EXPLORING ORGANIC FOOD PURCHASE BEHAVIORS OF GEN Z: AN APPLICATION OF TPB AND MOA MODEL IN A TRANSITION COUNTRY

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Abstract: This article investigates the predictors of purchase behavior of the generation Z (Gen Z) in the Vietnamese organic food sector. We proposed a research model by extending the theory of planned behavior (TPB) with the motivation–opportunity–ability (MOA) framework to address the gap between purchase intention and behavior in the organic food market. Data from a self-administered online survey with 426 respondents living in the three biggest cities of Vietnam were analyzed in SmartPLS software to test proposed hypotheses. Our findings show that trust is the most crucial factor affecting the purchase behavior of Gen Z in the Vietnamese organic food sector. Notably, perceived barriers (PB) were found to positively influence purchase behavior. The present study suggests the organic food producers and suppliers to change their marketing strategies and policies in response to the demanding Vietnamese Gen Z.

Keywords: organic food, purchase intention, actual purchase behavior, theory of planned behavior, MOA framework, generation Z in Vietnam.

JEL Classification: D12, M31, Q13.

1 Introduction

The excessive use of pesticides and chemical fertilizers in agriculture has negatively impacted consumer health, the environment, and the sustainability of global agriculture. Globally, consumer safety and health concerns are growing due to the dangers associated with agricultural products. In the past 15 years, organic has evolved in response to consumer demand for safe products. It is justifiable that organic food promotes human, environmental, and soil health, embracing the concept and idea of cleaner production (Chekima et al., 2017). It balances economic gains, food security, and agricultural output that is more sustainable (De Schutter, 2010).

Consequently, organic food production can aid in mitigating the negative environmental effects of conventional agriculture (Petek et al., 2018). The production and consumption of organic foods is a global trend in developed and developing nations (Petek et al., 2018). The global organic food market is anticipated to increase by 9.7 percent between 2020 and 2021, from $201.77 billion to $221.37 billion. Notably, during the 2021 epidemic, organic food demand increased dramatically. Some nations have seen a 30 percent increase in retail sales (Willer, 2021). This market is anticipated to expand rapidly in the "new normal" world following the Covid-19 pandemic when consumers are more concerned with purchasing healthy products.

Numerous studies have highlighted organic food consumption as a more sustainable form of consumption (Gustavsen and Hegnes, 2020; Thogersen et al., 2015). As a means of elucidating the complexities of sustainable consumption and outlining the "consumer side" of sustainable agricultural systems, the primary focus of these initiatives is the study of consumer attitudes toward organic food. The theory of planned behavior (TPB) is the most commonly used theory to examine consumers' attitudes toward organic food consumption. In addition, researchers have added variables such as health consciousness (Teng and Wang, 2015), environmental concern (Tandon et al., 2020), and knowledge (Chakrabarti, 2010) to TPB to explain organic food purchase intention and actual purchasing. Notably, previous research has

found inconsistent results regarding people's attitudes toward organic food (Thogersen et al., 2015), motivations for altering consumption patterns (Yadav and Pathak, 2016). Inconsistent results may be attributable to sociocultural and access to organic food-related variations in consumer profiles across diverse research contexts.

Numerous studies on organic food consumption have been conducted, with the majority focusing on Western nations. Few studies on organic food in Vietnam were recognized including Nguyen et al. (2019) and Pham et al. (2019). However, these Vietnamese studies did not consider generation Z (Gen Z) as an analytical unit. Meanwhile, with 15 million people, Gen Z will soon be the largest potential customer group for the Vietnamese organic food market. They are known to adopt green products actively (Nguyen et al., 2018). In this regard, there is a pressing need for additional research on Gen Z's organic food consumption in Vietnam. It is unclear how Gen Z perceives organic food and what influences their purchasing intention. Consequently, this article aims to investigate Gen Z's attitudes toward organic food in Vietnam by extending TPB with three specific pro-environmental factors: health consciousness, environmental concern, and organic food knowledge.

2 Literature Review and Hypothesis Development

2.1 Organic Food Market in Vietnam

In the mid-1990s, organic farming in Vietnam began to take off. However, until the late 1990s, there was little interest in organic agriculture. As a result, organic farming progressed slowly until the late 2000s. Still, it has made tremendous headway with contemporary products such as rice, shrimp, coconut, coffee, chocolate, milk, tea, vegetables, fruits, cinnamon, anise, and other farm products. Notably, Vietnam's organic farming area doubled from 53,350 ha in 2016 to roughly 240,000 ha in 2020 (MARD, 2020). With the help of over 100 businesses and 17,000 farmers, 46 of Vietnam's 63 provinces and cities have established organic-cultivated land. Remarkably, international organic food and beverage goods sales exceeded $335 million in 2019 (Nguyen et al., 2021). Meanwhile, the domestic sale of organic food in Vietnam is still limited.

From the domestic demand side, it is insisted that the organic food market in Vietnam has potential to grow dramatically. Since half of Vietnam's population is young and well-informed, many consumers quickly adopt global food and beverage trends. As a result, international trends, including organic food, influence local consumption both at home and in restaurants (USDA, 2021).

