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Applying the Theory of Planned Behavior to Explain the Intention to Purchase Safe Food in Vietnam

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Abstract - Food safety has become a major concern for consumers in developing economies, especially in rapidly urbanizing cities. This study examines the factors determining consumers' intention to purchase safe food in Ho Chi Minh City, Vietnam. Based on the Theory of Planned Behavior, the research model includes eight factors: health concerns, perceived quality, environmental concerns, subjective norms, brand trust, perceived price, reference groups, and the influence of mass media. Data were collected from 356 consumers shopping at supermarkets in Ho Chi Minh City using a structured questionnaire. The data were analyzed using exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM). The results showed that environmental concerns, subjective norms, brand trust, health concerns, price perceptions, and quality perceptions significantly influenced the intention to purchase safe food. Among these factors, environmental concerns and subjective norms had the strongest impact.

Keywords: food, quality, safety, environmentally friendly products, supermarket.

1. INTRODUCTION

Food safety has become a global concern due to the increasing number of food contamination incidents and the growing awareness of healthy consumption. According to the World Health Organization, unsafe food contributes significantly to the global burden of disease, especially in developing countries. At the same time, domestic production is growing, while food quality management is not yet strictly enforced. Today's food must not only satisfy taste but also be safe and beneficial to health. In emerging economies like Ho Chi Minh City, rapid economic growth has significantly altered consumption patterns. Consumers are increasingly concerned about food safety, environmental sustainability, and product quality. Therefore, safe food products are receiving increasing attention in both academic research and market practice.

Despite the growing interest in safe food consumption, empirical evidence on the factors determining the intention to purchase safe food in Vietnam remains limited. Existing studies primarily focus on organic food consumption in developed markets, while research in emerging markets often overlooks the role of social influence, price perception, and media exposure. Therefore, this study aims to investigate the key factors influencing consumers' intention to purchase safe food in Ho Chi Minh City. Specifically, this study integrates psychological, social, and market factors into a comprehensive analytical framework.

Based on the Theory of Planned Behavior, this study proposes a theoretical framework to explain consumers' intention to purchase safe food. This theory posits that behavioral intention is shaped by individual attitudes, social influence, and perceived behavioral control. In the context of safe food consumption, these determinants can be expanded to include psychological perceptions, social pressures, and market-related factors.

Accordingly, the research model assumes that consumers' intentions to purchase safe food are influenced by several key determinants. These include health concerns, reflecting an individual's level of concern about the health impacts of food consumption; quality perceptions, representing consumers' awareness of the superior quality of safe food products; and environmental concerns, referring to consumers' awareness of environmental protection related to the production of safe food.

In addition, subjective norms capture the influence of social expectations from family members, friends, and other important reference groups on consumers' purchasing decisions. Brand trust reflects consumers' confidence in the reputation and reliability of safe food brands available on the market. Meanwhile, price perceptions represent consumers' evaluation of the price of safe food compared to conventional food products. Furthermore, reference groups can influence purchasing decisions through information sharing and recommendations, while exposure to mass media can shape consumer perceptions and attitudes toward food safety through marketing communications and public information channels.

Based on these theoretical arguments, this study proposes that these eight factors collectively influence consumers' intentions to purchase safe food. The research model of this study is developed based on the Theory of Planned Behavior (TPB), which explains

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that behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral controls. In the context of safe food consumption, this study expands the TPB framework by incorporating factors related to green consumer behavior.

First, attitudes toward safe food are expressed through consumer health concerns, environmental concerns, and perceived quality. These factors reflect consumers' positive evaluations of safe food products in terms of health benefits, environmental sustainability, and product quality.

Second, subjective norms represent the social influence of family members, friends, and other reference groups on consumer purchasing decisions. Social pressure can encourage consumers to adopt environmentally responsible consumption behaviors.

Third, cognitive behavioral control is expressed through factors such as price perception and brand trust. These factors influence consumers' ability to perceive and purchase safe food products. Finally, exposure to mass media is considered an additional factor influencing consumers' awareness and knowledge of safe food through marketing and information dissemination. Based on these theoretical arguments, the proposed research model examines the impact of these factors on consumers' intention to purchase safe food.

2. THEORETICAL BASIS

- **Safe Food**

Vietnam's Food Safety Law (Law No. 55/2010/QH12) stipulates that safe food is food that does not harm human health and life. In the US, Europe, and worldwide, safe food is considered food that is free of harmful chemicals and produced using holistic methods on safe farms. Safe food is grown and produced under conditions that do not use chemical fertilizers, pesticides, growth stimulants, animal growth enhancers, or genetically modified organisms to ensure the integrity of the final product (Perry and Schultz, 2005; Essoussi and Zahaf, 2008). Winter and Davis (2006) define safe food as a product that undergoes natural systems to promote biological transformation and reduce environmental pollution, while providing a safe and healthy environment for animals, plants, and farmers.

