressure to do something if he or she thinks most people encourage him or her should do it. On the other hand, a person who thinks that most of the people he is motivated to please think he shouldn't do the behavior will have a subjective norm that makes him feel like he should not do the behavior. The symbolism of the relationship between normative beliefs and subjective norms is shown in the following equation:

$$SN \propto \sum_{j=1}^{n} b_j m_j$$

SN is the subjective norms, bj is the normative belief concerning referent i. mj is the person's motivation to comply with referent j, and n is the number of salient normative beliefs

However, there is a brief look at some of factors that affect how much volitional control a person has over a behavior goal. According to Ajzen (1985), there are internal factors (individual differences, information, skills, and abilities, power of will) and external factors (time and opportunity, dependence on others). For instance, many behaviors can't just be done whenever someone wants to. They need skills, chances, materials, or cooperation to be done well. The theory of planned behavior (Ajzen, 1991) was an attempt to expand the theory of reasoned action to include behaviors. These behaviors are not totally under volitional control like quitting smoking. Ajzen (1991) added a variable called "perceived behavioral control" to the theory of reasoned action to account for these kinds of

behaviors. This is a measure of how easy or hard the behavior seems to be, and it is thought to be based on both past experience and expected problems. Ajzen says that subjective norm is a function of normative beliefs, just like perceived behavioral control is a function of control beliefs. The theory shows that it has a direct effect on intention. When it comes to good behaviors, stronger intention should come from feeling like they are easier to control. Through two different mechanisms, perceived behavioral control may also have a direct effect on behavior. First, if intentions stay the same, a person who thinks they have more control over their behavior is more likely to try harder and keep going for longer than a person who thinks they have less control. Second, people may have accurate ideas of how much control they actually have over their behavior. This is called perceived behavioral control. It's obvious that real behavior control is important: Some of a person's behavior success must depend on the resources and chances they have access to. Psychologically, what's more interesting than actual control is how people think they have control over their behavior and how that affects their plans and actions. In the theory of planned behavior, perceived behavioral control is an important factor. According to the theory of planned behavior, perceived behavioral control and behavioral intention can be used directly to predict behavioral achievement (Ajzen, 1991). The following is an illustration of the theory of planned behavior that can be found in the figure:

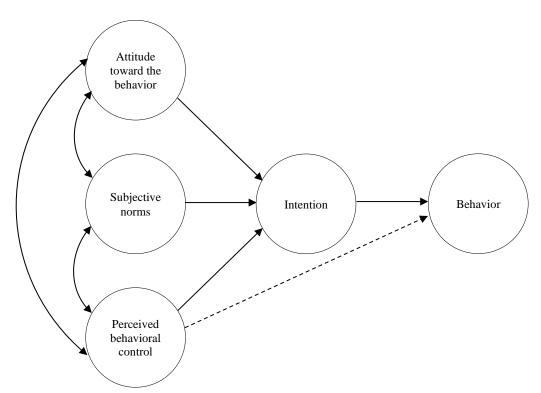


Fig. 2.2: The Theory of Planned Behavior

Source: Ajzen (1991)

#### 2.2 Definition of constructs in this thesis

#### 2.2.1 Attitude

According to Ajzen (1991), the definition of attitude (ATT) is "favorable or unfavorable idea towards conducting certain behavior". The assumption is that when the attitude is more positive, the behavior will more possibly happen. In this study, it can be assumed that when the attitude toward organic food consumption is more positive, the purchase intention will more possibly happen. It leads to the positive effect of attitude on purchase intention regarding organic food.

### 2.2.2 Subjective norms

Subjective norms (SN) is defined as "perceived social pressure to perform or not perform the behavior" (Ajzen, 1991). This refers to the belief about whether most people approve or disapprove of the behavior. It relates to a person's beliefs about whether peers and people of importance to the person think he or she should engage in the behavior. In particular, if a person believes that significant people such as parents, spouse, and friends think he/she should buy organic food, a person will be more likely to have the intention to purchase organic food. It leads to the positive effect of subjective norms on purchase intention regarding organic food.

#### 2.2.3 Perceived behavioral control

Perceived behavioral control (PBC) is defined as "an individual perceived ease or difficulty of performing the particular behavior" (Ajzen, 1991). Perceived behavioral control varies across situations and actions, which results in a person having varying perceptions of behavioral control depending on the situation. In particular, if a person believes that he/she feel easy to purchase organic food based on his/her available resources, a person will be more likely to have the intention to purchase organic food. It leads to the positive effect of perceived behavioral control on purchase intention regarding organic food.

#### 2.2.4 Intention

The definition of intention is what people say they do, plan to do, or would do under certain circumstances (Ajzen, 1991). In other words, an indication of an individual's readiness to perform a given behavior. The intention is based on attitude toward the behavior, subjective norms, and perceived behavioral control. This thesis investigates purchase intention toward organic food of millennials in Vietnam.

#### **2.2.5** Income

According to Cambridge Business English Dictionary (2022), the defintion of income is that money that is earned from doing work or received from investments.

#### 2.2.6 Environmental concern

Environmental concern refers to the degree to which people are aware of problems regarding the environment, their support of efforts to solve such problems, and a willingness to contribute personally to their solution (Dunlap & Jones, 2002, p. 485). The term environmental concern refers to "the affect associated with beliefs about environmental problems" (Schultz et al., 2005, p. 458)

## 2.3 Hypotheses development

# 2.3.1 Attitude, subjective norms, perceived behavioral control and purchase intention toward organic food

Based on the theory of planned behavior, in the aspect of organic food research, numerous studies have shown that there are positive effects of attitude, subjective norms, and perceived behavioral control on purchase intention. In this thesis, the illustrations of these positive effects were presented by highlighting many researches regarding organic food buying behavior in the following table.

Table 2.1: Attitude, subjective norms, and perceived behavioral control based on the theory of planned behavior

Year/Author	Independent	Dependent	Model/based	Analysis	Main conclusion related to
	variables	variables	theory	·	income
Sadiq et al.	Attitude	Behavioral	Theory of	Qualitative	Attitude, subjective norms,
(2021)		intention to	planned	face-to-face	perceived behavioral control to
India	Subjective norms	consume	behavior	(semi-	consume organic foods were
	Perceived	organic food		structured)	found as predictors of
	behavioral control			interviews	behavioral intention.
				Structural	
	Hedonic and			equations	
	utilitarian values			modeling	
	E1				
	Exploratory buying behavior				
	traits (exploratory				
Ahmed et al.	Attitude	Purchase	The extended	Structural	The findings indicated that
(2021)		intention	theory of	equation	attitude, subjective norms, and
China	Subjective norms		planned	modeling	perceived behavioral control
	D		behavior		have positive effects on the
	Perceived behavioral control				purchase intention of young
	beliavioral control				consumers for organic food.
	Environmental				
	concern				
	Environmental				
	awareness				

Sultan et al. (2020) Australia	Attitude Subjective norms Perceived behavioral control Perceived communication, satisfaction, and trust	Behavioral intention  Behavior	The theory of planned behavior	Structural equation modeling	Attitude has a positive and significant effect on behavioral intention toward organic food consumption.
Nuttavuthisit and Thøgersen (2017) Thailand	Attitude Perceived social pressure Perceived control	Green buying intention  Green buying behavior	The theory of planned behavior	Qualitative- focus group  Quantitative- Survey analysis with SPSS	The study illustrated that attitude has a positive effect on buying intention toward organic food.
(Paul et al., 2016) India	Attitude Subjective norms Perceived behavioral control Environmental concern	Purchase intention	The extended theory of planned behavior	Confirmatory factor analysis Structural equation modeling	Consumer attitude and perceived behavioral control significantly predict purchase intention.

Yazdanpanah and Forouzani (2015) Iran	Perceived behavioral control Subjective norms Self-identity Attitude Moral norm	Purchase intention toward organic food	Theory of planned behavior	Confirmatory factor analysis  Structural equation modeling	Results indicated that attitude was the predictor of intention to purchase organic food.
Arvola et al. (2008) Italy, Finland and UK.	Attitude Subjective norms Moral Beliefs	Intention	Theory of planned behavior	Structural equation modeling	Attitude, and subjective norms have positive effects on intention.
Saba and Messina (2003) Italy	Attitude Beliefs Intention	Intention	Theory of planned behavior	Cluster analysis Structural equation modeling	Attitude was found to be a predictor of intention to eat organic vegetables and fruits.

Nguyen et al. (2021)  Vietnam	Attitude Subjective norms Perceived monetary barriers Guilt Environmental concern	Purchase intention	Theory of planned behavior	Structural equation modeling	The positive effect is illustrated in the relationship between attitude, subjective norms and purchase intention toward organic meat.  Purchase intention is reduced significantly by perceived monetary.
Minh and Nhan (2020) Vietnam	Attitude Subjective norms Perceived behavioral control Health consciousness and food safety Environmental consciousness and consumer knowledge	Purchase intention	Theory of planned behavior	Exploratory factor analysis Confirmatory factor analysis Structural equation model	Customer attitude, subjective norms, and perceived behavioral control have a significant influence on their purchasing intention.

	Availability product				
Pham et al. (2018) Vietnam	Attitude  Environmental concern  Food safety concern  health consciousness  food taste  media exposure  perceived barriers	Purchase intention	Theory of planned behavior	Multivariate data analysis using structural equation modeling	Attitude has a positive effect on purchase intention

Source: Author

According to Sadiq et al. (2021), the study predicts organic food choice as a consumption behavior. The extended theory of planned behavior with food eating values and individuals exploratory buying behavioral traits. The study indicated that an individual's attitude toward consuming organic foods is the predictor of behavioral intention, followed by subjective norms, and then perceived behavioral control. Investigation of Ahmed et al. (2021) is about organic food purchase intention among young Chinese consumers applying the theory of planned behavior. The findings indicated that attitude, subjective norms, and perceived behavioral control have positive effects on the purchase intention of young consumers for organic food. Moreover, in the study of Sultan et al. (2020), an attitude has a positive and significant effect on behavioral intention toward organic food consumption. According to (Nuttavuthisit & Thøgersen, 2017), the study is about the importance of consumer trust for the emergence of a market for organic food. With the theory of planned behavior application, the positive effect of the relationship between attitude and buying intention toward organic food is presented. Furthermore, Paul et al. (2016) use the extended theory of planned behavior to predict green product consumption. The results show that consumer attitude and perceived behavioral control significantly predict purchase intention. Yazdanpanah and Forouzani (2015) studied organic food purchase intention of Iranian students with an application of the theory of planned behavior. Results indicated that attitude was the main predictor of their intention to purchase organic foods. Arvola et al. (2008) predict the intention to purchase organic food with the application of the theory of planned behavior in Italy, Finland and the United Kingdom. The finding illustrates that attitude and subjective norms have positive effects on the intention to purchase organic food. Another study shows that attitude as a component is found to be a significant predictor of intention to consume organic fruits and vegetables (Saba & Messina, 2003).

In the Vietnamese organic food research aspect, the positive effects of the relationship between attitude, subjective norms, perceived behavioral control and purchase intention are described in many studies. Nguyen et al. (2021) conducted a study to examine the purchase intention of organic meat. The finding indicates that attitude has a positive effect on purchase intention toward organic meat. Minh and Nhan (2020) investigate determinants of consumers' purchasing intention toward organic food in Ho Chi Minh City, Vietnam. The results show that customer attitude, subjective norms, and perceived behavioral control have significant influences on purchasing intention. Moreover, in the study of Pham et al. (2018), the authors investigated young customers' purchase behavior toward organic food. According to the finding, there is a positive effect of attitude on purchase intention. According to the above literature review, to answer the research question 1 and to conduct the research objective 1, the hypotheses are as follows:

**H1:** Attitude positively affects purchase intention toward organic food of millennials in Vietnam.

**H2:** Subjective norms positively affect purchase intention toward organic food of millennials in Vietnam.

**H3:** Perceived behavioral control positively affects purchase intention toward organic food of millennials in Vietnam.

#### **2.3.2** Income

#### **Income and the development in Vietnam**

First, this section briefly presents the development of the Vietnamese economy. From there, it can be seen that the growth of the national economy as well as the development of people's income in Vietnam. A remarkable amount of progress has been made in Vietnam. In just one generation, Vietnam has gone from being one of the poorest countries in the world to have an economy comparable to that of a middle-income country because of the implementation of economic reforms beginning with the launch of the "Doi Moi" initiative in 1986. The GDP per capita almost reached USD 3,700 by the year 2021, having expanded by a time of 3.6 since 2002. The poverty rate, defined as living on less than USD 1.90 per day, has significantly decreased, going from over 32 percent in 2011 to below 2 percent.

The strength of the economy has been demonstrated through multiple crises, the most recent of which being COVID-19, thanks to the firm foundations upon which it is built. When the epidemic struck in the year 2020, Vietnam was one of the very few countries that had posted GDP growth. The appearance of the Delta type caused the GDP growth rate to decelerate to 2.58 percent in 2021; however, it is anticipated that the rate will return to 5.5 percent in 2022 (The World Bank, 2022b).