2.2 Generation Z as Consumers

Gen Z were born between 1997 and 2012. Gen Z is open to experimenting with different ways of being themselves and shaping their identities over time. In this sense, they are "identity nomads." In addition, Gen Z has advantages to access modern world knowledge, and of course, they will be decisive factors for the distribution of world consumption very soon. These young adults were among the first to incorporate social media use into their everyday lives and are much more likely than older generations to say they are online "almost constantly." With so much information at their fingertips, Gen Z people are more pragmatic and analytical in their decision making than prior generations.

The characteristics of Gen Z also affect the types of products they frequently choose and their attitude and behavior when making a purchase. For example, Králová (2020) found that Gen Z in Czech spends more than Gen X and Y on foodstuff and non-alcoholic beverages and this type of product also ranks third in the list of most popular products that Gen Z purchase. Furthermore, organic food is more likely to be consumed by Gen Z consumers that adopt green consumption practices (Lockie et al., 2002). In addition, Lavuri et al. (2021) insisted that environmental knowledge, environmental concern, attitude, and green purchase intention had different effects on the green purchase behavior of Gen Z in comparison with Gen Y in India.

In Vietnam, the number of Gen Z is approximately 15 million people in 2021, accounting for about 19 percent of the population in the working-age group. It is predicted that this group will make up almost one-third of the working-age population by 2025. These figures reveal the big market size for organic food in Vietnam soon as they are potential consumers.

According to the report of Nielsen in 2018, the Vietnamese Gen Z is very open to new experiences, so that they are keen on experiencing new brands. With 40 percent of Gen Z in the study of Nielsen in Vietnam being open to exciting trials even they have frequently used brands, there is a massive opportunity for brands to attract them with exciting customer experiences, product, or service offerings.

From the above arguments, it is undeniable that further analysis into the green consumption behavior, particularly organic food purchase, of Vietnamese Gen Z should be conducted. Such a study will be beneficial for organic food producers and distributors to understand Gen Z consumers and alter their production and marketing strategies toward green.

2.3 Hypothesis Development

Numerous studies have been carried out to explain the behaviors of consumers to purchase organic food using several theories such as the theory of planned behavior (TPB) and the motivation–opportunity–ability (MOA) theory.

According to TPB, an individual's behavior is determined by their intentions to perform such behavior. Intentions, in turn, are related to a set of variables, including attitude, subjective norm, and perceived behavioral control (PBC). Attitude refers to a person's positive or negative beliefs of a particular behavior. Subjective norms are a person's perceived social approval regarding a behavior. PBC is a person's perceived capacity to perform a behavior. According to Ajzen (1991), if attitude, subjective norm, and PBC are strong, the intention will be strong, leading to a specific behavior. Thus, in the TPB, attitude is regarded as the first essential factor of intentions and subsequent behaviors.

In addition, the MOA theory explains consumer behavior using three factors: motivation, opportunity, and ability. As defined in the MOA framework, consumers will more likely perform a behavior if they perceive it will support their interest and are aware of the consequences of not acting (motivation), have the options available and accessible to encourage the behavior (opportunity), and the skills and competencies to perform the behavior (ability) (van Geffen et al., 2020). The MOA theory has been applied in various empirical studies, including home energy conservation (Baumhof et al., 2018), organic food consumption (Zhu, 2016), and public transportation usage (Thøgersen, 2009).

Furthermore, existing literature also suggests that TPB and MOA framework can be integrated to explain individuals' motivations and actions (Baumhof et al., 2018; van Geffen et al., 2020). In this regard, we adapted and extended the TPB with MOA framework to investigate the behaviors of the Z generation in Vietnam regarding organic food consumption and purchase. Thus, we developed the following research model (see Figure 1).

As shown in Figure 1, we raised 11 hypotheses to test the relationship among factors that influence attitude, intention, and actual purchase behavior (APB) of organic food. The hypotheses are explained as follows.

2.3.1 Health Consciousness

Health consciousness is defined as an individual consumer's propensity to identify with and actively take steps to protect their health (Hansen et al., 2018). The concept of health consciousness has been considered an egotistic motive for individuals to purchase and consume organic food (Hansen et al., 2018). However, the findings of prior studies regarding the impact of health consciousness have been inconsistent and limited to the investigation of its link with purchase intention and willingness to purchase. For instance, Michaelidou and Hassan (2008) posited a minor indirect role of health consciousness in determining buying intentions for organic food. Husic-Mehmedovic et al. (2017) suggested that although health consciousness may create a positive inclination among individuals for consuming organic food, it does not necessarily lead to a positive behavioral consequence. Moreover, Pino et al. (2012) found no effect of health consciousness on buying intentions. Thus, in this study, we raised the following hypothesis:

H1: Health consciousness (HC) positively influences the Z generation's attitude toward organic food consumption (ATT).