Safe food is food produced without the use of conventional pesticides. Foods from live animals such as meat, eggs, and milk...live animals are not raised with antibiotics and growth hormones (Organic Food Production Law, 1990). In the current context, with the rapid increase in non-communicable chronic diseases in Vietnam, nutrition and food have become central elements in public health care strategies. A report by the World Health Organization (WHO, 2023) shows that more than 70% of global deaths stem from chronic diseases such as cardiovascular disease, diabetes, cancer, and obesity – all closely linked to dietary habits.

In Vietnam, the shift in food consumption patterns – from a traditional diet mainly consisting of vegetables, fish, and rice to a diet rich in red meat, sugar, and processed foods – is leading to a "double burden" of nutrition: both excess energy and micronutrient deficiencies. Therefore, analyzing the relationship between food and health issues is crucial in policy planning and changing nutritional behavior.

Food is not only a source of energy but also a biological, cultural, and social factor. According to Drewnowski (2018), nutrition affects the body through three main mechanisms: (1) providing energy and nutrients for cellular activities; (2) regulating biological responses such as immunity, inflammation, and oxidation; and (3) influencing behavior and mental health.

Furthermore, the WHO's "Determinants of Health" model indicates that health is influenced by the environment, behavior, social conditions, and food systems. Therefore, food is a mediator between individual behavior and public health.

- **Purchase Intention**

Ajzen (2002a) defines an action intention as a person's action guided by a consideration of three factors: belief in the behavior, belief in norms, and belief in control. The stronger the belief, the greater the person's action intention.

Regarding purchase intention, Kotler and colleagues (2001) argue that during the purchase selection evaluation phase, consumers rank different brands and form a purchase intention. Generally, consumers decide to purchase products from their most popular brands. However, two factors can prevent a purchase intention from becoming a purchase behavior: the attitudes of those around them and unexpected situations. Consumers may form a purchase intention based on factors such as expected income, expected selling price, and expected product characteristics.

Purchase intention is described as a customer's willingness to purchase a product (Elbeck et al., 2008), and this is the concept the author will use in this thesis. A company's sales can be surveyed based on customer purchase intentions. Predicting purchase intention is the first step in predicting the actual purchasing behavior of customers (Howard and Sheth, 1967). Furthermore, based on several theories, purchase intention is considered the basis for predicting future demand (Warshaw, 1980; Bagozzi, 1983; Fishbein and Ajzen, 1975).

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- **Intention to Purchase Safe Food**

Nik Abdul Rashid (2009) defines the intention to purchase safe food as the ability and will of an individual to prioritize safe food over conventional food during the purchase consideration process. Ramayah et al. (2010) argue that the intention to purchase safe food is one of the specific manifestations of the act of purchasing.

Han, Hsu, and Lee (2009) suggest that the intention to purchase safe food is often related to positive product reviews and the intention to pay a higher price for safe products. In this section, the author will use the concept of Nik Abdul Rashid (2009).

Customer choice decisions are very complex issues, in which they will have to decide: (1) How many types of items to choose from each category; (2) how to choose purchases during shopping trips over time; (3) how to choose different types of stores (Benna or A. C. (1995)). The Theory of Planned Behavior (TPB) Model: According to the Theory of Planned Behavior (TPB), "Intention to perform a behavior will be influenced by three factors developed from the theory of rational behavior" (Ajzen, 1991). Attitude towards behavior, subjective norms, and perceived behavioral control. Attitude towards behavior is the degree to which performing that behavior is rated positively or negatively.

Rational Behavior Theory (TRA) The Rational Behavior Theory (TRA) posits that behavioral intentions lead to behavior, and intentions are determined by individual attitudes toward behavior, along with the influence of subjective norms surrounding the performance of those behaviors (Ajzen and Fishbein, 1975). The Rational Behavior Theory is concerned with consumer behavior as well as determining their behavioral tendencies, where behavioral tendencies are partly attitudes toward behavior and partly subjective norms.

- **Planned Behavior Theory**

The theoretical foundation of this study is based on Planned Behavior Theory, developed by Icek Ajzen. This theory is widely used to explain and predict human behavior in many fields, including consumer behavior, environmental behavior, and food consumption.

According to the Theory of Planned Behavior, an individual's behavior is primarily determined by behavioral intention, reflecting a person's willingness to perform a particular action. Behavioral intention, as influenced by the Theory of Planned Behavior, is built upon three main components: attitude toward the behavior, subjective norms, and perceived control over the behavior.

Attitude toward the behavior refers to an individual's positive or negative evaluation of performing a particular behavior. In the context of food consumption, consumers who perceive safe food as beneficial to their health and well-being are more likely to form a positive attitude toward purchasing those products.

Subjective norms refer to perceived social pressures from other important people such as family members, friends, or colleagues. These social influences can encourage or discourage individuals from engaging in a particular behavior. In food consumption decisions, consumers often rely on recommendations and opinions from reference groups when choosing food products.

Perceived control over behavior reflects the extent to which individuals believe they have the resources and opportunities to perform a behavior. Factors such as product availability, price, and accessibility can influence consumers' perceived control over purchasing safe food.