The GDP is expected to grow by 7.72% in the second quarter of 2022 compared to the same time last year. This is more than the growth rate for the second quarter from 2011 to 2021. GDP grew by 6.42 percent in the first half of 2022, which was more than the growth of 2.04 percent in the first half of 2020 and the growth of 5.74 percent in the first half of 2021. But the rate of growth is lower than in 2018 and 2019, when it was 7.28% and 6.98% during the same time period. The agriculture, forestry, and fishing sector grew by 2.78 percent, which was worth 5.07 percent of the overall growth rate. The industry and construction sector grew by 7.70 percent, which was worth 48.33 percent. The processing and manufacturing industry were the growth engine of the whole economy with an increase of 9.66 %; service sector increased by 6.60%, (contributing 46.60%). Regarding the economy's structure in the first six months of 2022, the agriculture, forestry, and fishery sector account for 11.05%; industry and construction accounted for 39.30%; the service sector accounted for 40.63%; product tax minus product subsidies accounted for 9.02%. In the first half of 2022, final consumption went up by 6.06 percent compared to the same time in 2021; accumulated assets increased by 3.92%; exports of goods and services increased by 9.10%; imports of goods and services increased by 4.41% (General Statistics Office of Vietnam, 2022a)

The chart below depicts the development of Vietnam's GDP from 2016 to 2021. Vietnam's GDP has gone down in the years 2020 and 2021 because of the COVID-19 epidemic. However, the growth of Vietnam's GDP is still among the high-growing countries.

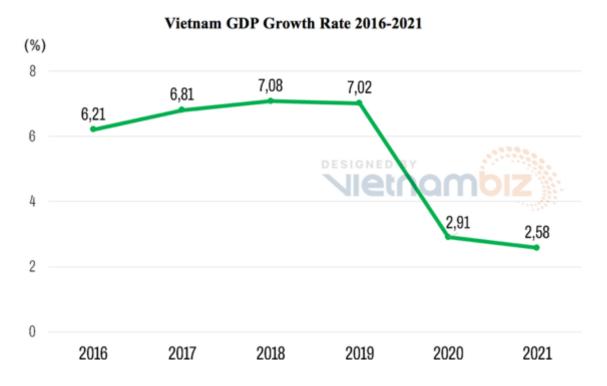


Fig. 2.3: Vietnam GDP Growth Rate 2016-2021

Source: General Statistics Office of Vietnam (2022b)

According to The World Bank (2022a), the GDP 2021 of Vietnam is USD 362.64 billion. In 2021, Vietnam ranked 41st in the top 50 economies with the largest GDP in the world and 5th among countries in Southeast Asia. In 2022, Vietnam strives to achieve a GDP per capita of about USD 3,900. According to resolution No. 16/2021/QH15 of the government regarding the five-year development plan from 2021 to 2025 related to socio-economic aspects, Vietnam is planning to improve its GDP per capita by 2025 to reach about USD 4,700-5,000. By 2030, Vietnam aims to become a developing country with modern industry, high middle income, a GDP per capita of about USD 7,500, and people with high quality of life. Additionally, by 2045, Vietnam aims to become a developed and high-income country.

The chart below depicts the GDP per capita growth in Vietnam from 2011 to 2021. From the graph shown, GDP per capita in Vietnam increased from USD 1,942 in 2011 to USD 3,694 in 2021.

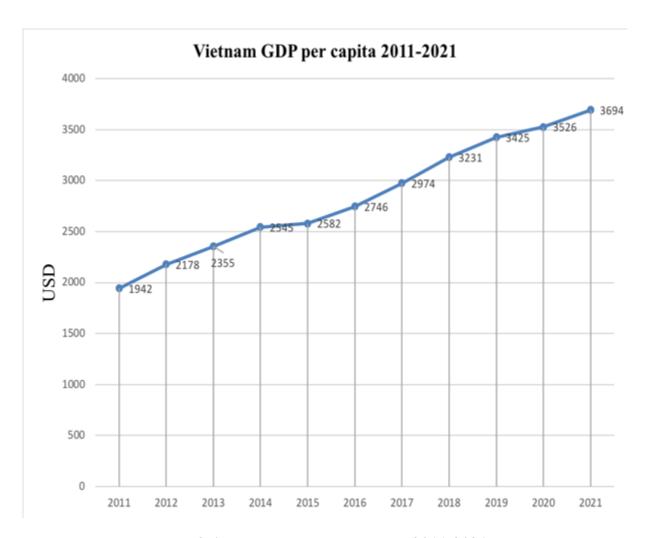


Fig. 2.4: Vietnam GDP Per Capita 2011-2021

Source: The World Bank (2022b)

For the purpose of this thesis, data collecting was conducted in three major cities in Vietnam: Ho Chi Minh, Da Nang, and Hanoi. The chart below depicts the top cities in Vietnam with the highest per capita income.

Ho Chi Minh City ranked second with 6.537 million VND/person/month. Hanoi is in third place with 5.981 million VND/person/month. Followed by provinces with incomes over 5 million VND/person/month are Dong Nai, Bac Ninh, Da Nang, Hai Phong, and Can Tho. Ba Ria Vung Tau and Quang Ninh ranked in the last two positions in the top 10, with an income of more than 4.5 million VND/person/month (Cafefvn, 2021).

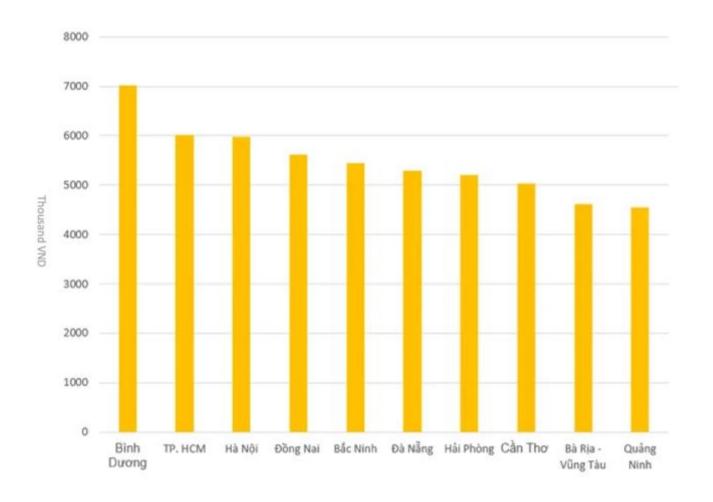


Fig. 2.5: Top GDP Per Capita of Cities in Vietnam in 2020

Source: Cafefvn (2021)

# Research of income regarding organic food purchase intention

As is the case with organic food, a customer's income is a crucial component in determining their purchasing decisions. In the theory of planned behavior, the effect of income has been demonstrated by several experiments. The table below describes the impact of income on buying behavior of organic food with the application of the TPB.

Table 2.2: Income with the application of the theory of planned behavior

Year/Author	Independent variables	Dependent variables	Model/based theory	Analysis	Main conclusion related to income
Chen et al. (2014) China	Attitude, pre-purchase evaluation  Control variable:	Purchase intention	The theory of planned behavior	Hierarchical regression analysis	Income is weak significant correlations with people's intention to purchase organic food.
	Gender, age, education, income		The 'hierarchy of effects' model		
			The consumer decision-making process		
Kuran and Mihic (2014)	Attitude, subjective norms, health awareness and	Purchase intention of organic food	Theory of planned behavior	N/A	The findings of the investigation revealed that household income is found to be a significant
Republic of Croatia	knowledge, perceived availability, perceived financial situation, marital status, age, household income.				factor that affects the intention to purchase organic food.
Omar et al. (2016)	Gender, age, level of education, level of income, presence of	Intention to purchase organic	N/A	Independent samples t-test and analysis of	The positive effect of income on intention to purchase organic products.
Malaysia	children in the household	products		variance ANOVA	

Slamet et al. (2016) Indonesia	Attitude, environmental concern, safety, health concern, trust, and socio-demographic factors	Consumers' purchase behavior	N/A	Descriptive analysis, factor analysis, and a Binary logit model	Consumers with fewer family members and have a higher income, and are price tolerant, are more likely to purchase organic vegetables.
Singh and Verma (2017) India	Health consciousness, knowledge, subjective norms, and price availability age, education, income	Purchase intention, actual buying behavior	Theory of Planned Behavior	Factor analysis, independent t-test, ANOVA multiple linear regression, and hierarchical multiple regression analysis.	Socio-demographic factors (age, education, and income) are found to have an impact on actual buying behavior.
Hansmann et al. (2020)  Sweden	Attitude, subjective norms, perceived behavioral control, general environmental concern, knowledge, evaluation, trust, income, education level, the share of	Purchases of organic fruits and vegetables.	Theory of Planned Behavior and further behavioral decision- making models	Complex multiple regression model to explain organic fruit and vegetable purchases	Income is positively related to the organic purchase.

	purchase of organic fruit and vegetables				
Trinh (2021)	The quality of products; Trademarks, product	The consumer decisions to		Ordinal Logistic Regression	The empirical model shows that there are eight factors which have significant positive
Vietnam	labels; Advertising, media, cultural factors; The understanding of the consumers about products of organic agriculture; The convenience of the point of sale; Income of consumers; Psychological factors the consumer's career	purchase organic agricultural products.		Regression	impacts on the consumer decisions to purchase organic agricultural products.
Gundala and Singh (2021)	Health consciousness, consumer knowledge,	Purchase intention	Theory of planned behavior	ANOVA, multiple linear	Age, education, and income are demographic factors that also
United States	perceived or subjective norms, and perception of price attitude Availability	consumers' buying behavior	Deliavior	regression, factor analysis, independent t- tests, and hierarchical multiple	impact consumers' buying behavior.

Age, education, and income		regression analysis	

Source: Author

This table shows the relationship between income and purchase intention. Regarding organic food research, income has a direct positive effect on purchase intention (Kuran & Mihic, 2014; Omar et al., 2016; Trinh, 2021). In particular, a study that was conducted by Kuran and Mihic (2014) used the TPB to investigate organic food purchasing behavior in the Republic of Croatia. The findings of the investigation revealed that household income is found to be a significant factor that affects the intention to purchase organic food. According to research carried out in Vietnam (Trinh, 2021), it was discovered that the level of income possessed by customers has a strong and beneficial impact on their decisions about the purchase of organic agricultural goods. Moreover, the organic products research of Omar et al. (2016) investigated effect of a relationship between demographic factors and purchase intention in Malaysia. According to the finding, the author showed the positive effect of income on purchase intention.

Additionally, income is studied in descriptive analysis. The finding in the study of Oliveira Martins et al. (2021) shows more often buying organic food at higher income more than lower income. Or, consumers with fewer family members and have a higher income, and are price tolerant, are more likely to purchase organic vegetables (Slamet et al., 2016).

The direct effect between income and actual buying behavior (Gundala & Singh, 2021; Hansmann et al., 2020; Singh & Verma, 2017). In particular, income is positively related to organic purchases (Hansmann et al., 2020). Singh and Verma (2017) present the impact of demographic factors, including age, education, and income, on the buying behavior of consumers. Moreover, there is a study has shown that socio-demographic factors such as age, education, and income were also found to have an impact on actual buying behavior (Gundala & Singh, 2021).

Moreover, the research use income as a control variable control variable (Chen et al., 2014). According to Chen, Lobo, and Rajendran (2014), the use of three theories—the consumer decision-making process, the theory of planned behavior, and the 'hierarchy of effects' model—to study the drivers of purchase intention regarding organic food in mainland China. This investigation used income as a control variable, and the results showed that income had weak significant correlations with people's intention to purchase organic food.

From the literature review above, it can be seen that when customers are aware of the benefits of organic food, it will increase their intention to buy organic food. Based on the theory of planned behavior, the association between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention are not the same for all customers that are millennials in Vietnam. Instead, these relationships will change based on the customer's income. Therefore, it is supposed that an increase in customers' income will increase their intention to purchase organic food based on the theory of planned behavior. In particular, when millennials are aware of the benefits of organic food, an increase in customers' income will increase their positive effects

of attitude, subjective norms, and perceived behavioral control that lead to increase their intention to purchase organic food. Hence, according to the above literature review, to answer the research question 2 and to conduct the research objective 2, it is to suppose the hypotheses as follows:

**H4:** The higher income, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.

**H5:** The higher income, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.

**H6:** The higher income, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.

#### 2.3.3 Environmental concern

Environmental concern refers to the degree to which people are aware of problems regarding the environment, their support of efforts to solve such problems, and a willingness to contribute personally to their solution (Dunlap & Jones, 2002, p. 485). The term environmental concern refers to "the affect associated with beliefs about environmental problems" (Schultz et al., 2005, p. 458). Based on the theory of planned behavior, there are many studies showing that environmental concern has positive effects on attitude, subjective norms, perceived behavioral control, and purchase involvement. In particular, with an extended TPB model, in the area of green product consumption, Maichum et al. (2016) conducted research on Thai customers' purchase intention. According to the findings, there is significant effect of environmental concern on attitude, perceived behavioral control, and purchase intention. Another study by Yadav and Pathak (2016), also in the field of green product consumption, investigated the purchase intention of young customers toward green products in India. Findings suggest that TPB can be effective in predicting young consumers' purchasing intention for green products. The results show that attitude, and purchase intention are positively affected by environmental concern. One prominent study in green product consumption based on the theory of planned behavior is the study of Paul et al. (2016), this study predicted green product consumption. According to the result of this study, environmental concern positively affects attitude, subjective norms, perceived behavioral control, and purchase intention.

In the field of organic food, many previous studies show the positive effects of environmental concern on attitude, subjective norms, perceived behavioral control, and purchase intention based on the theory of planned behavior. Ishaq et al. (2021) investigated people's motives in Italy and Pakistan regarding organic food purchasing. Positive effects of environmental concern on attitude, subjective norms, and perceived behavioral control are demonstrated in findings of this study. Studies by Imani et al., (2021), Nguyen et al. (2021), Pham et al. (2018) show the positive effect of environmental concern on attitude toward organic food purchasing intention. Imani et al. (2021) show that environmental concern has positive effects on attitude toward purchasing intention of organic food.