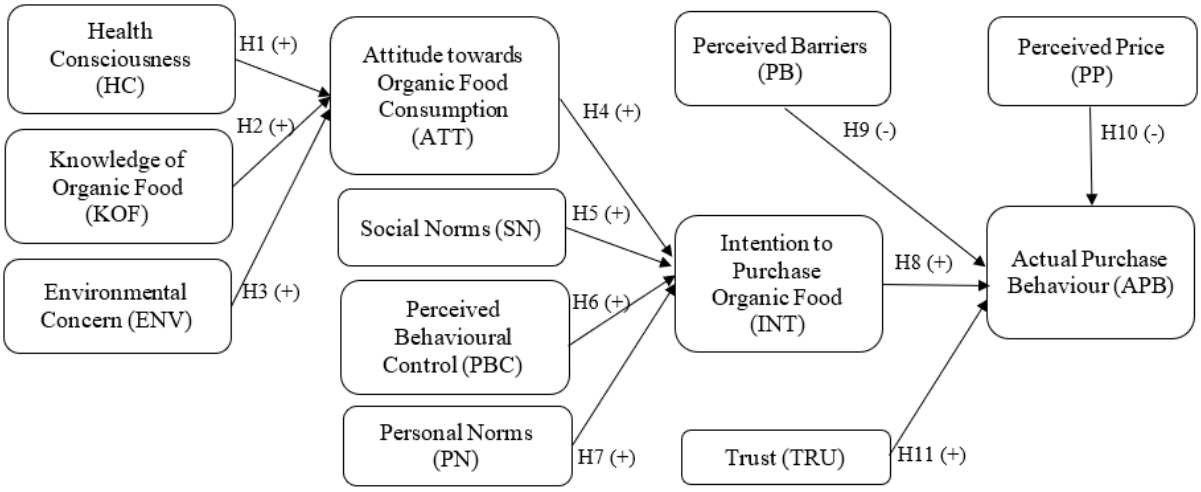


Figure 1: Conceptual model
(*Source*: own elaboration)

2.3.2 Knowledge of Organic Food

In the purchase process of food, knowledge of food ingredients and production is an essential factor affecting consumer behaviors (Sapp, 1991). Remarkably, the purchase of environmentally friendly products cannot be separated from consumers' knowledge about the environment and ecology and knowledge of organic food (KOF; Fukushige and Aryupong, 2020). Thus, awareness and KOF are essential in consumer purchase decisions (Singh and Verma, 2017).

It is found in these studies that there is little consumer awareness about organic food worldwide. European consumers seem to be most knowledgeable where the organic market is relatively well developed than other world areas. Literature also suggests that consumers have inconsistent knowledge about what is "organic." For example, Hall et al. (1989) found that respondents assumed organic food produced is free from pesticides, no artificial fertilizers, no growth regulators, and residue-free products. Similarly, in a survey study, respondents in the United Kingdom perceived organic farming to imply free from chemicals, the absence of growth hormones, and "not intensively grown" or "product grown naturally" (Hutchins and Greenhalgh, 1997). In other words, organic products are perceived to be free from pesticides and chemical fertilizers, and are pure, natural, and healthy. The study of Smith and Paladino (2010) insisted that consumers' knowledge of social and environmental issues positively affects their attitude and purchase behavior toward organic food products. It is therefore hypothesized that:

H2: KOF positively influences the Z generation's attitude toward organic food consumption (ATT).

2.3.3 Environmental Awareness

Organic food purchase and consumption are regarded as an activity to protect the environment and support sustainability (de-Magistris and Gracia Royo, 2012). The influence of environmental awareness on consumer decision to enact proenvironmental behavior has been previously investigated (Pham et al., 2019) and is associated with the increased frequency of buying organic food (Birch et al., 2018). Some studies considered environmental awareness as a moderator in explaining organic food purchase behavior (Kushwah et al., 2019; Tandon et al., 2020).

Consequently, we argued that environmental awareness would directly affect the ATT. Thus, we developed the following hypothesis.

H3: Environmental awareness (ENV) positively influences the Z generation's ATT.

2.3.4 Attitude Toward Organic Food Consumption

Attitude has long been considered as an antecedent of proenvironmental intention and behavior (Nguyen et al., 2016; Pham et al., 2019). However, findings

from previous studies on organic food revealed inconsistent results. Some authors including Smith and Paladino (2010), Singh and Verma (2017) confirmed the significant positive relationship between attitude and intention toward organic produce. On the contrary, in the context of developing countries such as India, Tandon et al. (2020) found that attitude had no significant association with buying behavior of organic food. In this study, we hypothesized as follows:

H4: ATT positively influences the Z generation's intention to purchase organic food (INT).

2.3.5 Social Norms

According to Ajzen (1991), social norms (SN) or subjective norms are individuals' subjective beliefs about the norms of society or groups they belong to. SN have been investigated in several studies on organic food and positively influence consumers' intention to purchase (Mørk et al., 2017; Thogersen, 2009). Therefore, in this study, we also assumed that SN positively impact INT. Hypothesis 5 was raised:

H5: SN positively influence the Z generation's INT.

2.3.6 Perceived Behavioral Control

PBC is the extent to which individuals perceive themselves as being able to perform a specific behavior (Ajzen, 1991). In particular, numerous studies on individual behaviors have considered PBC as an essential factor regarding sustainable consumption and organic food.