Due to its strong explanatory power, the Theory of Planned Behavior has been widely applied in investigative studies on organic food consumption, green shopping behavior, and safe food purchase intentions. Therefore, this theory provides a suitable theoretical framework for considering the determinants influencing consumers' safe food purchase intentions in urban areas.

- **Application of TPB in Safe Food Consumption**

Previous studies have widely applied the Theory of Planned Behavior (TPB) to investigate consumer intentions toward environmentally friendly or health-related products. Research has shown that psychological factors such as health concerns and environmental awareness significantly influence consumer attitudes toward safe food consumption. Beyond psychological factors, social influences also play a crucial role in shaping purchasing decisions. Subjective norms, reference groups, and media exposure can influence consumer perceptions and attitudes toward safe food products. Furthermore, market-related factors such as product quality, brand trust, and price perception can also influence consumer intentions to purchase safe food. Based on these theoretical arguments and previous empirical studies, this study integrates both psychological and market-related factors into an expanded framework derived from the Theory of Planned Behavior to explain consumers' intention to purchase safe food in Ho Chi Minh City.

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3. DEVELOPMENT OF THE RESEARCH MODEL

Based on the Theory of Planned Behavior, this study proposes a conceptual framework to explain consumers' intention to purchase safe food. This theory posits that behavioral intention is shaped by individual attitudes, social influences, and perceived behavioral controls. In the context of safe food consumption, these determinants can be extended to include psychological perceptions, social pressures, and market-related factors.

Accordingly, the research model assumes that consumers' intention to purchase safe food is influenced by several key determinants. These include health concerns, reflecting an individual's level of concern about the health impact of food consumption; quality perceptions, representing consumers' awareness of the superior quality of safe food products; and environmental concerns, referring to consumers' awareness of environmental protection related to the production of safe food.

Additionally, subjective norms capture the influence of social expectations from family members, friends, and other important reference groups on consumer purchasing decisions. Brand trust reflects consumers' confidence in the reputation and reliability of safe food brands available on the market. Meanwhile, price perceptions represent consumers' assessment of the price of safe food compared to conventional food products. Furthermore, reference groups can influence purchasing decisions through information sharing and recommendations, while exposure to mass media can shape consumer perceptions and attitudes toward safe food through marketing communications and public information channels.

Based on these theoretical arguments, this study proposes that these eight factors collectively influence consumers' intention to purchase safe food.

The research model of this study is developed based on the Theory of Planned Behavior (TPB), which explains that behavioral intention is influenced by attitudes, subjective norms, and perceived behavioral controls. In the context of safe food consumption, this study expands the TPB framework by incorporating factors related to green consumer behavior.

Firstly, attitudes toward safe food are expressed through consumer concerns about health, environmental concerns, and perceived quality. These factors reflect consumers' positive assessments of safe food products in terms of health benefits, environmental sustainability, and product quality.

Secondly, subjective norms represent the social influence of family members, friends, and other reference groups on consumers' purchasing decisions. Social pressure can encourage consumers to adopt environmentally responsible consumption behaviors.

Thirdly, cognitive behavioral control is expressed by factors such as price perception and brand trust. These factors influence consumers' ability to perceive and purchase safe food products. Finally, exposure to mass media is considered an additional factor influencing consumers' awareness and knowledge of safe food through marketing and information dissemination. Based on these theoretical arguments, the proposed research model examines the impact of these factors on consumers' intentions to purchase safe food.

Table 1. Summary of previous studies on safe and organic food purchase intentio

No.	Author(s)	Country / Context	Method	Key Variables	Main Findings
1	Icek Ajzen (1991)	Global	Conceptual	Attitude, Subjective Norm, PBC	Introduced the Theory of Planned Behavior explaining behavioral intention.
2	Paul Sparks & Richard Shepherd (1992)	UK	Survey	TPB + Self-identity	Self-identity improves the explanatory power of TPB in food choice behavior.
3	Maria Magnusson et al. (2003)	Sweden	Survey	Health concern, environmental concern	Health consciousness strongly influences organic food choice.
4	Emmanuel Yiridoe et al. (2005)	Canada	Review	Consumer perception	Consumers perceive organic food as safer and healthier.
5	Christopher K Winter & Sarah F Davis (2006)	USA	Review	Organic food perception	Organic food is associated with safety, environmental protection and health benefits.
6	Mei-Fang Chen (2007)	Taiwan	SEM	Attitude, trust	Attitude and trust significantly influence organic food purchase intention.