Moreover, Nguyen et al. (2021) and Pham et al. (2018) present results for the positive effect of environmental concern on attitude in Vietnam. In particular, regarding organic food intention to purchase, Nguyen et al. (2021) investigated Ho Chi Minh City, Vietnam while Pham et al. (2018) evaluated the purchase behavior of young consumers in Vietnam.

Moreover, previous studies show the positive effect of environmental concern on purchase intention toward organic food based on the TPB. The research conducted by Asif et al. (2018) demonstrates direct effect of environmental concern on the purchase intention of consumers regarding organic food. This study investigated Iran, Turkey, and Pakistan with a comparative examination toward organic food. According to the research findings by Nguyen and Truong (2021), environmental concern has a direct influence on a consumer's intention to purchase organic food in Vietnam. In addition, in South Africa, Mhlophe (2016) investigated customer purchase intention toward organic food. The result shows that environmental concern has a positive effect on purchase intention. Environmental concern not only effects directly to attitude, subjective norms, perceived behavioral control but also mediates a relationship between attitude and purchase intention based on the TPB. Ahmed et al. (2021) examined young customers' organic food purchase intention using the theory of planned behavior. The findings of this research illustrate that environmental concern not only effects directly to attitude but also acts as a mediator in the interaction between attitude toward consumption and purchase intention for organic food in China.

From the literature of previous studies above, engagement in environmentally friendly behavior, including organic food consumption, is more likely to happen to consumers with greater environmental concern. Previous studies show the positive effect between environmental concern and attitude, subjective norms, perceived behavioral control. It can be seen that when people are aware of environmental concern, their attitude toward the behavior of intention of buying organic food will increase. Moreover, their subjective norms, perceived behavioral control toward organic food purchasing intention will increase. Moreover, environmental concern has a positive effect on purchase intention. This illustrates that when the increase of environmental concern, people is more likely to rise the intention to purchase organic food. The association between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention are not the same for all customers that are millennials. Instead, these relationships will change based on the environmental concern of millennial customers. Therefore, it is supposed that a rise in customers' environmental concern will rise their intention to purchase organic food based on the theory of planned behavior. In particular, when millennials are aware of the benefits of organic food, an increase in customers' environmental concern will increase their positive effects of attitude, subjective norms, perceived behavioral control that lead to increase their intention to purchase organic food. Therefore, according to the above literature review, to

answer the research question 3 and to conduct the research objective 3, it is to suppose the hypotheses as follows:

**H7:** The higher environmental concern, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.

**H8:** The higher environmental concern, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.

**H9:** The higher environmental concern, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.

This study supposed that the rise in income and environmental concern will lead to the increase positive effect of the relationship between attitude and purchase intention toward organic food. Thus, to answer the research question 4 and to conduct the research objective 4, the hypothesis is as follows:

**H10:** There is a three-way interactive effect of income, environmental concern, attitude on purchase intention toward organic food of millennials in Vietnam.

# 2.4 Organic food and organic market in Vietnam

## **Organic food definition**

Organic food is food and drinks produced by methods complying with the standards of organic farming, and the standards vary worldwide. According to the United States Department of Agriculture (USDA, 2022), organic is a labeling term that indicates that the food or other agricultural product has been produced through approved methods. These methods integrate cultural, biological, and mechanical practices that foster the cycling of resources, promote ecological balance, and conserve biodiversity. Synthetic fertilizers, sewage sludge, irradiation, and genetic engineering may not be used. Moreover, there are other popular organic food standards in Vietnam which are of Japanese Agricultural Standards. The JAS Standards for organic plants and organic processed foods of plant origin were established in 2000 on the basis with the Guidelines for the production, processing, labelling and marketing of organically produced foods which were adopted by the codex alimentarius commission. According to Australian Certified Organic (Australian Certified Organic, 2021), organic is not just "chemical free". It is a whole systems or holistic means of growing and handling food. The whole system is linked from soil, plants, animals, food, people to environment. Certified organic products are grown and processed without the use of synthetic chemicals, fertilisers, or GMO's. In Vietnam, the organic food standard TCVN 11041:2017 is published by the Ministry of Science and Technology, including three standards (Ministry of Science and Technology, 2017).

- TCVN 11041-1:2017: Organic agriculture Part 1: General requirements for production, processing, and labeling of organic agricultural products.
- TCVN 11041-2:2017: Organic agriculture Part 2: Organic farming

• TCVN 11041-3:2017: Organic agriculture – Part 3: Organic livestock

Moreover, currently, Vietnam has updated another regulation support to organic agriculture:

- In August 2018, Decree 109/2018 related to Organic Agriculture is published. This is about production regulation, logo, labelling, traceability, certification, inspection, and trading of organic products.
- In November 2019, to complement Decree 109/2018, the Vietnamese government released Circular 16/2019, which lays out in great detail the institutions and organizations responsible for the application, certification, and testing of organic agricultural goods in Vietnam.
- The Organic Agricultural Development Project for 2020–2030 was approved by the Government of Vietnam in June 2020. Vietnam plans to use the money from this initiative to increase the amount of land used for organic agriculture production to between 1.5 and 2 percent of all agricultural land by 2025.

#### An organic market in Vietnam

Vietnam's organic food sector may be modest now, but it has enormous growth potential. Ecolink-Ecomart, Organik Da Lat, Vien Phu Green Farm, Vinamit, TH True Milk, Vinamilk, and TH True Milk are just few of the "major players" that have recently boosted their investments in organic food and beverage manufacturing. In an effort to establish itself as a leader in the Vietnamese organic dairy market, Vinamilk, the country's largest dairy producer, has introduced its own "Organic" brand through its U.S. subsidiary Driftwood Dairy and in partnership with California Natural Products. This organic milk, produced in the United States in 2016, was exported back to Vietnam (M. Nguyen, 2021).

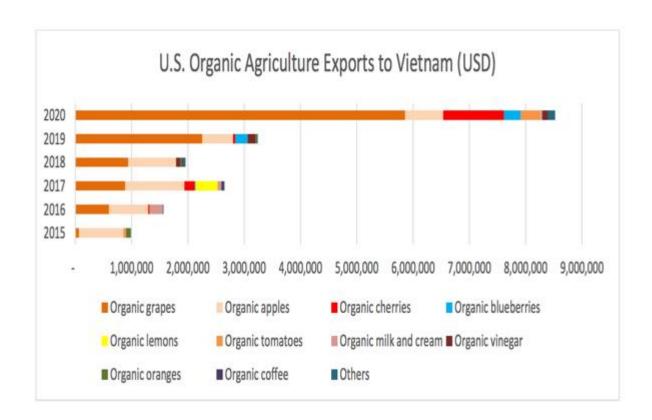


Fig. 2.6: United State organic agriculture exports to Vietnam Source: M. Nguyen (2021)

A wide variety of organic food and drink products, including fresh fruits and vegetables and processed goods, are imported to Vietnam to satisfy customer demand for things that cannot be farmed or manufactured locally. Organic food and beverage exports from the United States to Vietnam reached USD 8.5 million in 2020, up from USD 1 million in 2015. The majority of these exports were comprised of fresh fruits and processed foods. The merits and disadvantages of selling organic food and drinks made in the United States in Vietnam are discussed (M. Nguyen, 2021).

Many Vietnamese respondents in a 2020 study conducted by the United States Department of Agriculture's Foreign Agricultural Service in Ho Chi Minh City (HCMC). M. Nguyen (2021) said they are more likely to purchase and use items bearing organic certification marks. Popular and trustworthy organic certifications include the USDA Organic mark, Europe Organic, Australian Organic, and JAS. The trademarks of Vietnam's most well-known organic certified brands are as follows:









Fig. 2.4: Most well-known organic certified brands

Source: M. Nguyen (2021)

## 3. HYPOTHESES AND MODEL

From the literature review, this section presents research models and hypotheses summary.

# 3.1 Study model

From above literature review, the research models comprises 6 constructs as follows:

- 1. Attitude (ATT)
- 2. Subjective norms (SN)
- 3. Perceived behavioral control (PBC)
- 4. Purchase intention (PI)
- 5. Income (IC)
- 6. Environmental concern (EC)

**Proposed model 1** for this thesis is illustrating in the following figure:

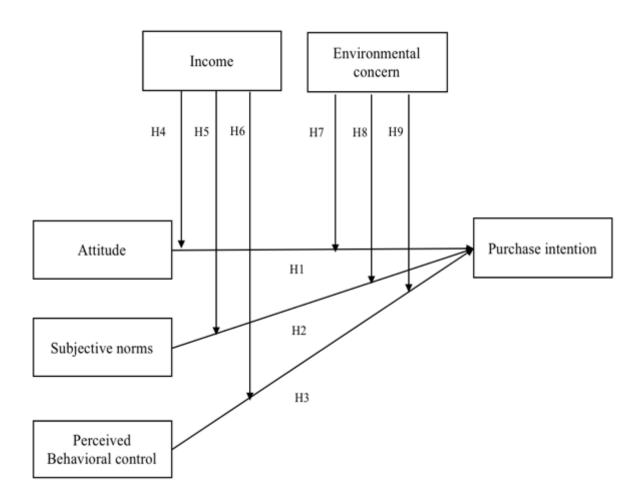


Fig. 3.1: Proposed model 1

Source: Author

Based on the theory of planned behaviour (TPB), this thesis uses 4 constructs of the TPB named: attitude, subjective norms, perceived behavior control and purchase intention. Based on this, three hypotheses (H1, H2, H3) are illustrated in the figure 3.1. The two constructs of income and environmental concern are developed from the literature review to add to the theory of planned behavior to test the moderation effects. In particular, the moderation effects of income on the relationship between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavior control and purchase intention are described. Thus, the three hypotheses (H4, H5, H6) are presented in figure 3.1. Similarity, the figure 3.1 also presented the moderation effects of environmental concern on the relationship between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavior control and purchase intention (H7, H8, H9)

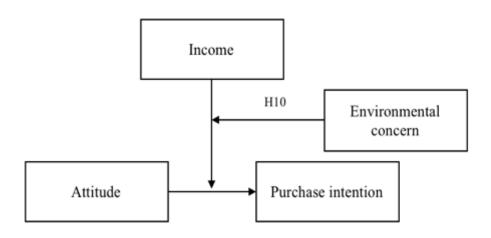


Fig. 3.2: Proposed model 2

Source: Author

The **proposed model 2** is presented in figure 3.2. The figure 3.2 illustrates the three-way interactive effect of income, environmental concern, attitude on purchase intention. Thus, the hypothesis H10 is presented in the figure 3.2.

# 3.2 Hypotheses for this thesis

From the literature review, the summary of hypotheses for this thesis are presented as follows:

**H1:** Attitude positively affects purchase intention toward organic food of millennials in Vietnam.

**H2:** Subjective norms positively affect purchase intention toward organic food of millennials in Vietnam.

- **H3:** Perceived behavioral control positively affects purchase intention toward organic food of millennials in Vietnam.
- **H4:** The higher income, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.
- **H5:** The higher income, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.
- **H6:** The higher income, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.
- **H7:** The higher environmental concern, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.
- **H8:** The higher environmental concern, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.
- **H9:** The higher environmental concern, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.
- **H10:** There is a three-way interactive effect of income, environmental concern, attitude on purchase intention toward organic food of millennials in Vietnam.

### 4. METHODOLOGY

This section outlines research design, sampling methods, measurement scales, data analysis methods and pilot study results.

# 4.1 Research design

This thesis uses positivism paradigms for the investigation. Positivism relies on the deductive method to verify a priori hypotheses that are often stated quantitatively, where functional relationships can be derived between causal and explanatory factors (independent variables) and outcomes (dependent variables) (Park, Konge, & Artino, 2020). Moreover, the author's beliefs and biases do not factor into the generalization of reality achieved via the testing of theories and the verification of hypotheses (Creswell, 2014). The hypothetico-deductive method is a circular process that begins with theory from the literature to build testable hypotheses, design an experiment through operationalizing variables (i.e., identifying variables to manipulate and measure through group assignments), and conduct an empirical study based on experimentation. Ultimately, the findings from such a study are used to help inform theory and contribute to the literature (Park et al., 2020).

The research procedure shown in the figure 4.1 can be divided into five stages (see Table 4.1). In stage 1, after the research problems, research gaps, research questions and research objectives identification, a literature review of based theory and previous study will be illustrated. The literature review supports building research model and hypotheses development. Then, in stage 2, a draft questionnaire is developed for a pilot study. The reliability test will be applied for the pilot test. After that, in stage 3, a full questionnaire is established for data collection. In the 4th stage, the data is analyzed for measurement model assessment, structural model assessment, and moderation relationships. The last stage is results, discussions and conclusion.

Table 4.1: Research stages

Stage	Items					
1	Research problems →Literature review→ Research Model→					
	Hypotheses development					
2	Draft questionnaire → Pilot study					
3	Full questionnaire survey → Data collection					
4	Analysis: Measurement model assessment, structural model					
	assessment, moderation.					
5	Results, discussions and conclusion.					

