

INTENTION TO PURCHASE LOCAL FOOD OF VIETNAMESE CONSUMERS IN THE COVID-19 PANDEMIC CONTEXT: AN APPLICATION OF THE THEORY OF PLANNED BEHAVIOR

Nguyen Van Phuong^{1,2*}, Bui Thi Nga², Iris Schröter³ and Marcus Mergenthaler³

¹Faculty of Political Economy, VNU University of Economics and Business,
Vietnam National University, Hanoi, Vietnam

²Faculty of Accounting and Business Management,

Vietnam National University of Agriculture, Hanoi, Vietnam

³Department of Agriculture, South Westphalia University of Applied Sciences,
Lübecker Ring 2, 59494 Soest, Germany

Corresponding author: vanphuong@vnu.edu.vn

(Received: December 14, 2021; Accepted: 2022)

ABSTRACT

The COVID-19 pandemic has changed consumers' habits and behavior for food shopping and consumption in favor of local food. This study sought to determine the intention of Vietnamese consumers to purchase local food in the COVID-19 pandemic context. Data came from the interviews of 286 consumers using standard questionnaire. Five provinces from the North to the South: Hanoi, Quang Ninh, Dong Thap, Ninh Thuan and Dak Lak, which represent typical areas of Vietnam such as urban, rural areas; coastal, plain and mountainous areas, respectively were considered in 2021. Based on an extended theory of planned behavior (TPB), descriptive statistics, exploratory factor analysis, and regression analysis were used to establish the relationship between behavioral intention and its determinants. Four determinants affected the intention to purchase local food among Vietnamese consumers in the COVID-19 pandemic context: subjective norm, trust in local food, perceived behavioral control, and attitude of consumers to local food. The impact of the COVID-19 pandemic on consumers was found not significant. Policy implications are discussed to promote sustainable local food development in Vietnam in the future.

Key words: consumer behavior, local food, TPB, Vietnamese consumer

INTRODUCTION

The COVID-19 pandemic created many challenges when the numbers of infection cases increased rapidly in all countries and territories. National and regional governments all around the world imposed policies to control the situation, including social distancing, safety mandates, and lockdown restrictions. This in turn slowed down the economy, affecting many business sectors, caused an increase in unemployment rates, and reduced consumers' income and spending (Jo et al. 2021). These policies and situations cause changes in the daily lives of people, from how they work to how they shop and how they entertain themselves. Consumers also changed their behavior to the new orientation and habits of food consuming, food shopping, food delivery and dining out (Jo et al. 2021; Sheth 2020). Consumers have increased home cooking and baking (Gerritsen et al. 2020), spent more time on new recipes and wasted less food (Huntepr 2020), and eaten out less during the pandemic (Flanagan et al. 2021). They prefer online shopping with direct delivery to their door (Jo et al. 2021). Also, local food has become more important during the COVID-19 pandemic (Bui et al. 2021).

There is no consensus in defining local food (Feldmann and Hamm 2015). Local food is understood differently, based on the social and spatial context, as consumers and scholars are very flexible in understanding the term (Carroll and Fahy 2015). It is mainly defined as food that is produced, processed, and retailed within a defined geographical area (Adams and Adams 2011; CFIA 2019; Kumpulainen et al. 2018; Moya et al. 2013). The distance between the location of production and consumption ranged from 10 miles, 30 to 50 miles (Thilmany et al., 2010) to 100 miles (Adams and Adams, 2011; Durham et al. 2009; Feldmann and Hamm 2015; Thilmany et al. 2010). In some other studies, food can be considered local when it is consumed in the same county, town, state, or country from which it originated (Brown 2003; Darby et al. 2008; Moya et al. 2013).

The previous literature showed that local food promotes certain dimensions of sustainability (Mäkineniemi and Vainio 2014) that brought benefits to the consumers: local foods are of higher quality (Feldmann and Hamm 2015), are fresher (Lim and Hu 2016), more nutritious (Bianchi and Mortimer 2015), and tastier than other products (Jensen et al. 2019) thanks to the shortened transportation time from production to consumption, and less use of preservatives (Bui et al. 2021; Motta and Sharma 2016; Skallerud and Wien 2019). Local food is also considered to protect the ecological environment (Zhang et al. 2020) by using less chemicals during production (Lim and Hu 2016), reducing the use of transportation fuels, thus minimizes the emission of greenhouse gases (Bianchi and Mortimer 2015; Moya et al. 2013). It is believed that local food consumption supports local producers (Jensen et al. 2019) and contributes to the local economic development because the money the consumers spend remains within their community (Jensen et al. 2019; Memery et al. 2015). From these benefits, local food has become a new trend in many countries such as in the US (Hedberg and Zimmerer, 2020), Europe (Kumpulainen et al. 2018; Skallerud and Wien 2019), and others (Lim and Hu, 2016) with the total sale of around \$20 billion in 2020 (Zhang et al. 2020).