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No.	**Author(s)**	**Country / Context**	**Method**	**Key Variables**	**Main Findings**
7	Renée Hughner et al. (2007)	Global	Literature review	Motivations of organic consumers	Health, environmental concern and food safety are major drivers.
8	Leila H Essoussi & Mehdi Zahaf (2008)	Canada	Survey	Perceived value, environmental concern	Environmental concern and product value affect organic food purchasing.
9	Nina Michaelidou & Louise Hassan (2008)	UK	Survey	Health consciousness	Health consciousness significantly predicts organic food purchase intention.
10	Nik Abdul Rashid (2009)	Malaysia	Survey	Environmental awareness	Environmental awareness positively affects green purchase intention.
11	Heesup Han et al. (2009)	USA	SEM	Attitude, norms	TPB variables strongly influence green consumer behavior.
12	T Ramayah et al. (2010)	Malaysia	SEM	Attitude, subjective norms	Attitude is the strongest predictor of green product purchase intention.
13	Ahmed Al-Swidi & Azman Ismail (2012)	Malaysia	Survey	Green marketing	Green marketing awareness increases purchase intention.
14	Valeria Carfora et al. (2019)	Italy	SEM	Attitude, norms, PBC	Attitude is the most important determinant of plant-based food consumption.
15	Lucas C Dorce et al. (2021)	Brazil	SEM	Health benefit, sustainability	Health perception strongly influences plant-based food purchase intention.
16	Jia Pang (2021)	Malaysia	SEM	TPB + Protection Motivation	Self-efficacy improves intention to buy green food products.
17	John Thøgersen (2010)	Europe	Survey	Sustainability attitude	Sustainability awareness affects food purchasing decisions.
18	Krittinee Nuttavuthisit & John Thøgersen (2017)	Thailand	SEM	Trust	Consumer trust significantly influences organic food purchase.
19	Xiaohui He & Yue Sui (2024)	China	SEM	Green awareness	Environmental awareness strengthens green food purchase intention.
20	Wen Chen & Md N Othman (2025)	Global	Systematic review	TPB + extended variables	Integrating TPB with health, price and trust increases explanatory power.

Previous studies have widely applied the Theory of Planned Behavior to explain green food and organic food consumption. However, most studies focus on developed countries and often examine limited psychological determinants. Few studies integrate social influence, media exposure, brand trust, and price perception simultaneously in the context of emerging markets such as Vietnam. Therefore, this study proposes an extended TPB model to investigate consumers' intention to purchase safe food in Viet

Previous studies have widely applied the theory of planned behavior to explain the consumption of green and organic foods. However, most studies focus on developed countries and often examine only a limited set of psychological determinants. Few studies integrate social influence, media exposure, brand trust, and price perception simultaneously in the context of emerging markets such as Vietnam. Therefore, this study proposes an extended TPB model to investigate consumers' intention to purchase safe food in Vietnam.

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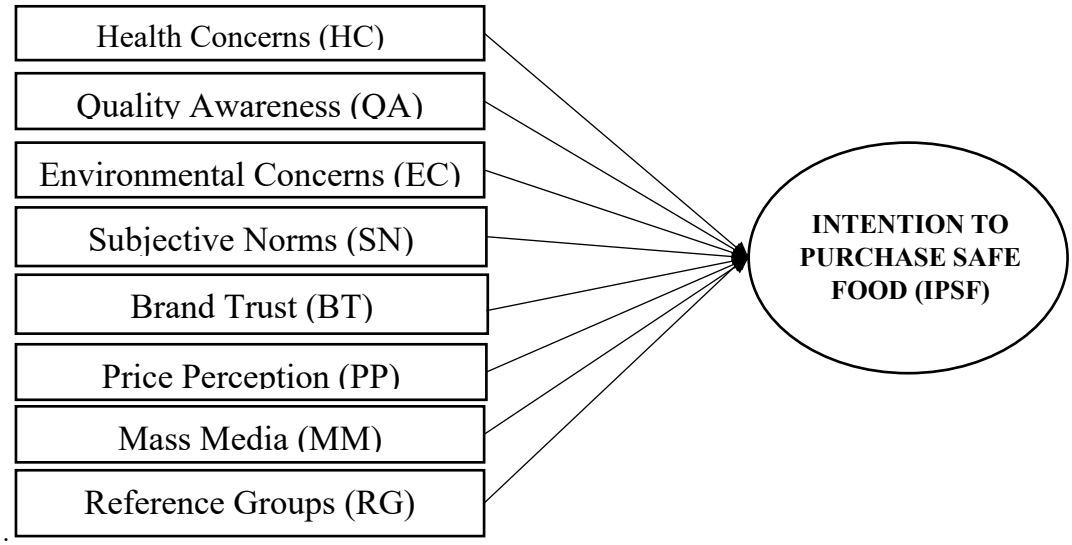

Figure 1: Research Model
(Source: Author's synthesis)

+Developing the Hypothesis

- **Health Concerns**

Health concerns are widely recognized as one of the most important factors driving consumer food choices. Consumers who are very concerned about their health tend to pay more attention to the nutritional value, safety, and production methods of food products. Safe food products are often seen as healthier alternatives because they are produced according to stricter safety standards and are less likely to contain harmful chemicals or contaminants.

Previous studies have consistently demonstrated that health awareness significantly influences consumers' intentions to purchase safe or organic food products. Consumers who perceive safe food as beneficial to their health are more likely to develop a positive attitude toward such products and therefore exhibit stronger purchase intentions. Therefore, the hypothesis is as follows:

H1: *Health concerns positively influence the intention to purchase safe food.*

- **Environmental Concerns**

Environmental concerns refer to the extent to which individuals are aware of environmental issues and are willing to support environmentally friendly practices. In the context of sustainable consumption, consumers concerned about environmental issues tend to prefer products produced in an environmentally responsible manner.