Source: Author

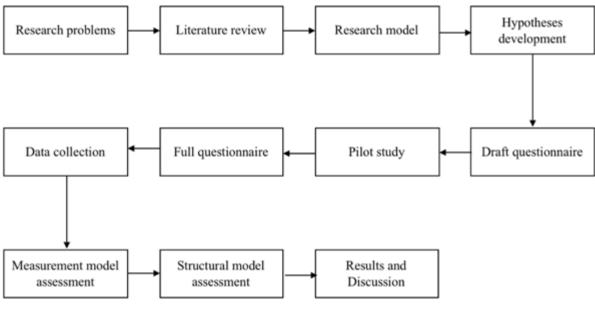


Fig. 4.1: Research procedure

Source: Author

#### 4.2 Data collection method

#### 4.2.1 Sampling

The population is Vietnamese millennials (born from 1980 to 2000) who have intention to purchase organic food. The data were collected from the three largest cities in Vietnam: Ho Chi Minh City, Da Nang City, and Hanoi City. With a population of over 9 million, Ho Chi Minh City is Southern Vietnam's largest and busiest city (Meta, 2022c). The next largest city, Hanoi, which is in Northern Vietnam, has a population of over 8.5 million (Meta, 2022b). Third, Da Nang City has about 1.2 million people and is located in the Central of Vietnam (Meta, 2022a). The population of these three cities composes nearly 19% of the entire Vietnamese population (with 98.51 million people) (General Statistics Office of Vietnam, 2022c). The three most populous cities were chosen for this study not just for the sheer number of people living there, but also for the abundance of healthy food options available in their organic markets. In major urban centers, consumers have easy access to a wide variety of eco-friendly goods, including organic produce. In addition, both the availability of organic food and the tendency toward its use are substantially higher than in rural areas and smaller cities.

This research is empirical quantitative-based research. To investigate this study, a survey questionnaire was selected as a research instrument. Specifically, the cluster and snowball sampling technique are applied to collect data from respondents. At the first step, the population is divided into three groups based on the three main geographical regions of Vietnam: Northern, Central and Southern Vietnam. Then, the number of respondents will be selected based on the percentage of that group representing the population. The data is collected from

April to August 2022 by the online form. Table 4.2 shows the percentage of population of three big cities and the sample.

Table 4.2: Share of population in three main cities, regions in Vietnam and sample

City	Sample	% Population Region (Vietnam)	% Population City (Vietnam)
Ho Chi Minh-			
Southern	150 (39.1%)	39%	9.1 %
Vietnam			
Da Nang- Central	102 (26 90/)	270/	1.20/
Vietnam	103 (26.8%)	27%	1.2%
Ha Noi- Northern	121 (24 10/)	240/	0.60/
Vietnam	131 (34.1%)	34%	8.6%
Total	384 (100%)	100%	19%

Source: General Statistics Office of Vietnam

#### 4.2.2 Sample size

The online platform was used to collect data randomly from millennials with the sample framework. With the cluster and snowball sampling technique, the data was collected from appropriate millennials. The sample size is identified with a standard of 95 percent confidence level and error of 5 percent. According to Krejcie and Morgan (1970) and Hair et al. (2010), to identify the sample size, the sample size (n) should be between 300 and 384 respondents when the population is higher than one million or/and the population is unknown. The formula for sample identification is presented as follows:

$$n = \frac{z^2(p.q)}{e^2}$$

Where:

n = sample size

z = distribution value corresponding to selected confidence (if 95% confidence level, z value is 1.96)

p = is an estimate of the percentage of the population

q = 1-p (the ratio p and q is estimated at 50%/50% which is the greatest possible probability of the population).

e = error percentage 5%

Therefore, the sample size for this study, with 95% confidence, error 5 %, is 384.

#### 4.2.3 Questionnaire design

The original version of the questionnaire was written in English. Then, for the Vietnamese respondents, it was translated into Vietnamese. There are two main parts in the questionnaire named demographic part and the construct part. The demographic part consists of information related to gender, age, marital status, family size, employment status, education, personal income monthly, and city of living. The construct part includes questionnaire related to measurement scales of attitude, subjective norms, perceived behavioral control, environmental concern, and purchase intention. All items from the construct part are applied the scale of 5-point Likert for response options. The scale is 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), 5 (strongly agree)

#### 4.3 Measurement scale of variables

#### 4.3.1 Attitude (ATT)

Attitude is constructed from six items adopted from Asif et al. (2018), and Yadav and Pathak (2016a). These items for measuring attitude are: "I think that organic food purchasing is interesting; I think that organic food purchasing is a good idea; I think that organic food purchasing is important; I think that organic food purchasing is beneficial; I think that organic food purchasing is wise choice; I think that organic food purchasing is favorable". These six items of attitude variable are coded ATT1, ATT2, ATT3, ATT4, ATT5, ATT6.

#### 4.3.2 Subjective norms (SN)

Scales for evaluating subjective norms were adopted from Asif et al. (2018) and Yadav and Pathak (2016a). The following statements serve as measurement of subjective norms: "My family thinks that I should buy organic food; Most people I value would buy organic food; Most people important to me think that I should buy organic food; My close friends think that I should buy organic food". They are coded SN1, SN2, SN3, and SN4.

#### 4.3.3 Perceived behavioral control (PBC)

Perceived behavioral control scales were adopted from Asif et al. (2018) and Yadav and Pathak (2016a). There is a correlation between the extent to which people believe they can control their actions and the veracity of each of the following statements: "If I wanted to, I could buy organic food; I think it is easy for me to buy organic food; It is mostly up to me whether or not to buy organic food". Three items are labeled PBC1, PBC2, and PBC3.

#### **4.3.4 Income (IC)**

The monthly income of people who living in Ho Chi Minh City is 8.9 million VND and 8.7 million VND in Ha Noi City (Tuoi Tre, 2022). In Da Nang City the monthly income of people is 5.23 million VND (Mai Que, 2022). The people who have experience working will have the monthly income range from 10 million VND to higher 40 million VND. The income will be depended on the number of years of working experience, city of living and education. For this thesis income

variable is divided into 5 gourps: less than 10 million VND, from 10 to 20 million VND, from 20 to 30 million VND, from 30 to 40 million VND, and more than 40 million VND. They are coded IC1, IC2, IC3, IC4, IC5.

### **4.3.5** Environmental concern (EC)

To measure environmental concern, four items were adopted from Lee (2008), H. V. Nguyen et al. (2021), and Pham et al. (2018). These items were intended to capture how respondents' concern about Vietnam's environment and also how they were emotionally involved in environmental preservation. Environmental concern is constructed of four items: "Vietnam's environment is my major concern; I am worried about the worsening of the quality of Vietnam's environment; I am emotionally involved in environmental protection issues in Vietnam; I often think about how the environmental quality in Vietnam can be improved". They are coded EC1, EC2, EC3, and EC4.

#### **4.3.6** Purchase intention (PI)

Four items measuring purchase intention were adopted using measurement scale from Asif et al. (2018) and Yadav and Pathak (2016a). These items were designed to capture respondents' intention to purchase organic food: "I am willing to purchase organic food while shopping; I intend to purchase organic food; I will consider purchasing organic food; I will make an effort to buy organic food in the near future". They are labelled PI1, PI2, PI3, and PI4.

The table below summarizes the measurement scales of all constructs for this study:

Table 4.3: Measurement scales for this thesis

Construct	Code	Indicator	Source
	ATT1	I think that organic food purchasing is interesting.	
	ATT2	I think that organic food purchasing is a good idea.	A sif ot al
Attitude	ATT3	I think that organic food purchasing is important.	Asif et al. (2018); Yaday and
(ATT)	ATT4	I think that organic food purchasing is beneficial.	Pathak (2016a)
	ATT5	I think that organic food purchasing is wise choice	(2010a)
	ATT6	I think that organic food purchasing is favorable.	
Subjective Norms	SN1	My family thinks that I should buy organic food	Asif et al. (2018);
(SN)	SN2	Most people I value would buy organic food	Yadav and

	SN3	Most people important to me think that I should buy organic food.	Pathak (2016a)
	SN4	My close friends think that I should buy organic food.	
Perceived	PBC1	If I wanted to, I could buy organic food	Asif et al. (2018);
Behavioral Control	PBC2	I think it is easy for me to buy organic food.	Yadav and Pathak
(PBC)	PBC3	It is mostly up to me whether or not to buy organic food.	(2016a)
	EC1	Vietnam's environment is my major concern.	
Environmental	EC2	I am worried about the worsening of the quality of Vietnam's environment.	(K. Lee, 2008; H. V.
Concern (EC)	EC3	I am emotionally involved in environmental protection issues in Vietnam	Nguyen et al., 2021; Pham et al., 2018)
	EC4	I often think about how the environmental quality in Vietnam can be improved	2018)
Darter	PI1	I am willing to purchase organic food while shopping	Asif et al.
Purchase	PI2	I intend to purchase organic food	(2018);
Intention (PI)	PI3	I will consider purchasing organic food	Yadav and Pathak
(11)	PI4	I will make an effort to buy organic food in the near future	(2016a)

Source: Author

# 4.4 Method of analysis

# 4.4.1 Analysis by SPSS

After data collection completion, the data was transferred to excel file and then SPSS for coding and check missing and error data. For the pilot test, the IBM SPSS (v.22) was used to analyze the data. The descriptive statistic was used to access participants' demographic characteristics. Cronbach's Alpha Coefficient values (>0.7) were applied for each factor to assess the questionnaire's internal consistency, or reliability (Hair et al., 2013). Kaiser Meyer Olkin (KMO) Bartlett's test of Sphericity was then used to assess the reliability of the survey. From 0 to 1, the KMO statistic represents the degree to which each variable in a set can be perfectly predicted by the other variables. Values between 0.5 and 0.7

are considered acceptable, while values between 0.7 and 0.8 are considered good (Hair et al., 2013).

#### 4.4.2 Analysis by Smart PLS-SEM

The structural model was put through its paces using SEM in order to evaluate its overall fit (Gefen et al., 2000). Direct relationships between independent variables and dependent variable), as well as moderating effects of income and environmental concern were hypothesized using this method. The Smart PLS analysis tool will be analyzed assessment constructs which comprise the evaluation of indicator reliability, internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2010).

Internal consistency reliability indicates that the survey results are accurate and consistent with the actual data, and that the reliability of the scale used to measure that variable is high. The first thing that must be checked is the internal consistency reliability. Cronbach's alpha is an index of internal consistency used to assess the consistency of results when there is some degree of autocorrelation among the variables of interest. The significance of all variables is taken into account by Cronbach's alpha. Hair et al. (2017) states that when assessing the reliability of a research scale, both the composite reliability (CR) and the total variance extracted AVE (average variance extracted) of the variables in the observed variable are taken into account. For a scale's reliability to be considered adequate, it needs to have an AVE of at least 0.5 and a CR coefficient of at least 0.7 (Hulland, 1999).

In order to evaluate convergent validity, it is necessary to determine how strongly various indicators of the same construct are related to one another. Convergent validity can be established by looking at the indicator's factor loading, composite reliability (CR), and the average variance extracted (AVE).

The observed variable factor loadings and the average extracted variance are used to calculate a convergence value. Research by Hair et al. describes a systematic procedure for analyzing data that conforms to the steps of reflective model analysis (Hair et al., 2017). Any observable variables with an outer loading of less than 0.4 will be eliminated, and any with a loading factor of between 0.4 and 0.7 may also be eliminated if doing so improves the statistical criteria to the required level (Hair et al., 2017).

For discriminant validity, this study uses Fornell-Lacker criterion (Fornell & Larcker, 1981). This method compares the square root of the average variance extracted (AVE) with the correlation of latent constructs (Hair et al., 2017). It is expected that a latent construct will be better able to explain the variance of its own indicator than the variance of other latent constructs. To that end, researchers expect the AVE square root of each latent construct to be greater significant than its correlations with other latent constructs. In addition to the correlation between traits, the Heterotrait-Monotrait (HTMT) ratio is used to evaluate discriminant

validity. Based on a Monte Carlo simulation analysis, Henseler et al. (2015) proposed the superior performance of HTMT, finding that it outperforms 97% to 99% of the cross-loadings criterion (0.0%) and the Fornell-Lacker technique (20.82%) in terms of specificity and sensitivity. Discriminant validity is low if the HTMT score is near to 1. When applying the HTMT as a standard, it must be compared to some sort of threshold. The HTMT's discriminant validity is said to be lacking if its value is greater than this threshold.

Moreover, the Smart PLS analysis tool will be analyzed the structural model assessment with Path Coefficients analysis. The PLS algorithm looked at how independent and dependent variables were related to each other. The significance and t-statistics for all pathways were tested using the PLS bootstrapping method. T-tests were used to see how significant each association was. Bootstrapping, as defined by Hair et al. (2017), is an iterative sampling strategy for estimating standard error without assuming a forwarding distribution. The bootstrapped estimates are close to the true data normalcy. The significance of the t-statistic for the path coefficients may be computed with it.

Smart PLS analysis tool will do multicollinear analysis as a last step. As stated by Hair et al. (2017), a VIF of 2 or less indicates excellent results and the absence of multicollinearity, whereas a VIF of 2 to 5 indicates moderate results with some correlation but not too much. Contrarily, when VIF is more than 5, a strong relationship is seen. In addition, the endogenous structure was taken into consideration by calculating the total explanatory variance using the coefficient R<sup>2</sup>. Effect size f<sup>2</sup> is the coefficient to evaluate the effect of each independent variable on the dependent variable. f<sup>2</sup> will have the proposed thresholds to compare the order of impact of the independent variable on the dependent variable(Hair et al., 2013). For weighing the significance of various factors, Cohen (1988) advocated the use of the f<sup>2</sup> index table. Blindfolding and predictive relevance (Q2) is used to strengthen and confirm for the same aim of explanation and prediction, even though the size of R<sup>2</sup> is commonly employed as a criteria to assess the predictive validity of the PLS-SEM model (Chin, 2010). Using the model and PLS-SEM settings, it demonstrates how well the original data can be recreated (Fornell & Larcker, 1981).

#### 4.4.3 Moderation relationship analysis

The moderation effects of income and environmental concern on the relationship between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention will be analyzed by Smart PLS. In this thesis, SPSS v23 with plugin of process of Hayes is applied to analysis of three-way interactive effect of environmental concern, income, attitude on purchase intention.