For example, Wang et al. (2020) insisted that PBC was the second most influential latent variable toward consumers' intention to purchase pork with certified labels in China. Similarly, de-Magistris and Gracia Royo (2012) confirmed that PBC had a significant positive impact on INT. Therefore, we developed the following hypothesis:

H6: PBC positively influences the Z generation's INT.

2.3.7 Personal Norms

Personal norm (PN) is defined as a self-expectation of specific action in a particular situation, experienced as a feeling of moral obligation (Schwartz, 1977). This definition is widely accepted in social psychological research such as Ajzen (1991), Kaiser (2006), and Arvola et al. (2008). It is usually assumed that individuals adhere to PN for internal reasons, that is because they feel it is the (morally) right thing to do (Schwartz & Howard, 1984). Previous studies, including Mørk et al. (2017), have found that PN positively influence the INT. Similarly, we also hypothesized as follows:

H7: PN positively influence the Z generation's INT.

2.3.8 Intention to Purchase Organic Food

According to the TPB, the intention is the best predictor of an individual's actual behavior. Many studies analyzed the impact of INT on the APB using TPB (de-Magistris and Gracia Royo, 2012; Singh and Verma, 2017). These studies confirmed the positive relationship between intention and actual purchase of organic food. In this study, we followed the previous studies and also assumed that intention to purchase would positively lead to the actual purchase of organic food of young Vietnamese consumers. So we raised hypothesis 8 as the following:

H8: INT positively influences the Z generation's APB of organic food.

2.3.9 Perceived Barriers

Organic food is still new for consumers, so several barriers might appear in the purchasing process (Pham et al., 2019). Aside from the extra price, some barriers include a lack of information and availability, skepticism in organic labels, time constraint, insufficient marketing, and poor presentation (Bryła, 2016). Similarly, Konuk (2018) attributed the key barriers of organic food consumption to availability, lack of trust, and product appearance. Such barriers appear to reduce consumers' INT despite their positive attitudes toward the products (Hughner et al., 2007).

Research in some developing countries revealed that the lack of access to markets and market information

is one of the key barriers (Zundel & Kilcher, 2007). In other words, limited availability and difficulties in accessing organic food products are major barriers to purchasing environmentally sustainable products (Bryła, 2016; Kushwah et al., 2019; Pham et al., 2019). Thus, we formulated the following hypothesis:

H9: Perceived barriers (PB) negatively influence the Z generation's APB of organic food.

2.3.10 Perceived Price

Certified organic foods are often more expensive than conventional foods for a variety of reasons. As a result, price becomes an essential factor in organic food marketing. The conclusions of studies on the relationship between perceived price (PP) and customer purchasing behavior are conflicting. According to Gan et al. (2014), a higher price has an impact on consumers in buying behavior. Their findings are consistent where higher prices lead to a negative impact on the likelihood of consumers purchasing organic food. Some consumer groups have a more positive attitude toward organic food, and they show a willingness to pay the higher price (Sriwaranun et al., 2015).

Chakrabarti (2010) found that the premium price of organic food can hinder Indian consumers from purchasing organic food. On the other hand, wealthy American consumers perceive their consumption of organic food as an alternative way to show off their affluent status in society (Vaidya & Mogelonsky, 2007). In contrast, the study of Smith et al. (2009) revealed that price does not have a significant effect on the intention to buy organic food. Based on the above arguments, we hypothesized that:

H10: PP negatively influences the Z generation's APB of organic food.

2.3.11 Trust

Trust is described as a consumer's perception of a service provider's dependability and ability to deliver stated product features (Konuk, 2018). Consumers' formulation of trust may also be complicated by their lack of knowledge on organic food attributes product attributes (Misra and Singh, 2016). This lack of awareness may impede consumers' ability to process apparent distinctions between organic and conventional food (Torres-Ruiz et al., 2018), thereby leading to consumer mistrust about organic food.

Trust has been investigated as an exogenous variable or mediator in the relationship between intention and APB in many studies on organic food. For example, Zhang et al. (2018) discovered that consumers' belief in organic labeling might influence their proclivity to purchase organically produced food. Similarly, Nuttavuthisit and Thøgersen (2017) determined consumers' trust in marketers and producers may have a favorable impact on their purchasing intentions for organic food. Recently, perceived trust has been confirmed as a moderator and mediator in organic food for consumers' behavior—intention relationship (Konuk, 2018; Tandon et al., 2020; Wang et al., 2020).

In this study, we also assumed the positive influence of trust on the APB of young consumers in Vietnam. Thus, the following hypothesis was raised:

H11: Trust (TRU) positively influences the Z generation's APB of organic food.

3 Methodology

3.1 Measurement of Constructs

Scale items were adapted from existing literature and were measured on a 5-point Likert scale ranging from "1 = Totally disagree" to "5 = Totally agree." The survey instrument measured constructs of the TPB, including ATT, PBC, and INT. Three antecedents of ATT were identified, including health consciousness, lack of knowledge on organic food attributes, and environmental concern. Moreover, we used three variables in MOA theory to explore the factors influencing the actual purchase behaviors of consumers. Thus, three measurements, which are PP, PB, and trust, were adopted. The details of measurement instruments were presented in Table 1 as follows.