Safe food production methods often emphasize minimizing chemical use, environmentally friendly farming practices, and sustainable resource management. Therefore, environmentally conscious consumers are more likely to consider safe food as an environmentally responsible consumption choice.

Previous research has shown that environmental concerns significantly influence consumers' willingness to purchase green or organic food products. Consumers with strong environmental awareness tend to favor sustainable food systems through their purchasing decisions. Therefore, the hypothesis is as follows:

H2: *Environmental concerns positively influence the intention to purchase safe food.*

- **Perceived Quality**

Perceived quality refers to consumers' perception of the superior quality of a product compared to available alternatives on the market. In the case of food products, perceived quality often includes attributes such as freshness, nutritional value, taste, and safety.

Consumers who believe that safe food products are of higher quality than conventional food products are more likely to prioritize them in their purchasing decisions. Perceived product quality plays a crucial role in shaping consumer attitudes and purchasing intentions. Previous studies on the consumption of organic and safe food have shown that perceived product quality is a crucial determinant of consumer purchase intentions. When consumers associate safe food with better quality and reliability, their intention to purchase those products increases. Therefore, the hypothesis is as follows:

H3: *Perceived quality positively influences the intention to purchase safe food.*

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- **Subjective Norms**

Subjective norms refer to perceived social pressure from other important people that influence an individual's behavior. According to Icek Ajzen, social influence from family members, friends, and colleagues plays a significant role in shaping behavioral intentions.

In the context of food consumption, individuals often consider the opinions and recommendations of those around them when making purchase decisions. If consumers perceive that other important people expect them to buy safe food, they are more likely to develop the intention to do so.

Previous research has confirmed that subjective norms significantly influence consumers' purchase intentions for environmentally friendly and organic products. Therefore, the hypothesis is as follows:

H4: *Subjective norms positively influence the intention to buy safe food.*

- **Reference Groups**

Reference groups include individuals or groups whose opinions, attitudes, or behaviors influence consumer decisions. These groups may include family members, friends, colleagues, or the social community.

Consumers often rely on recommendations and experiences shared by reference groups when evaluating food products. Positive recommendations or discussions about safe food products can increase consumer awareness and trust in those products.

Previous studies on consumer behavior have demonstrated that reference groups significantly influence purchasing decisions, especially for products related to health and sustainability. Therefore, the hypothesis is as follows:

H5: *Reference groups positively influence the intention to purchase safe food*.

- **Brand Trust**

Brand trust refers to consumers' belief in the reliability, reputation, and safety of a product or brand. In the food industry, trust plays a crucial role because consumers often cannot directly verify the safety of a product before purchasing it.

Consumers who trust safe food brands are more likely to consider these products reliable and safe to consume. Therefore, brand trust can significantly increase consumers' willingness to purchase safe food products.

Previous research has shown that brand trust is a key factor in determining purchase intentions, especially for products related to health and safety issues. Therefore, the hypothesis is as follows:

H6: *Brand trust positively influences the intention to purchase safe food*.

- **Price Perception**

Price perception refers to a consumer's assessment of a product's price relative to its perceived value. Safe food products are often priced higher than conventional food due to stricter production standards and certification processes.

Consumers who perceive the price of safe food as reasonable relative to its health and environmental benefits may be more willing to purchase such products. Conversely, high price sensitivity may reduce purchase intentions. Previous studies have shown that price perception significantly influences consumer purchase intentions for organic and safe food products. Therefore, the hypothesis is as follows:

H7: *Price perception positively influences the intention to purchase safe food*.

- **Mass Media**

Mass media plays a crucial role in shaping consumer perceptions and views on food safety issues. Through television, social media, newspapers, and online platforms, consumers receive information about food safety risks, environmental issues, and healthy consumption practices.

Exposure to media information about safe food can increase consumer knowledge and awareness, which can then influence their attitudes and purchase intentions.

Previous research has shown that media exposure can significantly influence consumer perceptions and behavior regarding environmentally friendly products.

Therefore, exposure to mass media is expected to positively influence the intention to purchase safe food. Thus, the hypothesis is as follows:

H8: *Exposure to mass media positively influences the intention to purchase safe food.*

Research Methodology

This study uses a quantitative method, collecting data through survey questionnaires and analyzing it using SEM/PLS-SEM. The study's subjects are consumers aged 18 and over who are involved in purchasing food for their families in Vietnam. These individuals are capable of understanding and making purchasing decisions regarding safe food products. The survey area covers

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three major cities in Vietnam: Hanoi, Ho Chi Minh City, and Da Nang. The study uses a convenient sampling method due to time and cost constraints. Data was collected through online questionnaires and in-person surveys from consumers.

According to the recommendation of Joseph F. Hair Jr., the minimum sample size should be 5 to 10 times the number of observed variables. This study uses 20 observed variables, therefore the minimum sample size is 100. To ensure the reliability of factor analysis and structural modeling, the study collected 400 survey questionnaires, of which 366 valid questionnaires were used for data analysis.