#### 4.5 Pilot-test

Saunders et al. (2017) state that prior to using the questionnaire to collect data and it should be pilot tested. They point out the purpose of the pilot test is to refine the questionnaire so that the respondents will have no problems in answering the questions and also there will be no problems in recording the data.

Additionally, after identifying preexisting theory and testing the questionnaire design, a Pilot-test was implemented. The reliability and validity of the questions were checked. The researcher ran a preliminary study to cut down on participant fatigue and waste. The data for the pilot test began arriving in April of 2022. Saunders et al. (2017) state that the minimum number for a pilot study is 10. This study uses the pilot study of 50 samples.

As a result, Excel was used to create codes and conduct analyzes of the data for the preliminary examination. SPSS (v.23) was used to process and alter the data for analysis of construct reliability. The descriptive analysis for the pilot test is illustrated as follows:

Table 4.4: Descriptive analysis for a pilot study

Items	Sample (n=50)	Percentage (%)
Gender		
Male	23	46
Female	27	54
Age	- 1	1
From 22- 28 years old	16	32
From 29- 35 years old	22	44
From 36- 42 years old	12	24
Marital Status	•	,
Married	25	50
Single	24	48
Divorced/Widow	1	2
Family Size	- 1	
From 2-3	28	56
From 4-5	18	36
Higher than 5	4	8
<b>Employment Status</b>	1	1
Full-time job	35	70

Part-time job	8	16
Student	0	0
Housewife	0	0
Business	7	14
Education		
Diploma	7	14
Bachelor degree	32	64
Postgraduate	11	22
Personal Income		
Less than 10 million	1	2
From 10 to 20 million	17	34
From 20 to 30 million	15	30
From 30 to 40 million	8	16
More than 40 million	9	18
City of Living		
Ho Chi Minh City	20	40
Da Nang City	14	28
Ha Noi City	16	32

Source: The results from SPSS

The Cronbach alpha, KMO analysis for independents variables and dependent variable for all construct are presented as follows:

Table 4.5: Reliability and KMO for pilot study

Variable	Measurement Item	Mean	Std.	Cronbach's Alpha	KMO	Note	
	ATT1	4.18	0.71969				
Attitude	ATT2	4.24	0.82214	0.935	0.025		
(ATT)	ATT3	3.88	0.93982				
	ATT4	3.78	0.97499		0.796	Independent variables	
	SN1	4.04	0.8797			variables	
Subjective Norms (SN)	SN2	4.08	0.80407	0.753			
14011115 (514)	SN3	3.62	0.98747				

	SN4	4.04	0.9026			
Perceived	PC1	4.26	0.77749			
Behavioral	PC2	3.76	0.87037	0.815		
Control (PBC)	PC3	3.8	0.88063			
Environmental concern (EC)	EC1	3.86	0.88086			
	EC2	3.8	0.80812	0.885		
	EC3	4.06	0.9564			
	EC4	4.06	0.9775			
	PI1	4	0.88063			
Purchase Intention (PI)	PI2	3.6	1.04978	0.055	0.752	Dependent
	PI3	3.76	0.95959	0.855	0.753	variable
	PI4	3.76	1.0214			

Source: The results from SPSS

All constructs with Cronbach alpha are greater than 0.7. The KMO of the independent factors in the EFA was 0.796, while the dependent variables were 0.753. As a result, all items were acceptable (>0.5) and statistically significant (Sig.:0.000; p<0.0005).

# 5. RESULTS

# 5.1 Descriptive statistic

Table 5.1: Descriptive statistic

Items	Sample (n=384)	Percentage (%)
Gender	1	
Male	199	51.8
Female	185	48.2
Age		
From 22- 28 years old	61	15.9
From 29- 35 years old	165	43.0
From 36- 42 years old	158	41.1
<b>Marital Status</b>	1	
Married	276	71.9
Single	105	27.3
Divorced/Widow	3	0.8
<b>Family Size</b>	1	
From 2-3	146	38.0
From 4-5	149	38.8
Higher than 5	89	23.2
<b>Employment Status</b>	1	
Full-time job	298	77.6
Part-time job	26	6.8
Student	2	0.5
Housewife	7	1.8
Business	51	13.3
Education	1	1
Diploma	20	5.2
Bachelor degree	297	77.3
Postgraduate	67	17.4
<b>Personal Income</b>	1	1

Less than 10 million	23	6.0				
From 10 to 20 million	43	11.2				
From 20 to 30 million	109	28.4				
From 30 to 40 million	144	37.5				
More than 40 million	65	16.9				
City of Living						
Ho Chi Minh City	150	39.1				
Da Nang City	103	26.8				
Ha Noi City	131	34.1				

Source: The results from SPSS

The data collected from online is 384 samples. This is how the men and women compare: 51.8 percent of the people who answered the survey are men, and 48.2 percent are women. The survey shows the balance between men and women. The millennials range in age from 22 to 42 years old. In which most respondents are between the ages of 29 and 35, with 43% (165 respondents). 41.1 percent of respondents (158 people) are between the ages of 36 and 42, and 15.9 percent are between the ages of 22 and 28. (61 respondents). Marital statuses are married shows the most percentage (71.9%), followed by single (27.3 percent with 105 respondents). Most of the respondents who answered had families with 4-5 members (38.8% or 149 respondents). The percentage of respondents who has families with 2–3 members is 38.0% (146 respondents), and then families with higher 5 members is 23.2% (89 respondents). Regarding employment status, the most common jobs are having a full-time job (77.6%, 298 respondents) and business (13.3%, 51 respondents). Followed by part-time job (6.8 percent with 26 respondents), housewife (1.8 percent with 7 respondents), student (0.5 percent with 2 respondents). The majority of respondents that have an education with bachelor degree is 77.3 percent (with 297 respondents). Followed by the percentage of respondents with postgraduate degree (17.4 percent with 67 respondents), and diploma (5.2 percent with 20 respondents). Regarding monthly income, respondents with a monthly income from 30 to 40 million VND account for the most (37.5 percent with 144 respondents), followed by monthly income from 20 to 30 million VND (28.4 percent with 109 respondents), and respondents with monthly income more than 40 million VND (16.9 percent with 65 respondents). The respondents have a monthly income from 10 to 20 million VND (11.2 percent with 43 respondents), and less than 10 million (6.0 percent with 23 respondents). In terms of city of living, the respondents from Ho Chi Minh City are 150 respondents (with 39.1 percent), followed by the respondents from Ha Noi (34.1 percent with 131 respondents), and Da Nang City (26.8 percent with 103 respondents).

#### 5.2 Assessment of measurement model

According to Hair et al. (2010), the assessment constructs comprise the evaluation of indicator reliability, internal consistency reliability, convergent validity, and discriminant validity.

#### 5.2.1 Internal consistency reliability

Internal consistency reliability indicates that the survey results are accurate and consistent with the actual data and that the reliability of the scale used to measure that variable is high. The first thing that must be checked is the internal consistency reliability. Cronbach's alpha is an index of internal consistency used to assess the consistency of results when there is some degree of autocorrelation among the variables of interest. The significance of all variables is taken into account by Cronbach's alpha. Hair et al. (2017) states that when assessing the reliability of a research scale, both the composite reliability (CR) and the total variance extracted AVE (average variance extracted) of the variables in the observed variable are considered. For a scale's reliability to be considered adequate, it needs to have an AVE of at least 0.5 and a CR coefficient of at least 0.7 (Hulland, 1999). The results of the overall reliability of the scale are presented in Table 5.2.

Table 5.2: Internal consistency reliability for this study

Construct	Cronbach's Alpha	Rho_A	Composite Reliability	Average Variance Extracted (AVE)
Attitude	0.907	0.910	0.928	0.683
Subjective norms	0.865	0.881	0.907	0.710
Perceived behavioral control	0.813	0.818	0.889	0.727
Environmental concern	0.731	0.740	0.830	0.550
Purchase intention	0.855	0.855	0.902	0.696

Source: The results from SmartPLS

The findings demonstrate that across all constructs, there is a high value for the composite reliability (CR), with values ranging from 0.830 to 0.928. Cronbach's alpha is found in the range of 0.731 to 0.907, while the RhoA can be found in the

interval of 0.740 to 0.910. This finding demonstrates the reliability of the scale is high.

# 5.2.2 Convergent validity

In order to evaluate convergent validity, it is necessary to determine how strongly various indicators of the same construct are related to one another. Convergent validity can be established by looking at the indicator's factor loading, the indicator's composite reliability (CR), and the average variance extracted (AVE).

The observed variable factor loadings and the average extracted variance are used to calculate a convergence value. Research by Hair et al. describes a systematic procedure for analyzing data that conforms to the steps of reflective model analysis (Hair et al., 2017). Any observable variables with an outer loading of less than 0.4 will be eliminated, and any with a loading factor of between 0.4 and 0.7 may also be eliminated if doing so improves the statistical criteria to the required level (Hair et al., 2017). The factor loadings of all constructs are presented as follows:

Table 5.3: Factor loading

Construct	Items	Code	Loading
	I think that organic food purchasing		
	is interesting.	ATT1	0.800
	I think that organic food purchasing		
	is a good idea.	ATT2	0.826
	I think that organic food purchasing		
Attitude	is important.	ATT3	0.840
Attitude	I think that organic food purchasing		
	is beneficial.	ATT4	0.798
	I think that organic food purchasing		
	is wise choice	ATT5	0.846
	I think that organic food purchasing		
	is favorable.	ATT6	0.849
	My family thinks that I should buy		
	organic food	SN1	0.799
	Most people I value would buy		
Subjective	organic food	SN2	0.850
norms	Most people important to me think		
	that I should buy organic food.	SN3	0.841
	My close friends think that I should		
	buy organic food.	SN4	0.877
	If I wanted to, I could buy organic		
	food	PBC1	0.853

Perceived	I think it is easy for me to buy		
	organic food.	PBC2	0.856
behavioral	It is mostly up to me whether or not		
control	to buy organic food.	PBC3	0.849
	Vietnam's environment is my major		
	concern.	EC1	0.695
	I am worried about the worsening of		
	the quality of Vietnam's		
Environmental	environment.	EC2	0.737
	I am emotionally involved in		
concern	environmental protection issues in		
	Vietnam	EC3	0.785
	I often think about how the		
	environmental quality in Vietnam		
	can be improved	EC4	0.747
	I am willing to purchase organic		
	food while shopping	PI1	0.825
Purchase	I intend to purchase organic food	PI2	0.838
intention	I will consider purchasing organic		
	food	PI3	0.812
I will make an effort to buy organic			
	food in the near future	PI4	0.863

Source: The results from SmartPLS

All of the observed variables had an factor loading greater than 0.4 (Table 5.3), ranging from 0.696 to 0.877. Therefore, it can be argued that there is convergence among the values of the observed variables in the elements of the study model.

# 5.2.3 Discriminant validity

To assess discriminant validity, this study uses Fornell-Lacker criterion (Fornell & Larcker, 1981). This method compares the square root of the average variance extracted (AVE) with the correlation of latent constructs (J. F. Hair et al., 2017). It is expected that a latent construct will be better able to explain the variation of its own indicator than the variance of other latent constructs. Accordingly, the AVE square root for each latent construct ought to be larger than the value of the correlations among the different latent constructs. Heterotrait-to-monotrait (HTMT) ratio of correlation is another method for assessing discriminant validity. Through a Monte Carlo simulation analysis, Henseler et al. (2015) presented the improved performance of this technique and discovered that HTMT achieves greater specificity and sensitivity rates (97–99%) than the cross-loadings criteria (0.00%) and Fornell–Lacker (20.82%). Closeness to 1 on the HTMT suggests poor discriminant validity. Criteria based on the HTMT require evaluating results in relation to an established standard. A lack of discriminant validity is shown if the HTMT value is greater than this threshold.

Table 5.4: Discriminant validity (Fornell - Larcker criterion)

	Attitude	Environmental concern	Perceived behavioral control	Purchase intention	Subjective norms
Attitude	0.827				
Environmental concern	0.068	0.847			
Perceived behavioral control	0.059	0.221	0.613		
Purchase intention	0.405	0.073	0.233	0.842	
Subjective norms	0.071	0.509	0.218	0.061	0.839

Source: The results from SmartPLS

Table 5.4 shows that all square roots of AVE with coefficients greater than 0.5 (from 0.613 to 0.847) meet the criteria established by Fornell and Larcker. When comparing components in the same column, the square root of AVE always has a greater value than the correlation coefficient. Since this is the case, it follows that all factors have discriminant validity.

Additionally, the HTMT value should be below 0.9, as proposed by Henseler et al. (2015). According to Table 5.5, all of the HTMT indices for the various factors are more than 0.9. As a result, the criteria for discriminant validity have been defined.

Table 5.5: Discriminant validity- Heterotrait - Monotrait Ration (HTMT)

	Attitude	Environmental concern	Perceived behavioral control	Purchase intention	Subjective norms
Attitude					
Environmental	0.135				
concern	0.133				
Perceived	0.20.5	0.00			
behavioral control	0.396	0.22			
Purchase intention	0.561	0.23	0.531		
Subjective norms	0.454	0.128	0.366	0.472	

Source: The results from SmartPLS

#### 5.3 Structural model assessment

#### **5.3.1** Path coefficients

The PLS algorithm looked at how independent and dependent variables were related to each other. The PLS bootstrapping function was used to test the significance level and t-statistics for all paths. Based on the results of the t-tests, the level of significance of each relationship was found. According to Hair et al. (2017), bootstrapping is an iterative sampling technique to estimate standard error without forwarding distributional assumptions. The bootstrap results approximate the normality of the data. It is used to calculate the significance of the t-statistic related to the path coefficients.