3.2 Sampling and Data Collection

This study focuses on the Z generation so we targeted at students who are enrolling in bachelor programs. We administered an online questionnaire survey to a representative sample of the Z generation in Vietnam.

Table 1. Sources of measurements
(*Source:* Authors' own research)

Construct	Number of items	Adapted from
Health consciousness (HC)	3	Pham et al. (2019); Singh and Verma (2017)
Knowledge of organic food (KOF)	3	Singh and Verma (2017)
Environmental awareness (ENV)	3	Teng and Wang (2015)
Attitude toward organic food consumption (ATT)	3	Gil et al. (2000); Michaelidou and Hassan (2008); Çabuk et al. (2014)
Social norms (SN)	5	Mørk et al. (2017)
Perceived behavioral control (PBC)	3	Bredahl (2001)
Personal norms (PN)	3	Mørk et al. (2017)
Intention to purchase organic food (INT)	3	Pham et al. (2019); Singh and Verma (2017)
Perceived barriers (PB)	4	Pham et al. (2019)
Perceived price (PP)	3	Singh and Verma (2017); Gil et al. (2000)
Trust (TRU)	4	ThØgersen (1995); Wang (2015); Tandon et al. (2020)
Actual purchase behavior (APB)	3	Singh and Verma (2017)

Our respondents came from three most crowded and economic developed cities of the country, which are Hanoi (the North), Da Nang (the Central), and Ho Chi Minh city (the South). The snowball and convenient sampling methods were applied. Initially, 100 potential respondents were selected from Facebook friend lists of the research team. Then, these respondents were encouraged to circulate the questionnaire to their friends. After two months, we received 426 valid questionnaires.

3.3 Data Analysis

The demographics characteristics of the sample were obtained using SPSS software. Then we used SmartPLS software to analyze the relationships as specified in the conceptual model with structural equation modeling. In the measurement model, the reliability, validity, and R-square were tested. Moreover, blindfolding method was applied to check the predictive power of the data. In the structural model, the standard 5000 bootstrapping method was applied to test the hypotheses.

4 Results and Discussions

4.1 Sample Characteristics

SPSS software version 22 was employed for data analysis. The sample characteristics are presented in Table 2.

As shown in Table 2, female young consumers account for nearly two-thirds of our sample. Regarding the kinds of organic food that the Vietnamese young consumers prioritize, organic vegetable ranked the first, then organic meat and organic fruit followed. These items are also most popular types of organic food being advertised in the Vietnamese market nowadays. Notably, in our survey, the Z generation showed high willingness to buy organic food as 57.5 percent of the respondents stated that they may spend from 15 percent to 35 percent of their monthly expenditure for organic food.

4.2 Reliability and Validity of Measurements

The reliability of measurements were checked in SmartPLS using several criteria including the Cronbach's alpha, item loadings. The validity of the measurements were evaluated based on the variance composite reliability (CR), variance inflation

Table 2. Sample characteristics (*n*=426)
(*Source:* Authors' own research)

Characteristic	Frequency	Percent (%)
Gender	-	-
Female	297	69.7
Male	129	30.3
Organic food priority	-	-
Organic vegetable	174	40.8
Organic meat	112	26.3
Organic fruit	81	19.0
Organic cereals	18	4.2
Organic drink	31	7.3
Organic seasoning for cooking	7	1.6
Organic cookies	3	0.7
Estimated budget for organic food (in total monthly expenditure)	-	-
Below 15%	122	28.6
From 15% to 35%	245	57.5
Above 35%	59	13.8

Table 3. Reliability of measurements
(*Source:* Authors' own research)

Constructs	Items	Loadings	VIF	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Health consciousness (HC)	HC1	0.874	2.198	0.847	0.907	0.766
	HC2	0.864	1.826			
	HC3	0.887	2.265			
Knowledge of organic food (KOF)	KOF1	0.816	1.872	0.779	0.867	0.686
	KOF2	0.825	1.965			
	KOF3	0.843	1.378			
Environmental awareness (ENV)	ENV1	0.813	1.515	0.814	0.890	0.729
	ENV2	0.876	2.197			
	ENV3	0.871	2.085			
Attitude toward organic food consumption (ATT)	ATT1	0.907	2.862	0.856	0.913	0.778
	ATT2	0.926	3.149			
	ATT3	0.810	1.674			
Social norms (SN)	SN1	0.856	2.496	0.910	0.933	0.736
	SN2	0.883	3.121			
	SN3	0.847	2.622			
	SN4	0.861	2.685			
	SN5	0.841	2.310			
Perceived behavioral control (PBC)	PBC1	0.861	2.342	0.845	0.906	0.763
	PBC2	0.905	2.681			
	PBC3	0.852	1.703			