There are 32 quantitative questions in this study. According to Bollen (1989), the minimum sample size is 175 (35x5). However, to ensure a sufficiently large sample size and reliable T-test and ANOVA results, the sample size must be > 300. The survey was conducted from the beginning of October to December 2025 using paper questionnaires submitted directly or sent via email to the survey team. Each question was measured on a 5-point Likert scale. There were 400 questionnaires, and a total of 387 were received. 21 questionnaires were rejected due to incomplete information. Therefore, 366 questionnaires were used for further analysis. The collected data were validated using Cronbach's Alpha reliability coefficient, exploratory factor analysis (EFA), and structural equation modeling (SEM).

4. RESEARCH RESULTS

Cronbach's Alpha and EFA Analysis

The proposed research model consists of 8 independent variables and 1 dependent variable. The reliability analysis results of the research scales all showed total variable correlations from 0.5874 to 0.721 (> 0.4); Cronbach's Alpha coefficients from 0.830 to 0.923 (> 0.8), so all 7 observed variables met the requirements and were accepted (Table 1).Table 1: Summary of Cronbach Alpha and EFA results for the scales

The scals	Number of variables	Confidence coefficient	Variance	Value
Health Concerns (HC)	4	0,877	**73,335**	**Đạt yêu Cầu**
Environmental Concerns (EC)	4	0,903		
Perceived Quality (PQ)	4	0,923		
Subjective Norms (SN)	4	0,855		
Reference Groups (RG)	4	0,896		
Brand Trust (BT)	4	0,912		
Price Perception (PP)	4	0,881		
Mass Media (MM)	4	0,830		
Intention to purchase safe food (IPSF)	4	0,871	**59,824**	
Total	**36**			

Source: Author's calculations

The results of the EFA analysis with Promax rotation show that the KMO coefficient is 0.757, so the EFA fits the data, and the Chi-square statistic of the Bartlett test reaches a value of 12886.987 with a significance level of 0.000; therefore, the observed variables are correlated with each other in the overall scope. The extracted variance = 73.335 indicates that the 6 extracted factors explain 73.335% of the data variation, at an Eigenvalue of 1.547. Therefore, the extracted scales are acceptable (Table 1).

Confirmatory Factor Analysis (CFA)

CFA analysis shows that this model has a chi-square statistic of 614.641 with 309 degrees of freedom (p = 0.000). The relative chi-square of degrees of freedom CMIN/df is 1.989 (< 2). Other indicators such as: GLI = 0.901 (> 0.9), TLI = 0.953 (> 0.9), CFI = 0.947 (> 0.9), and RMSEA = 0.053 (< 0.08). This also allows us to conclude the unidimensionality of the observed variables. Regarding convergent validity, the standardized weights of the scales are all > 0.5 and statistically significant (p < 0.5). Therefore, the scales achieve convergent validity (Figure 2).

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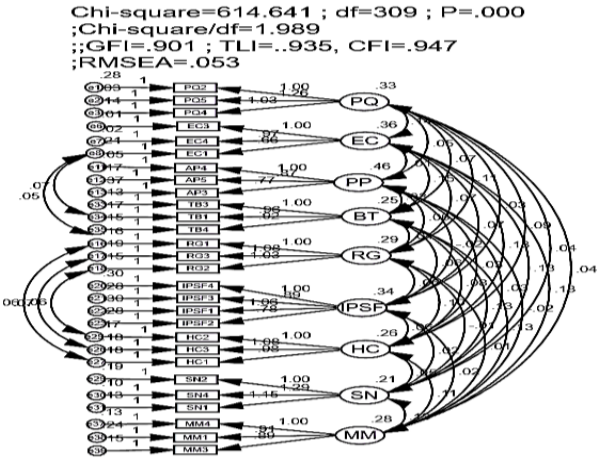

Figure 2: CFA analysis results

Source: Author's calculations

Table 2: CFA test results on discriminant validity between scale components

Relationship			Estimate	S.E.	C.R.	P
PQ	<-->	EC	0,136	0,021	6,385	***
PQ	<-->	PP	0,054	0,022	2,466	0,014
PQ	<-->	RG	0,108	0,020	5,370	***
PQ	<-->	HC	0,091	0,019	4,808	***
PQ	<-->	SN	0,036	0,016	2,293	0,022
PQ	<-->	BT	0,066	0,018	3,705	***
PQ	<-->	MM	0,045	0,018	2,416	0,016
EC	<-->	RG	0,065	0,019	3,403	***
EC	<-->	IPSF	0,066	0,021	3,051	0,002
EC	<-->	HC	0,127	0,020	6,378	***
EC	<-->	SN	0,128	0,018	6,949	***
EC	<-->	BT	0,146	0,020	7,332	***
EC	<-->	MM	0,131	0,020	6,381	***
PP	<-->	RG	0,060	0,022	2,724	0,006
PP	<-->	HC	0,028	0,021	1,346	0,017
PP	<-->	SN	0,035	0,019	1,871	0,041
RG	<-->	IPSF	0,061	0,021	2,936	0,003
RG	<-->	HC	0,103	0,019	5,293	***
RG	<-->	MM	0,008	0,018	,465	0,042
IPSF	<-->	HC	0,059	0,020	2,930	0,003
HC	<-->	SN	0,049	0,015	3,215	0,001
HC	<-->	MM	0,106	0,019	5,542	***
SN	<-->	MM	0,133	0,019	7,088	***
BT	<-->	MM	0,125	0,019	6,506	***
IPSF	<-->	BT	0,063	0,020	3,224	0,001
HC	<-->	BT	0,081	0,017	4,692	***
SN	<-->	BT	0,131	0,018	7,307	***