To determine if the assumptions and the underlying structural model hold up, the path coefficient between two latent variables was calculated. The path coefficient in Table 5.6 show supported and not supported hypotheses. The study showed that the supported hypotheses had path coefficient values ( $\beta$ ) ranging from 0.115 to 0.289, was significant at the 0.05 level, and pointed in the positive direction.

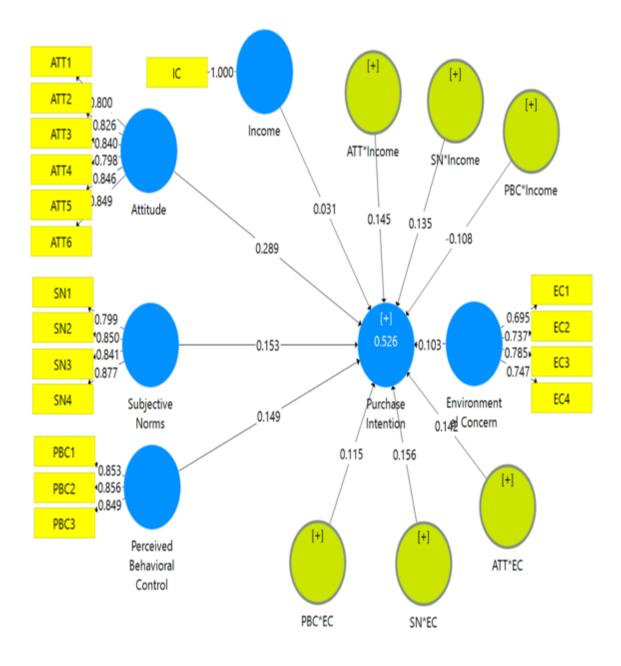


Fig. 5.1: Path coefficients for the study

Source: The results from SmartPLS

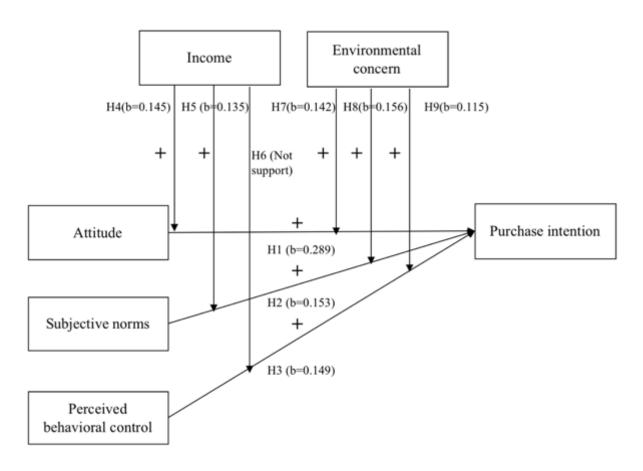


Fig. 5.2: Hypotheses testing results (From H1 to H9)

Source: Author

Table 5.6: Hypotheses testing

Hy.	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values	Result
H1	Attitude → Purchase intention	0.289	0.301	0.056	5.119	<0.001	Supported
H2	Subjective norms  →Purchase intention	0.153	0.156	0.042	3.641	<0.001	Supported
НЗ	Perceived behavioral  control → Purchase  intention	0.149	0.146	0.048	3.081	0.002	Supported
H4	Attitude*Income→Purc hase intention	0.145	0.14	0.063	2.317	0.021	Supported

Н5	Subjective norms*Income → Purchase intention	0.135	0.134	0.045	2.968	0.003	Supported
Н6	Perceived behavioral control*Income → Purchase intention	-0.108	-0.1	0.056	1.927	0.055	Not Supported
Н7	Attitude*Environmental  concern →Purchase  intention	0.142	0.136	0.056	2.546	0.011	Supported
Н8	Subjective norms  *Environmental concern  → Purchase intention	0.156	0.151	0.048	3.271	0.001	Supported
Н9	Perceived behavioral  control* Environmental  concern → Purchase  intention	0.115	0.111	0.046	2.521	0.012	Supported

Source: The results from SmartPLS

The structural model is applied to test research hypotheses, with the value t > 1.96, the test is statistically significant at the 5% level. The results of the table 5.5 of path coefficients and T-values show that with nine hypotheses being tested, eight hypotheses are supported at 5% significance level (because p value < 0.05). Hypothesis H6: Income positively affects the relationship between perceived behavioral control and purchase intention is not supported because the p-value > 0.05(p-value=0.055). The table 5.6 shows the hypotheses testing as follows

**Hypothesis H1**: Attitude positively affects purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.289, t=5.119, p value <0.01).

**Hypothesis H2**: Subjective norms positively affect purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.153, t=3.641, p value <0.01).

**Hypothesis H3**: Perceived behavioral control positively affects purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.149, t=3.081, p value=0.002<0.01).

**Hypothesis H4**: The higher income, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.145, t=2.317, p value=0.021<0.05).

**Hypothesis H5**: The higher income, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.135, t=2.968, p value=0.003<0.01).

**Hypothesis H6**: The higher income, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =-0.108, t=1.927, p value=0.055>0.05)  $\rightarrow$  **Not supported.** 

**Hypothesis H7**: The higher environmental concern, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.142, t=2.546, p value=0.011<0.05).

**Hypothesis H8**: The higher environmental concern, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.156, t=3.271, p value=0.001<0.01).

**Hypothesis H9**: The higher environmental concern, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam ( $\beta$ =0.115, t=2.521, p value=0.012<0.05).

#### **5.3.2** Moderation effect of income

The results from table 5.6 show the interaction of attitude and income has positive effect on purchase intention. With ( $\beta$ =0.145,t=2.317, p value=0.021<0.05), the result supports the hypothesis H4, which presents that income plays a role as a moderator for the relationship between attitude and purchase intention. In other words, income increases the positive effect of the relationship between attitude and purchase intention (see Fig 5.3).

Similarly, the interaction of subjective norms and income also has a statistically significant effect on purchase intention ( $\beta$ =0.135, t=2.968, p value=0.003<0.01). The result supports the hypothesis H5. In this case, income also increases the positive effect of the relationship between subjective norms and purchase intention (see Fig 5.4).

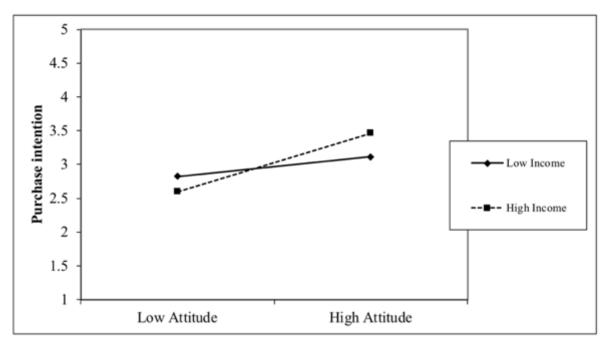


Fig. 5.3: Effect of interaction between attitude and income on purchase intention

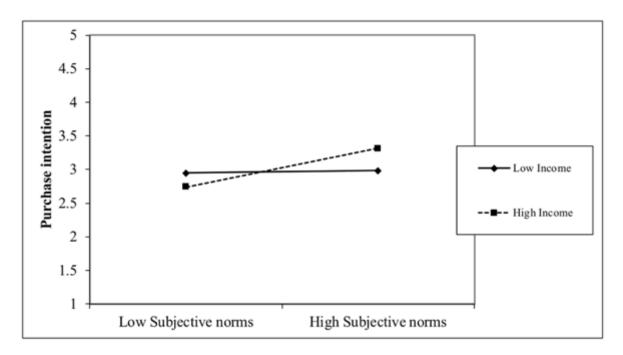


Fig. 5.4: Effect of interaction between subjective norms and income on purchase intention

#### 5.3.3 Moderation effect of environmental concern

The result from table 5.6 show the interaction of attitude and environmental concern has positive effect on purchase intention. With ( $\beta$ =0.142, t=2.546, p value=0.011<0.05), the result supports the hypothesis H7, which presents that environmental concern plays a role as a moderator for the relationship between attitude and purchase intention. In other words, environmental concern increases

the positive effect of the relationship between attitude and purchase intention (see Fig 5.5).

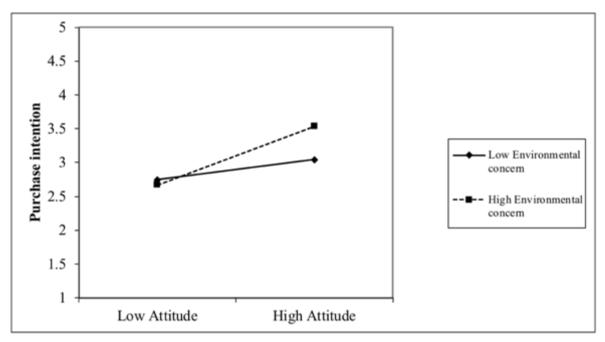


Fig. 5.5: Effect of interaction between attitude and environmental concern on purchase intention

Similarly, the interaction of subjective norms and environmental concern also has a statistically significant effect on purchase intention ( $\beta$ =0.156, t=3.271, p value=0.001<0.01). The result supports the hypothesis H8. In this case, environmental concern also increases the positive effect of the relationship between subjective norms and purchase intention (see Fig 5.6).

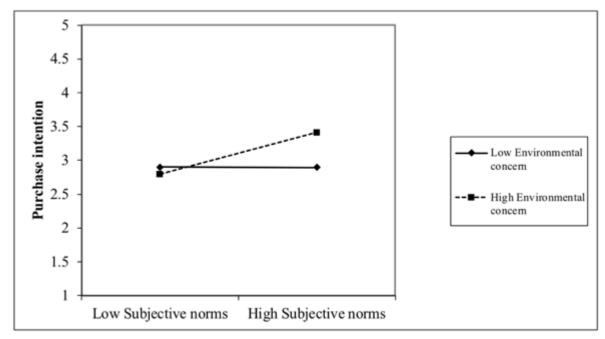


Fig. 5.6: Effect of interaction between subjective norms and environmental concern on purchase intention

In addition, the interaction of perceived behavioral control and environmental concern also has a statistically significant effect on purchase intention ( $\beta$ =0.115, t=2.521, p value=0.012<0.05). The result supports the hypothesis H8. In this case, environmental concern also increases the positive effect of the relationship between perceived behavioral control and purchase intention (see Fig 5.7).

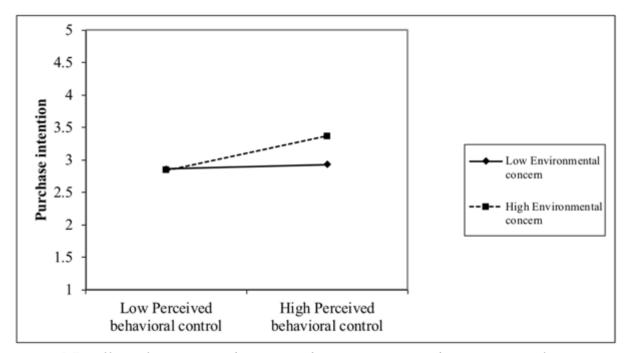


Fig. 5.7: Effect of interaction between subjective norms and environmental concern on purchase intention

#### **5.3.4** Three-way interactive effect

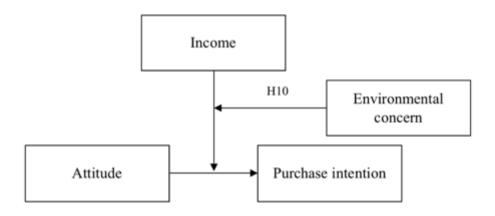


Fig. 5.8: Three-way interactive effect

Macro process in SPSS is applied for three-way interactive effect analysis. The moderation model is model 3 of Andrew (2022). The three-way interactive effect was used to clarify the relationship between environmental concern, income, attitude and purchase intention based on the theory of planned behavior. With R<sup>2</sup>

= 46.16% (F = 16.4284, p value < 0.05) (see Table 5.7) and  $\Delta R^2$  of 2.01% (p value < 0.05) (see Table 5.8), the model is significant. Moreover, the three-way interactive effect is significant and positive. Thus, the **hypothesis H10** is accepted.

Table 5.7: Table summary

R	R square	MSE	F	df1	df2	p
0.6794	0.4616	0.2062	16.4284	19.0000	364.0000	< 0.001

Source: The results from SPSS

Table 5.8: Three-way interaction: Attitude\*Income\*Environmental concern

	R <sup>2</sup> change	F	df1	df2	p
ATT*IC*EC	0.0201	3.3897	4.0000	364.0000	0.0097

Source: The results from SPSS

Table 5.9: Conditional effects on the value of the moderators

Moderators			Th	e focal predictors
Income	Environmental concern	Effects (b)	P value	Conclusion
Less	Low	-0.7856	0.0000	ATT predicts PI
than 10	Average	-0.1147	0.3366	ATT does not predict PI
million VND	High	0.3885	0.0244	ATT predicts PI
10-20	Low	-0.0104	0.9418	ATT does not predict PI
million	Average	0.4732	0.0055	ATT predicts PI
VND	High	0.8358	0.0014	ATT predicts PI
20-30	Low	-0.0088	0.9379	ATT does not predict PI
million	Average	0.4482	0.0000	ATT predicts PI
VND	High	0.7909	0.0000	ATT predicts PI
30-40	Low	0.2985	0.0003	ATT predicts PI
million	Average	0.5362	0.0000	ATT predicts PI
VND	High	0.7145	0.0000	ATT predicts PI
More	Low	0.5469	0.0007	ATT predicts PI
than 40	Average	0.7061	0.0000	ATT predicts PI
million VND	High	0.8255	0.0000	ATT predicts PI

Source: The results from SPSS

As illustrated above, there is the interaction of attitude, income, environmental concern on purchase intention. However, different conditions lead to different effects:

With the condition of income less than 10 million VND and low value of environmental concern, attitude **has a negative effect** on purchase intention (b=0.78, p value <0.01). With the condition of income less than 10 million and average value of environmental concern, attitude **has no effect** on purchase intention (b=-0.11, p value =0.33>0.05). With the condition of income less than 10 million and high value of environmental concern, attitude has a positive effect on purchase intention (b=0.3885, p value =0.0244<0.05).