Personal norms (PN)	PN1	0.854	2.169	0.885	0.928	0.812
	PN2	0.925	2.864			
	PN3	0.923	2.826			
Intention to purchase organic food (INT)	INT1	0.895	2.572	0.899	0.937	0.832
	INT2	0.906	2.714			
	INT3	0.934	3.475			
Perceived price (PP)	PP1	0.859	2.222	0.774	0.869	0.688
	PP2	0.840	2.049			
	PP3	0.788	1.315			
Perceived barriers (PB)	PB1	0.798	1.828	0.848	0.897	0.686
	PB2	0.848	1.933			
	PB3	0.833	2.106			
	PB4	0.831	2.068			
Trust (TRU)	TRU1	0.886	3.101	0.914	0.939	0.794
	TRU2	0.895	3.211			
	TRU3	0.886	2.830			
	TRU4	0.897	3.041			
Actual purchase behavior (APB)	APB1	0.905	2.734	0.889	0.931	0.818

Table 4. Discriminant validity of measurements
(*Source:* Authors' own research)

	APB	ATT	ENV	HC	INT	KOF	PB	PBC	PN	PP	SN	TRU
APB	0.904	-	-	-	-	-	-	-	-	-	-	-
ATT	0.567	0.882	-	-	-	-	-	-	-	-	-	-
ENV	0.535	0.791	0.854	-	-	-	-	-	-	-	-	-
HC	0.569	0.789	0.783	0.875	-	-	-	-	-	-	-	-
INT	0.650	0.774	0.719	0.745	0.912	-	-	-	-	-	-	-
KOF	0.599	0.745	0.720	0.753	0.691	0.828	-	-	-	-	-	-
PB	0.529	0.481	0.510	0.507	0.505	0.495	0.828	-	-	-	-	-
PBC	0.622	0.628	0.614	0.634	0.654	0.670	0.456	0.873	-	-	-	-
PN	0.669	0.502	0.478	0.454	0.594	0.490	0.585	0.503	0.901	-	-	-
PP	0.473	0.534	0.548	0.528	0.535	0.499	0.720	0.407	0.557	0.829	-	-
SN	0.669	0.764	0.688	0.690	0.765	0.698	0.553	0.630	0.706	0.592	0.858	-
TRU	0.672	0.664	0.605	0.634	0.689	0.620	0.578	0.687	0.577	0.502	0.673	0.891

Table 5. R-square results
(*Source:* Authors' own research)

	R-Square	R-Square Adjusted
APB	0.535	0.530
ATT	0.721	0.719
INT	0.698	0.695

factor (VIF), and average variance extracted (AVE) (see Table 3).

Table 3 showed that 11 measurement scales in the conceptual framework have Cronbach's alpha values and all item loadings higher than 0.7, reporting a good reliability. Moreover, the CR values were above 0.8, AVE values were above 0.5; meanwhile, the VIF values of all items were below 5. Thus, the convergent validity and discriminant validity of the measurements were good. In addition, the discriminant validity was checked using Fornell–Larcker test. Table 4 shows the details.

According to Fornell and Larcker (1981) and Hair et al. (2010), the discriminant validity is satisfactory when the square-root of AVE for each endogenous variable is higher than the correlations of latent variables. Thus, Table 4 confirmed the validity of measurement scales.

The next criterion taken in this study was R-square. Table 5 means that the coefficient determination was confirmed as all R-square values of endogenous variables were above 0.5 (Hair et al., 2010).

Table 5 showed that the values of R-square of three constructs are over 0.5 which mean that factors in the structural model explained more than 50 percent the variance for ATT, INT, and APB. The structural model achieved good fitness for further analysis.

4.3 Hypotheses Testing Results and Discussions

We ran the bootstrap analysis to evaluate the statistical significance of variables in the structural model. Results were presented in Figure 2 and Table 6 as follows.

As shown in Table 6, nine hypotheses were accepted, and two hypotheses, H9 and H10 were rejected. H9 was rejected (p-value = 0.008 < 0.05) as we assumed that the relationship between PB and APB was negative but the path coefficient showed positive relationship between two factors. At the same time, H10 was rejected because p-value = 0.829 > 0.05, meaning that PP did not affect the APB of the Vietnamese Z generation.

It is identified in this study that among three factors, environmental concern ($\beta3 = 0.368$, p-value < 0.05) is the most influential factor on ATT, followed by health consciousness ($\beta1 = 0.322$, p-value < 0.05) and KOF ($\beta2 = 0.322$, p-value < 0.05). This finding is in line with the study of Birch et al. (2018). However, this finding is opposite with the findings from other studies such as Smith and Paladino (2010) and Pham et al. (2019). Interestingly, the study of Pham et al. (2019) showed no relationship between environmental concern and attitude toward organic food in the Vietnamese context, while our study revealed the positive result. Thus, we may attribute this result to better knowledge and accountability of the Gen Z with the environmental problems of the country. Vietnam is one of the most vulnerable countries to climate change in the world. So, the environmental degradation is not a faraway issue anymore. Thus, it is time for consumers to actualize their concern and behave in a responsible way.