Source: Author's calculations

SEM Analysis

The SEM results obtained in Figure 3 show a chi-square statistic of 580.134 with 309 degrees of freedom (p = 0.000). The relative chi-square of degrees of freedom CMIN/df = 1.877 (< 2), which is acceptable for the study sample of 362 observations. GFI

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= 0.901, TLI = 0.941, CFI = 0.952, RMSEA = 0.050 < 0.08, demonstrating that the scale model for factors related to OCB is suitable for the research data. All (normalized) weights are > 0.5 and are statistically significant, so the concepts achieve convergent validity. Therefore, this model achieves compatibility with the collected information.compatibility with the

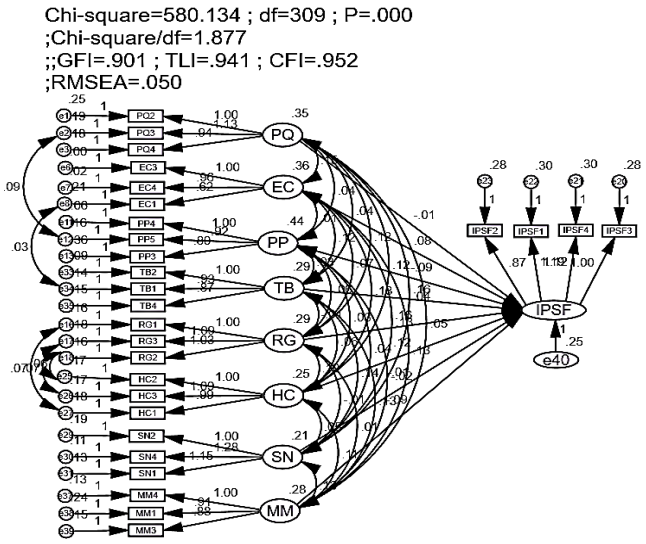

Figure 3: SEM analysis results

Source: Authors' group calculations

Table 3: SEM test results on discriminant validity between scale components

Relationship			Estimate	S.E.	C.R.	P
PQ	<-->	EC	0,150	0,023	6,510	***
PQ	<-->	RG	0,125	0,022	5,651	***
PQ	<-->	HC	0,118	0,021	5,565	***
PQ	<-->	SN	0,039	0,017	2,278	0,023
PQ	<-->	BT	0,043	0,020	2,153	0,031
PQ	<-->	MM	0,048	0,020	2,363	0,018
EC	<-->	RG	0,065	0,019	3,404	***
EC	<-->	HC	0,126	0,020	6,365	***
EC	<-->	SN	0,129	0,018	6,971	***
EC	<-->	BT	0,122	0,020	6,112	***
EC	<-->	MM	0,131	0,021	6,396	***
PP	<-->	RG	0,060	0,022	2,770	0,006
PP	<-->	HC	0,031	0,021	1,512	0,031
PP	<-->	SN	0,036	0,018	1,973	0,049
RG	<-->	HC	0,102	0,019	5,289	***
HC	<-->	SN	0,049	0,015	3,227	0,001
HC	<-->	MM	0,105	0,019	5,541	***
SN	<-->	MM	0,134	0,019	7,111	***
BT	<-->	MM	0,133	0,020	6,563	***
RG	<-->	BT	0,008	0,018	0,472	0,037
HC	<-->	BT	0,057	0,018	30,235	0,001
SN	<-->	BT	0,143	0,019	70,554	***

Source: Author's calculation

Regression analysis

The results show that, (1) Brand Trust (BT), (ES = 0.159) has the highest influence on OCB. The remaining factors influence in order from highest to lowest: (2) Reference Groups (RG) (ES = 0,159); (3) Health Concerns (HC) (ES = 0,121); (4) Mass Media

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(MM) (ES= 0,089); (5) Price Perception (PP) (ES= 0,085; (6) Environmental Concerns (EC) (ES = 0,082); (7) Subjective Norms (SN) (ES = 0,052) and (8) Perceived Quality (PQ) (ES = 0,051). (Bảng 4).