With the condition of income from 10 to 20 million VND and low value of environmental concern, attitude **has no effect** on purchase intention (b=-0.0104, p=0.9418>0.05). With the condition of income from 10 to 20 million VND and average value of environmental concern, attitude has a positive effect on purchase intention (b=0.4732, p value =0.0055<0.01). With the condition of income from 10 to 20 million VND and high value of environmental concern, attitude has **a strongest positive effect** on purchase intention (b=0.8358, p value =0.0014<0.01).

With the condition of income from 20 to 30 million VND and low value of environmental concern, attitude **has no effect** on purchase intention (b=-0.0088, p value =0.9379>0.05). With the condition of income from 20 to 30 million VND and average value of environmental concern, attitude has a positive effect on purchase intention (b=0.4482, p=0.000<0.01). With the condition of income from 20 to 30 million VND and high value of environmental concern, attitude has a positive effect on purchase intention (b=0.7909, p value <0.001) (**the third strongest influence**).

With the condition of income from 30 to 40 million VND and low value of environmental concern, attitude has a positive effect on purchase intention (b=0.2985, p value <0.001). With the condition of income from 30 to 40 million VND and average value of environmental concern, attitude has a positive effect on purchase intention (b=0.5362, p value <0.001). With the condition of income from 30 to 40 million VND and high value of environmental concern, attitude has a positive effect on purchase intention (b=0.7145, p value <0.001).

With the condition of income more than 40 million VND and low value of environmental concern, attitude has a positive effect on purchase intention (b=0.5469, p value <0.001). With the condition of income more than 40 million VND and average value of environmental concern, attitude has a positive effect on purchase intention (b=0.7061, p value <0.001). With the condition of income more than 40 million VND and high value of environmental concern, attitude has a positive effect on purchase intention (b=0.8255, p value <0.001) (**the second strongest influence**).

To sum up, the three strongest influences of attitude on purchase intention toward organic food are the condition of the high value of environmental concern and income level from 10 million to 20 million VND (the strongest influence); income level of more than 40 million VND (the second strongest influence); income level from 20 to 30 million VND (the third strongest influence). Under the condition of income of less than 30 million VND and low value of environmental concern, attitude did not predict purchase intention.

#### 5.3.5 Multicollinearity evaluation

According to Hair et al. (2017), VIF < 2 is good and there is no multicollinearity, if 2 < VIF < 5, it is acceptable and shows a moderate but not too much correlation. In contrast, VIF > 5, there is a high correlation.

The results of testing VIF (inner VIF values) of the structural model show that the ranges from 1.093 to 1.553 are all less than 2, so there is no phenomenon of multicollinearity, and it does not affect the results of hypothesis testing.

Table 5.10: Multicollinearity evaluation (VIF)

Construct	VIF
Attitude	1.448
Attitude*Income	1.552
Attitude*Environmental concern	1.419
Subjective norms	1.335
Subjective norms*Income	1.553
Subjective norms *Environmental concern	1.367
Perceived behavioral control	1.334
Perceived behavioral control*Income	1.315
Perceived behavioral control* Environmental concern	1.452
Income	1.119
Environmental concern	1.093

Source: The results from SmartPLS

#### **5.3.6** Coefficient of determination (R2)

Table 5.11: Coefficient of determination (R<sup>2</sup>)

	R Square	R Square Adjusted
Purchase		
intention	0.526	0.512

Source: The results from SmartPLS

To take into consideration the endogenous structure, the coefficient R2 was utilized to quantify the total explanatory variance. The corrected coefficient of determination R<sup>2</sup> for the model explaining endogenous purchase intent based on exogenous variables is 52.6%, as shown in Table 5.11. This finding demonstrates the model's strong predictive ability.

#### 5.3.7 Effect size f2

Effect size  $f^2$  is the coefficient to evaluate the effect of each independent variable on the dependent variable.  $f^2$  will have the proposed thresholds to compare the order of impact of the independent variable on the dependent variable (Hair et al., 2013). To assess the significance of independent variables, Cohen (1988) introduced the index table f2 as follows:

 $f^2 < 0.02$ : the level of effect is extremely small or no effect

 $0.02 \le f^2 < 0.15$ : small effect

 $0.15 \le f^2 < 0.35$ : medium effect

 $f^2 \ge 0.35$ : high effect

Table 5.12: Effect size f<sup>2</sup>

Relationships	$\mathbf{f}^2$	Effect
Attitude→ Purchase intention	0.125	Small
Subjective norms→ Purchase intention	0.037	Small
Perceived behavioral control → Purchase intention	0.035	Small
Attitude*Income→ Purchase intention	0.035	Small
Subjective norms*Income → Purchase intention	0.034	Small
Perceived behavioral control*Income→ Purchase	0.019	Extremely
intention	0.017	small
Attitude*Environmental concern→ Purchase	0.031	Small
intention	0.051	

Subjective norms *Environmental concern→	Environmental concern → 0.049	
Purchase intention	0.049	
Perceived behavioral control* Environmental	0.022	Small
concern→ Purchase intention	0.022	

Source: The results from SmartPLS

The effect size  $f^2$  for relationships (H1, H2, H3, H4, H5, H7, H8, H9) of this thesis are small (from 0.022 to 0.125). With a small effect size, it indicates that a research finding has a small practical significance. The effect size  $f^2$  of the relationship (H6: Perceived behavioral control\*Income  $\rightarrow$  Purchase intention) is extremely small or no effect (0.019). This hypothesis H6 is not supported with the above result illustration.

#### 5.3.8 Blindfolding and predictive relevance Q2

Although the magnitude of R<sup>2</sup> is widely used as a criterion to evaluate the predictive validity of the PLS-SEM model; For the same reasons of explanatory and predictive power, the blindfolding and predictive relevance (Q<sup>2</sup>) method is also employed (Chin, 2010). Evidence of how effectively the data can be recreated using the model and PLS-SEM parameters (Fornell & Larcker, 1981).

Table 5.13: Blindfolding and predictive relevance Q<sup>2</sup>

			Q² (=1-
	SSO	SSE	SSE/SSO)
Attitude	2292	2292	
Attitude*Income	2292	2292	
Attitude*Environmental concern	9168	9168	
Subjective norms	1528	1528	
Subjective norms*Income	1528	1528	
Subjective norms *Environmental concern	6112	6112	
Perceived behavioral control	1146	1146	
Perceived behavioral control*Income	1146	1146	
Perceived behavioral control* Environmental concern	4584	4584	

Income	382	382	
Environmental concern	1528	1528	
Purchase intention	1528	983.753	0.356

Source: The results from SmartPLS

The predicted value  $Q^2$  is 0.02; 0.15 and 0.35 are small, medium, and strong, respectively (Hair et al., 2017). Thus, the independent variables attitude (ATT), subjective norms (SN), perceived behavioral control (PBC), and the moderator variables income (IC), environmental concern (EC) predict strongly related ( $Q^2 = 0.356 > 0.15$ ) to the variable purchase intention (PI).

#### 6. DISCUSSION

From the results, attitude, subjective norms, perceived behavioral control were found to have a significant correlation on the purchase intention toward organic food of millennials in Vietnam.

Furthermore, there is the moderation effect of income, environmental concern to the relationship between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior. Finally, there is a three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam based on the theory of planned behavior

As can be seen in Table 6.1, brief summaries of the research hypotheses are included beside each study question. The empirical results supported all but one of the hypotheses (H6), while they confirmed the remaining hypotheses (H1, H2, H3, H4, H5, H7, H8, H9, and H10).

Table 6.1 Research questions and hypotheses

Researc	Research questions and Hypothesis Result			
Q1. How to predict and understand purchase intention of millennials				
toward o	organic food in Vietnam based on the theory of pl	lanned behavior?		
H1	Attitude positively affects purchase intention toward organic food of millennials in Vietnam.	Supported		
H2	Subjective norms positively affect purchase intention toward organic food of millennials in Vietnam.	Supported		
Н3	Perceived behavioral control positively affects purchase intention toward organic food of millennials in Vietnam.	Supported		
Q2. Is th	Q2. Is there a moderation effect of income on the relationship between			
	and purchase intention, subjective norms and pu	•		
perceive	d behavioral control and purchase intention of m	illennials toward		
organic food in Vietnam based on the theory of planned behavior?				
H4	The higher income, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.	Supported		

Н5	The higher income, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.	Supported
Н6	The higher income, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.	Not Supported
	ere a moderation effect of environmental concern	
	hip between attitude and purchase intention, sub e intention, perceived behavioral control and pur	
	als toward organic food in Vietnam based on the	
behavior	9	ν 1
Н7	The higher environmental concern, the higher positive effect of attitude on purchase intention toward organic food of millennials in Vietnam.	Supported
Н8	The higher environmental concern, the higher positive effect of subjective norms on purchase intention toward organic food of millennials in Vietnam.	Supported
Н9	The higher environmental concern, the higher positive effect of perceived behavioral control on purchase intention toward organic food of millennials in Vietnam.	Supported
Q4: Is the	ere a three-way interactive effect of income, envir	onmental concern,
	ude on purchase intention toward organic food based on the theory of planned behavior?	l of millennials in
Victiaiii	There is a three-way interactive effect of income,	
H10	environmental concern, attitude on purchase intention toward organic food of millennials in	Supported

Source: Author

Vietnam.

**Research Question 1:** How to predict and understand purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior?

Results from this study supported the theory of planned behavior. Purchase intention of millennials in Vietnam who are interested in organic food are influenced by their attitude, subjective norms, and perceived behavioral control. The results of the study support the theory of planned behavior as an appropriate theory for forecasting millennials' intention with respect to the purchasing of organic food in Vietnam. Previous study shows the confirmation that attitude,

subjective norms, and behavioral control toward organic food purchasing intention of the millennials in Vietnam are positive. The results is consistent with many researches of Magnusson et al. (2001), Arvola et al. (2008), Chen and Lobo (2012), Paul and Rana (2012), Chekima (2018), Xu et al. (2020), and in Vietnam (Pham et al., 2018; Nguyen et al., 2019; Minh & Nhan, 2020). Furthermore, the millennial generation is the most important group in Vietnam's workforce and the main consumer group to target. Because of this, they make a big difference in the market. Millennials and organic are likely to go together because millennials are an active generation that stays up-to-date with information and has a wide range of knowledge. Before using a product, do some research on it and be flexible to the new. So, organic food is one of the most important choices that Vietnamese millennials can make to make sure they eat healthy meals every day.

**Research Question 2:** Is there a moderation effect of income on the relationship between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior?

For question 2, this thesis illustrates the moderation effect of income on the relationship between attitude and purchase intention, subjective norms and purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior. This means that hypotheses H4 and H5 are supported. The association between attitude and purchase intention, subjective norms and purchase intention are not the same for all customers that are millennials. Instead, these relationships will change based on the income of millennial customers. The findings show that an increase in customers' income will increase the positive effect of the relationship between attitude and purchase intention, between subjective norms and purchase intention. Hypothesis H6 is not supported. There is not moderation effect of income on the relationship between perceived behavioral control and purchase intention. The finding shows that an increase in income will not affect the relationship between perceived behavioral control and purchase intention. According to Ajzen (1985), internal factors (individual differences, information, skills, and abilities, power of will) and external factors (time and opportunity, dependence on others) affect the perceived behavioral control. In this thesis, when income increases, the internal factors and external factors such as availability of organic food, location to buy organic food, ability to pay for organic food will not be affected. Thus, the relationship between perceived behavioral control and purchase intention is not affected when income increases. To sum up, when the increase in income, the positive effects of attitude to purchase intention, subjective norms to purchase intention will increase. This leads an increase the purchase intention regarding organic food.

**Research Question 3:** Is there a moderation effect of environmental concern on the relationship between attitude and purchase intention, subjective norms and

purchase intention, perceived behavioral control and purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior?

For question 3, this thesis illustrates the moderation effect of environment concern on the relationship between attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention of millennials toward organic food in Vietnam based on the theory of planned behavior. This means that hypotheses H7, H8, and H9 are supported. The association between attitude and purchase intention, subjective norms, perceived behavioral control and purchase intention are not the same for all customers that are millennials. Instead, these relationships will change based on the environmental concern of millennial customers. The findings show that an increase in customers' environmental concern will increase the positive effect of the relationship between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavioral control and purchase intention. From this result, it can be seen that Vietnamese millennials concerned about the environment and it will affect the purchase intention. To sum up, when the increase in environmental concern, the positive effects of attitude to purchase intention, subjective norms to purchase intention, perceived behavioral control will increase. This leads an increase the purchase intention regarding organic food.

**Research Question 4:** Is there the three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam based on the theory of planned behavior?

For the research question 4, this thesis illustrates the three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam based on the theory of planned behavior. However, different conditions lead to different effects. The interactive effects are different with different condition of income and environmental concern. With the condition of income less than 10 million VND and environmental concern is in low value, attitude has a negative effect on purchase intention. When millennial customers have income of less than 10 million and they don't concern much about the environment, they don't have intention to purchase organic food. With condition of income (less than 10 million, from 10 to 20 million VND, from 20 to 30 million VND) and the condition of environmental concern of low value, there is no three-way interactive effect of attitude, income, environmental concern on purchase intention.