Furthermore, INT is most strongly affected by the ATT ($\beta4 = 0.403$, p-value < 0.05), then SN ($\beta5 = 0.264$, p-value < 0.05), and PBC ($\beta6 = 0.174$, p-value < 0.05). Finally, PN ($\beta7 = 0.118$, p-value < 0.05) was found to be the least important among the four factors that predicted INT of Vietnamese young consumers. Our findings reflect the cultural norms in Vietnam that young people are significantly affected by other referents including family members and people living around them. Particularly, organic food is still new for the Vietnamese people so they tend to seek for more advices from others before making the purchase. In addition, the least importance of PN in this study implies that the Gen Z in Vietnam tend to purchase organic food because of external motivations rather than the internal ones. This phenomenon is understandable in Confucian countries where people are often afraid of "losing face" and collectivism is high.

Regarding the purchase behavior of the Vietnamese Gen Z, we found trust ($\beta11 = 0.356$, p-value < 0.05) as the most impactful factor, even higher than their intention to purchase ($\beta8 = 0.322$, p-value < 0.05). It is a notable finding in our study that coincides with other studies such as Nuttavuthisit and Thøgersen (2017) and Tandon et al. (2020). In an emerging organic food market like Vietnam, word-of-mouth (WOM) and e-WOM is a popular method to advertise the new products. Thus, it explains why trust is so important in the purchase decision of the Z generation.

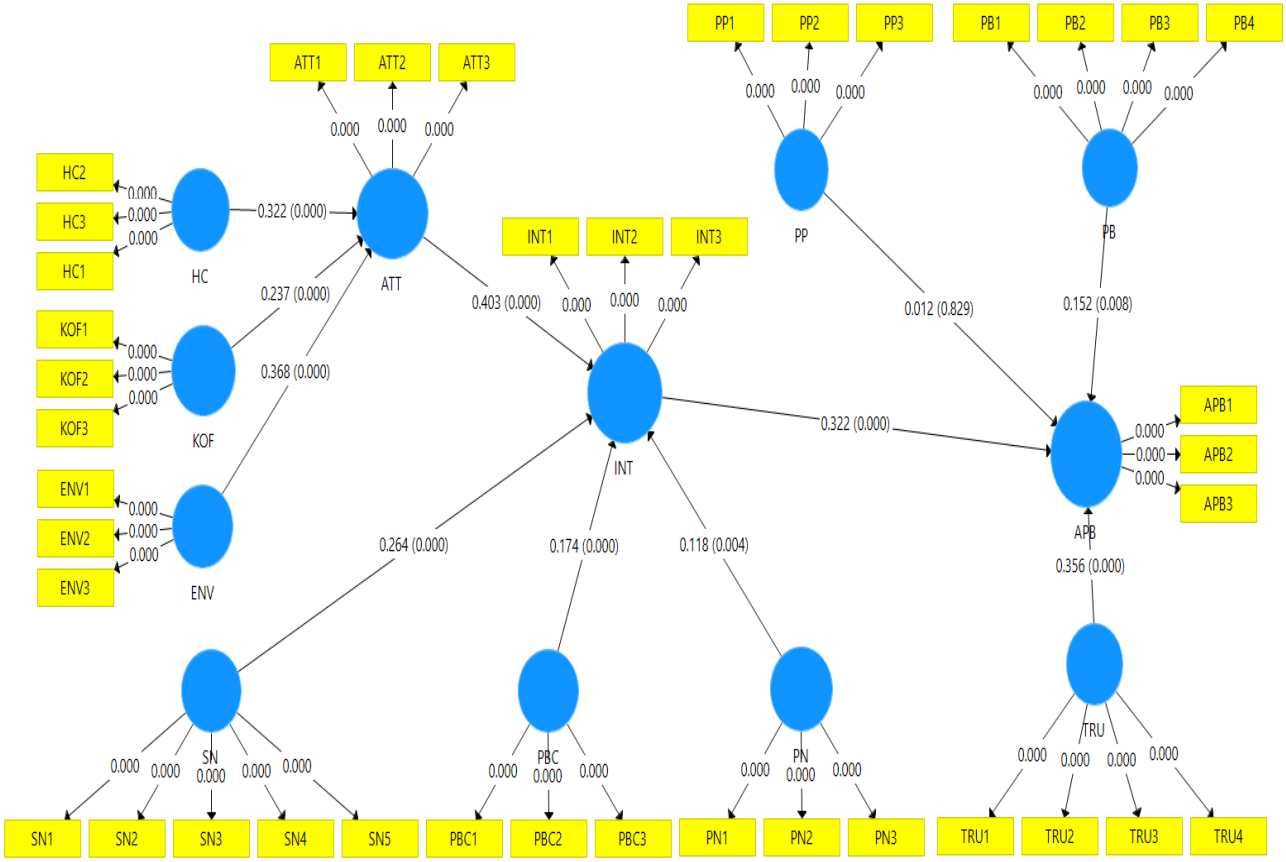


Figure 2: Structural model
(*Source*: own elaboration)

Table 6. Hypothesis – path coefficients
(*Source:* Authors' own research)