Table 4: Regression analysis results

Relationship			Estimate	S.E.	C.R.	P	Result
IPSF	<---	PQ	0,051	0,068	0,167	0,027	Yes
IPSF	<---	EC	0,082	0,067	1,218	0,023	Yes
IPSF	<---	PP	0,085	0,050	1,695	0,040	Yes
IPSF	<---	BT	0,159	0,081	1,974	0,048	Yes
IPSF	<---	RG	0,159	0,073	2,164	0,030	Yes
IPSF	<---	HC	0,121	0,087	1,389	0,015	Yes
IPSF	<---	MM	0,089	0,091	0,968	0,033	Yes
IPSF	<---	SN	0,052	0,108	0,113	0,010	Yes

Source: Author's calculations

The bootstrap method was used to test the model estimates, with a sample size of N = 1,000. The estimated mean of 1,000 samples along with the biases are presented in Table 5. The CR has a very small absolute value, so it can be concluded that the bias is very low and not statistically significant at a 95% confidence level. Therefore, we can conclude that the model estimates are reliable.

Table 5: Bootstrap estimation results, N = 1000

Relationship			SE	SE-SE	Mean	Bias	SE-Bias	CR
IPSF	<---	PQ	0.072	0.001	-0.013	-0.001	0.002	-2.00
IPSF	<---	EC	0.076	0.002	0.079	-0.003	0.002	-0.67
IPSF	<---	PP	0.062	0.001	-0.087	-0.002	0.002	-1.00
IPSF	<---	BT	0.113	0.002	0.16	0.002	0.003	1.50
IPSF	<---	RG	0.076	0.002	0.158	-0.001	0.002	-2.00
IPSF	<---	HC	0.093	0.002	0.127	0.007	0.003	0.43
IPSF	<---	MM	0.111	0.002	-0.088	0.001	0.001	1.00
IPSF	<---	SN	0.121	0.002	-0.014	-0.002	0.001	-0.50

Source: Author's calculations

Discussion of Research Findings

This study applies the Theory of Planned Behavior proposed by Icek Ajzen to examine the factors influencing consumers' intention to purchase safe food in Vietnam. The findings indicate that attitude, subjective norms, and perceived behavioral control significantly influence consumers' purchase intention, which is consistent with the theoretical assumptions of the TPB model.

First, attitude toward safe food was found to have the strongest positive effect on purchase intention. This result suggests that consumers who perceive safe food as beneficial for health and well-being are more likely to develop a strong intention to purchase such products. This finding is consistent with previous international studies examining organic or safe food consumption, which also report attitude as the most influential predictor of purchase intention. In Vietnam, rising public concern about food safety and chemical contamination may strengthen consumers' positive attitudes toward safe food products.

Second, subjective norms also show a significant influence on consumers' intention to purchase safe food. The result indicates that social influences from family members, friends, and social networks play an important role in shaping consumer decisions. This finding aligns with studies conducted in collectivist cultures, where social approval and group expectations strongly affect individual behavior. In Vietnam, recommendations and opinions from close social circles can reinforce consumers' confidence in choosing safe food products.

Third, perceived behavioral control positively affects purchase intention, although its impact is relatively weaker compared with attitude. This finding suggests that consumers are more likely to purchase safe food when they perceive that they have sufficient resources, knowledge, and access to such products. However, the relatively smaller effect may reflect existing barriers in the market, such as higher prices of safe food products and limited availability in some retail channels.

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Overall, the findings confirm that the core components of the TPB framework remain highly relevant in explaining consumer behavior related to safe food consumption. At the same time, the results highlight the importance of contextual factors such as food safety concerns, social influence, and market accessibility in shaping consumer intentions in Vietnam.

Policy Implications

Based on the research findings, several policy implications can be proposed to promote the consumption of safe food.

- Strengthening food safety management and certification systems

Government authorities should improve food safety monitoring and certification mechanisms to increase consumer trust in safe food products. Establishing transparent standards, reliable labeling systems, and effective traceability mechanisms can help consumers verify the origin and quality of food products. Strengthening regulatory enforcement will also reduce the circulation of unsafe food products in the market.

Enhancing public awareness of safe food consumption

Public awareness campaigns should be implemented to educate consumers about the health and environmental benefits of safe food. Communication programs through mass media, educational institutions, and community organizations can help strengthen positive consumer attitudes toward safe food products.

Improving accessibility and market availability

Policies should support the development of distribution channels for safe food products. Expanding supply chains, encouraging retailers to stock certified safe food products, and promoting local safe food markets can improve consumers' perceived behavioral control and facilitate purchase behavior.

- **Supporting producers and sustainable food production**

Governments and relevant stakeholders should provide financial and technical support to farmers and producers who adopt safe or sustainable farming practices. Incentives such as subsidies, training programs, and certification assistance can help reduce production costs and increase the supply of safe food products in the market.

- **Promoting community-based social influence**

Given the role of subjective norms in influencing consumer intention, community-based campaigns and social influence strategies can be effective in promoting safe food consumption. Encouraging influential community members, health experts, and social media advocates to promote safe food practices can further strengthen social norms that support healthy consumption behavior.

Conclusion of Discussion

In conclusion, this study confirms the explanatory power of the Theory of Planned Behavior in understanding consumers' intention to purchase safe food in Vietnam. Attitude, subjective norms, and perceived behavioral control all contribute to shaping consumer intentions, although their influence varies in magnitude. These findings provide valuable insights for policymakers, bus

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