With the income from 10 million to 30 million VND, and the environmental concern at average and high value, there is a three-way interactive effect of income, environmental concern, attitude on purchase intention. The interesting finding is that, under the condition of income from 10 to 20 million VND and environmental concern at high value, attitude has the strongest influence on

purchase intention. This means when the millennial customer has income from 10 to 20 million VND, and they concern very much about the environment, this significantly encourages them to have intention to purchase organic food.

With the income more than 30 million VND, there is the three-way interactive effect of income, environmental concern, attitude on purchase intention under all levels of environmental concern (low, average, and high). Under the condition of high value of environmental concern, attitude has strong effects on purchase intention toward organic food. This means that when the income of millennial customers increases and they concern very much about the environment, this condition significantly motivates them to purchase organic food in Vietnam.

The three strongest influences of attitude on purchase intention toward organic food are the condition of the high value of environmental concern and income level from 10 million to 20 million VND (the strongest influence); income level of more than 40 million VND (the second strongest influence); income level from 20 to 30 million VND (the third strongest influence). Under the condition of income of less than 30 million VND and low value of environmental concern, attitude did not predict purchase intention. These findings support significantly to the practical contributions.

#### 7. IMPLICATIONS

#### 7.1 Theoretical contributions

For the theoretical contribution, firstly, this thesis proved the application of theory of planned bahavior in the context of Vietnam. This theory is appropriate to investigate the intention to purchase organic food for millennials in Vietnam. The positive effects of attitude, subjective norms, perceived behavioral control on purchase intention regarding organic food has been proved in many researches. And the findings of this thesis show the same results for the context of Vietnamese millennials.

Moreover, this study gives the updating of the moderation effects of income. The findings illustrate the moderation of income on the relationships between attitude and purchase intention, between subjective norms and purchase intention. However, the interesting is that there is no moderation effect of income on the relationship between perceived behavioral control and purchase intention. The finding shows that an increase in income will not affect the relationship between perceived behavioral control and purchase intention.

Additionally, this thesis updates the moderation of environmental concern with the application of the theory of planned behavior. The presented findings show the moderation of environmental concern on the relationships between attitude and purchase intention, between subjective norms and purchase intention, between perceived behavioral control and purchase intention regarding organic food.

Last but not least, the three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food of millennials in Vietnam based on the theory of planned behavior will enrich the literature. The interesting is that with the condition of income and environmental concern at a very low value, attitude has a negative effect on purchase intention. When the income and environmental concern increase, the positive effect of attitude on purchase intention will increase. However, the strongest positive effect of attitude on purchase intention is not at the condition of the highest value of income and environmental concern. The strongest positive effect of attitude on purchase intention is at the condition of middle value of income and high value of environmental concern.

#### 7.2 Practical contributions

In practice, the amount of money one makes is a significant factor in determining whether or not they have the intention to purchase organic food. Companies that manufacture organic food goods will understand how millennials' income influences their desire to make a purchase. Companies will have a better understanding of which income ranges will have the most impact on purchasing intention and whether or not there is a difference in the intention of different

income groups to purchase organic food goods. The selling pricing strategy for each segment will be decided based on the results of this step. In light of this, the business will devise marketing techniques such as advertising products and finding new means to introduce products to consumers in order to fulfil the objective of achieving a dominant position in the market for millennials. When market research reveals that consumers are becoming more concerned about the environment, a business must have a plan in place to develop products that have the least possible negative effect on the natural environment. In addition, plans to improve the public's perception of the company, such as corporate social responsibility (CSR), environmental protection (such as waste treatment), and ecological environment protection around the enterprise. In particularly, organic food suppliers will pay attention to the group of customers with income from 10 to 30 million VND, especially from 10 to 20 million VND. With a marketing strategy that aims to protect the environment, design environmentally friendly products, the company will gain a lot of benefit in expanding the market with this millennial customer group. A group of customers with an income of 10 to 20 million VND can bring many benefits to the company providing organic food products. The price strategy with the link to the cost management of the companies which want to provide organic food to the market segment of millennials with income from 10 to 20 million VND.

#### 8. CONCLUSIONS

#### 8.1 Conclusions

The study illustrates the investigation to organic food purchase intention of Vietnamese millennials with the extension of the theory of planned. The main aim of this research is to investigate the income and environmental concern of millennials for organic food purchase intention. The three gaps of moderation effect of income, moderation effect of environmental concern and the three-way interactive effect of income, environmental concern, attitude on purchase intention was presented. The results show the positive effect of attitude, subjective norms, perceived behavioral control on purchase intention toward organic food of millennials in Vietnam. Moreover, income was found as the moderator of the relationship between attitude and purchase intention, subjective norms and purchase intention. Income did not moderate the relationship between perceived behavioral control and purchase intention. Environmental concern was found as the moderator of the relationship attitude and purchase intention, subjective norms and purchase intention, perceived behavioral control and purchase intention. Last but not least, there was a three-way interactive effect of income, environmental concern, and attitude on purchase intention toward organic food. The three strongest influences of attitude on purchase intention toward organic food are under the condition of high value of environmental concern and income level from 10 million to 20 million VND (the strongest influence); income level of more than 40 million VND (the second strongest influence); income level from 20 to 30 million VND (the third strongest influence). Under the condition of income of less than 30 million VND, and low value of environmental concern, attitude did not predict purchase intention.

### 8.2 Limitations of the study

This study only looks at organic food in a certain area, but this investigation could be extended to examine to many countries in Asian for the comparison. Moreover, the second limitation is that this study only investigates organic food. Thus, this model can be used to studied another product.

### 8.3 Future research suggestions

Practitioners can use this study as a model for future research on a variety of topics, such as eco-friendly products. This model can also be used for a wide range of other food products, such as traditional foods, safe foods, and foods sold in restaurants or grocery stores. For academics, the model can be used to develop and add more personality-related constructs. Moreover, this study will be better if the comparison between Vietnam and another country is investigated. Moreover, the comparison between generations in Vietnam (for example, between Gen Z and millennials) could be the better examination toward organic food purchase intention.

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#### University of Tomas Bata, Czech Republic

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#### University of Economics Ho Chi Minh City- CFVG, Vietnam

• *Master of Business Administration (Language: English) (2009-2010)* 

#### University of Strasbourg-EM Strasbourg Business School, France

• Master of European Management (Language: English) (2010-2011)

#### University of Economics and Laws, Viet Nam

• Bachelor of International Economic Relations (2002-2006)

#### BIG C VN & CFVG Ho Chi Minh, Vietnam

• Certificate of Executive Education- CFVG Training program (2013-2014)

#### Center for Predoctoral Training- Vietnam National University Ho Chi Minh City

- Predoctoral Training Program (2015)
- Data Analysis in SPSS & AMOS Statistics (2017)

#### **EXPERIENCES**

## **University of Transport HCMC-International Education & Cooperation Institute**

Visiting Lecturer (Dec 2012 to Present)

- Lecturing in High National Diploma- BTEC program- England
  - Working With and Leading People; Managing Activities to Achieve Result; Lecturer Business Strategy, Marketing, Managing Communication Knowledge & Information, Managing Financial Resources & Decision, Business Environment, Business Strategy, Business Etiquette.
  - Tutorial unit Business Decision Making; Financial System Auditing

- Lecturing in High Quality Program- Law University HCMC
  - Sales Management

#### **Big C Supercenter – Casino Group**

FMCG Floor Manager- Big C Di An Supermarket Director Trainee (September 2013 to September 2014)

Directly associate with the Store Director, Floor Manage is responsible for exploiting a commercial department of the supermarket. FMCG Floor Manager has three main missions

#### • Administrational

- Animate a team of collaborators: department manager, employees or commercial sellers. Organize and control the individual and team work.
- Participate in the different work of each individual if necessary.
- Animate periodic meeting and exchanges of viewpoints with his colleagues.
- Identify, organize the staff training and train if necessary. Identify potential employees.

#### • Commercial

- Ensure the implementation and respect of the concept. Implement the sale's plan commercial according to the guideline given by the Store Director.
- Optimize shelves by putting in place the plan defined by the Purchasing Centre.
- Ensure the correct information for customers
- Develop any action to animate commercially the department.
- Respect the price and assortment policies.
- Ensure the optimal management of the flow of merchandises.
- Warrant a perfect statement of products sold.
- Ensure the respect of commercial legislation.
- Analyze the key features of location and possibly propose Store Manager orientations adapted to the commercial site.

#### Managerial

- Achieving the annual goals in the following areas:
  - o Turnover.
  - o Gross profit.
  - o Staff costs.

- o Availability of equipment.
- The optimal supply management
- The actions to be taken to fight against the "démarque"
- Respect for administrative and accounting procedures

# **University of Transport HCMC-International Education & Cooperation Institute**

Program Manager Assistant (September 2011- December 2012)

- Tutorial unit Business Strategy, Managing Communication Knowledge & Information, Organizational Behavior, Managing Financial Resources & Decisions (High National Diploma- BTEC program- England)
- Internal Verification Scheme of Work & Lesson Plan of lecturers
- Internal Verification assessments
- Checking accuracy of marking & comments on all students' paperwork,
   Internal Verification samples of students' paperwork and the marking results awarded by teachers
- Participating class observations
- Support the External Verification from Edexcel (England) on Feb 2012 and manage the External Verification from Edexcel on July 2012
- Building yearly plan for classes.
- Support in quality improvement, teacher recruitment, student tutorial and consultant and any others

#### **Dong Duong Securities Company**

Securities Analyst (2008-2009)

- Monitor, synthesize, evaluate securities market and suggest daily investment decisions.
- Responsibility in most of programs of securities software.
- Make analysis reports; assess topics in securities sectors in particular as well as financial sectors in general.
- Periodically perform the analysis report of the general macroeconomics.
- Maintain and develop client networks.
- Search for new investment opportunities and do transactions for customers.
- Transaction execution, investment consulting and customer care.
- Support for establishment of securities agencies

#### **PUBLICATIONS**

- Hoang, H. C., Chovancova, M., & Hoang, T. Q. H. (2020). The interactive effect of level of education and environmental concern toward organic food in Vietnam. *Journal of Distribution Science*, *18*(9), 19–30. https://doi.org/10.15722/jds.18.9.202009.19
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#### **APPENDIX - QUESTIONNAIRE**

Dear Sir/Madam,

My name is Hoang Hung Cuong, a Ph.D. student at Tomas Bata University in Zlin, the Czech Republic. Currently, I am investigating a study named "The Moderation of Income and Environmental Concern and Organic Food of Millennials in Vietnam"

The purpose of this study is to explore the influence of attitude, subjective norms, perceived behavioral control, income and environmental concern on purchase intention toward organic food of millennials in Vietnam.

It will take about 5 to 7 minutes to answer the questions. You are asked to give honest answers because the information will be confidential and only accessed by the researcher. You will not be forced to take part in this study, and you are free to leave at any time.

This study pays attention to millennials, therefore if you were born from 1980 to 2000, please continue to do the survey.

Thank you very much for your cooperation.

#### **Part 1: General Information**

	Gender: ☐ Male Age	☐ Female
	□ 22- 28	
	□ 29- 35	
	□ 36- 42	
3.	Marital status	
	☐ Married	
	□ Single	
	☐ Divorced/Widow	
4.	Family size (the number of me	mbers in your family)
	☐ From 2-3	

	☐ From 4-5
	☐ Higher than 5
5.	Employment status
	☐ Full-time job
	☐ Part-time job
	□ Student
	☐ Housewife
	☐ Business
6.	Education
	□ Diploma
	☐ Bachelor degree
	□ Postgraduate
7.	Personal income- monthly (VND)
	☐ Less than 10 million
	□ 10–20 million
	□ 20–30 million
	□ 30–40 million
	☐ More than 40 million
8.	City of living
	☐ Ho Chi Minh City
	☐ Da Nang City
	☐ Ha Noi City

Part 2: Factors affect to purchase intention toward organic food

Please rate your level of agreement with the following statements.

Please select the appropriate box from 5 levels:

1. Strongly Disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly Agree

Question	Measurement	
Attitude toward purchasing intention of organic food		
1. I think that organic food purchasing is interesting.		
2. I think that organic food purchasing is a good idea.		
3. I think that organic food purchasing is important.		
4. I think that organic food purchasing is beneficial.		
5. I think that organic food purchasing is wise choice		
6. I think that organic food purchasing is favorable.		
Subjective norms toward purchasing intention of organic	food	
7. My family thinks that I should buy organic food		
8. Most people I value would buy organic food		
9. Most people important to me think that I should buy organic food.		
10. My close friends think that I should buy organic food.		
Perceived behavioral control toward purchasing intention	of organic food	
11. If I wanted to, I could buy organic food		
12. I think it is easy for me to buy organic food.		
13. It is mostly up to me whether or not to buy organic food.		
Environmental concern		
14. Vietnam's environment is my major concern.		
15. I am worried about the worsening of the quality of Vietnam's environment.		

16. I am emotionally involved in environmental protection issues in Vietnam		
17. I often think about how the environmental quality in		
Vietnam can be improved		
Purchase intention toward organic food		
18. I am willing to purchase organic food while shopping		
19. I intend to purchase organic food		
20. I will consider purchasing organic food		
21. I will make an effort to buy organic food in the near future		

Thank you very much for your participation
The Google form is available at: https://forms.gle/qBgn3nLz33mAZPSYA

# The Moderation of Income and Environmental Concern and Organic Food of Millennials in Vietnam

Hung Cuong HOANG

Změny v příjmech a přístupu k problematice životního prostředí a biopotravin u generace mileniálů ve Vietnamu

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