Hypothesis	Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics (|O/STDEV|)	P Values	Hypothesis Conclusion
H1	HC → ATT	0.322	0.328	0.058	5.543	0.000	Accepted
H2	KOF → ATT	0.237	0.236	0.052	4.539	0.000	Accepted
H3	ENV → ATT	0.368	0.363	0.060	6.168	0.000	Accepted
H4	ATT → INT	0.403	0.404	0.055	7.276	0.000	Accepted
H5	SN → INT	0.264	0.263	0.058	4.593	0.000	Accepted
H6	PBC → INT	0.174	0.172	0.044	3.954	0.000	Accepted
H7	PN → INT	0.118	0.121	0.041	2.874	0.004	Accepted
H8	INT → APB	0.322	0.317	0.058	5.514	0.000	Accepted
H9	PB → APB	0.152	0.151	0.057	2.647	0.008	*Rejected*
H10	PP → APB	0.012	0.013	0.054	0.216	0.829	*Rejected*
H11	TRU → APB	0.356	0.359	0.065	5.488	0.000	Accepted

It is remarkable in this study that PB (β9 = 0.322, p-value < 0.05) was found to have positive influence on APB, meaning that the more barriers the Z generation perceive, the more motivated they are to purchase organic food. This finding is opposite to the findings of Bryła (2016), Pham et al. (2019), and also a surprising result in the Vietnamese context. We might explain this contradictory result on the basis of social exchange theory and expectancy value theory. According to the social exchange theory, individuals determine to take an action based on their consideration of the benefits and costs of the alternative. Furthermore, an acceptable option is still better than anything else that is available. Thus, young people who perceive that the benefits of organic food outweigh the barriers in purchase process will try to get the organic food even when the barriers are high.

The expectancy value theory also helps to explain the relationship between barriers and APB. The theory postulates that achievement-related choices are motivated by a combination of people's expectations for success and subjective task value in particular domains. The model further differentiates task value into four components: attainment value (i.e., importance of doing well), intrinsic value (i.e., personal enjoyment), utility value (i.e., perceived usefulness for future goals), and cost (i.e., competition with other goals). In our present study, the positive relationship between and actual purchase is attributed to the attainment value and utility value that the Z generation expect to get upon their purchase of organic food.

Notably, PP (β10 = 0.012, p-value > 0.05) was confirmed to have no statistical relationship with the Z generation's APB of organic food. This finding was in line with the study of Truong et al. (2012) with 264 Vietnamese potential consumers of organic food. According to Truong et al. (2012), because of the consumers' perceived superior quality, potential Vietnamese consumers were not price sensitive toward organic food. Furthermore, as trust was found to be the most important factor that predicts the Vietnamese young consumers' actual purchase in our study, the importance of PP seems to lessen and even not influential at all.

5 Implications, Limitations and Conclusion

Our integrative TPB and MOA proposed research model was tested in the Vietnamese context and show statistically significant relationship among factors and also contradictory results with previous studies. Thus, it is implied that the study is compelling and needs more investigation in the context of developing countries.

In terms of theory, it is implied from our findings that the gap between purchase intention and purchase behavior of organic food can be explained by several factors such as trust and PB. When it came to displaying the intricacies of the Gen Zers' buying behavior in Vietnam, we discovered that trust was more influential than their intention to buy. Notably, we discovered that PB had a reverse impact on the purchase behaviors of young consumers. Regarding the MOA model, our study confirmed that the ability (e.g., attitude, intention, SN, and PN) and motivation (e.g., trust) are more important predictors of purchase behavior than the opportunity (e.g., PP and PB). To a certain extent, our study shed light on the purchase behaviors of Gen Zers in Vietnam. We added to the existing literature of organic food consumption a finding related to the psychological aspect from Vietnam that might motivate other empirical studies to explain. The psychological aspect of consumers, particularly in the emerging economy context, is still attractive for researchers.

In terms of practice, our findings suggest some implications for organic food producers and suppliers. We have shown that the PP has no statistical association with the Gen Zers' purchase behavior of organic food. Furthermore, because trust was found to be the most important factor in predicting the purchase of young Vietnamese consumers in our study, PP appears to be less essential, if not nonexistent. Thus, the organic food producers must focus on product quality rather than competitive prices to attract potential customers. Suppliers in the organic market may engage the young customers with marketing campaigns that focus on super attributes of organic food compared to conventional food.

Moreover, to enhance the trust of consumers and motivate purchase behavior, organic food producers should have trusted certificates of their products and communicate with the customers through mass

media channels. Recently, social media channels are becoming more and more pervasive in Vietnam. Gen Zers are the majority of social media users, but our study showed that they do not have sufficient KOF. Therefore, organic food producers and suppliers should take advantage of social media as a critical medium to advertise their products and educate young consumers about organic food. In addition, the role of referent people, who strongly influence the purchase behavior of Gen Zers, should not be disregarded in the Vietnamese context. As a result, marketing campaigns of organic food should aim at a broader scope of consumers, not only the young consumers. Last but not least, the Vietnamese government ought to amend the policies to encourage the production and consumption of organic food by focusing more on young people.

Despite some limitations of the study, including convenient and snowball sampling methods, the current study adds to the body of knowledge on organic food consumption by looking into the behaviors of Vietnam's Gen Z. Our study provided insights into the Vietnamese Gen Z and suggested further investigation in this topic with more concentration on situational factors in the purchase process of consumers.

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