Like all countries and territories in the world, Vietnam is not immune to the COVID-19 pandemic and its accompanying economic headwinds. Although it has first achieved some successes in containment and reduced the impacts of COVID-19, thanks to the compliant population that mostly adhered to safe distancing requirements, COVID-19 posed a negative impact on people's lives, especially the poor people. Many have become unemployed, resulting in no or low incomes (Bui et al., 2021). Similar to most consumers around the world, Vietnamese consumers have changed their behavior and habits. They adjust many aspects of their lives, including their way of shopping by avoiding the long queues in front of shops and supermarkets; more thoughtful spending, reducing shopping frequency through larger baskets; shifting to stores closer to their home, with more focus on local food; and increasing e-commerce (Tien 2020). Consumers also tend to order and shop online via mobile applications with more direct delivery to their doors than traditional shopping. Consumers also buy more local origin products cheaper and easier to buy than higher priced imported ones. This seems to show that the COVID-19 crisis encourages consumer preferences for local foods (Phuong et al. 2021).

Many studies have investigated the intention to purchase local food (Holt et al. 2018; Kumar et al. 2021; Minh et al. 2021) and effects of COVID-19 in terms of food businesses, market conditions, changes in consumer behaviors, revenues, and mobilities in the world (Bucak and Yiğit, 2021; Djekic et al. 2021; Jo et al. 2021; Nakat and Bou-Mitri 2021; Rizouet al. 2020; Wang et al. 2020). However, the intention to purchase local food of Vietnamese consumers in the context of COVID-19 is currently under-explored. No empirical evidence is available to explore the motivation of Vietnamese consumers' motivation to purchase local food. These gaps in the literature need to be addressed. Beyond that, this study aims to determine the intention to purchase local food of Vietnamese consumers in the COVID-19 pandemic context and suggest some policy recommendations to promote sustainable local food development in Vietnam in the future.

MODEL AND METHODOLOGY

Theory of Planned Behavior (TPB). Recently, the TPB has been an influential theoretical approach in the psychology domain (Shalender and Sharma 2021). It has been frequently used to investigate the behavioral predispositions of consumers and their buying behavior (Sabah 2016). Moreover, it is argued that buying decision is complex and need an intentional cognitive process (Giampietri et al. 2015). The TPB can be applied to predict the behavior of individuals by their intentions (Aggestam et al. 2017). However, Sniehotta et al. (2014) highlighted the limitations of the TPB, and in particular, the idea that individuals have an intention but may not act upon it (Ajzen 2006; Sniehotta et al. 2014). In other words, factors that go beyond an individual's control influence their intentions and predictions of behavior (Ajzen 2006; Kor and Mullan 2011).

The TPB argues that the intention of a person relies on personal attitudes, subjective norms (SN), and perceived behavioral control (PBC) and is used to determine and understand human behavior (Ajzen 1991). In general, the intention may increase with a positive attitude towards the behavior, SN, and PBC (Giampietri et al. 2018; Lim and An 2021). In this study, attitudes refer to the feelings or emotions related to performing a behavior (Ajzen 1991). Attitude can have positive effect to intention of the people (Lim and An 2021). SN represents the perception of significant others about a given behavior. The main assumption for adding this factor to the model is the argument that human's buying behavior is adopted according to other people's attitude towards given behavior (Sabah 2016); SN is social in nature because a person performs an action on the basis of the opinions of her/his acquaintances, which is also influenced by perceptions of social pressure to make a decision about the action for him/her (Park 2000); PBC is related to the perceived ease or difficulty of performing the behavior (Aggestam et al. 2017).

The concept of the TPB was extended in other studies (Giampietri et al. 2018; Mazzocchi et al. 2008), by noting that trust is a behavioral determinant whose nature is jointly relevant to the TPB concepts of attitudes, SN, and

PBC. In addition, the studies have found that the direct interaction between local food producers and consumers and repeated exchanges can provide consumers with a sense of trust built on shared know-how and a mutual understanding with local food producers (Hartmann et al. 2015; Hunt 2007; Meyer et al. 2012; Tregear 2011). Moreover, trust can drive loyalty and new solid relationships between producers and consumers (Hartmann et al. 2015). In Vietnam, trust is an important factor that affects consumer behavior (Nam and Huan 2018). So in this study, trust was added to extend the TPB of Ajzen (1991).

The study was conducted in the complex COVID-19 pandemic context in Vietnam. Many recent studies have been conducted around the world that indicates the impact of COVID-19 on food production and business (Bucak and Yiğit 2021; Nakat and Bou-Mitri 2021; Soon et al. 2021; Wang et al. 2020). Bui et al. (2021) studied short food supply chains in Vietnam during COVID-19 and argued that COVID-19 affected Vietnamese consumer behavior. A more in-depth study on local food purchases during COVID-19 is necessary to assess food consumer behavior for implementing policy to promote local food selling.

Factors affecting the intention of Vietnamese consumers to purchase local food in the COVID-19 pandemic context were tested based on the TPB model (Fig. 1). In particular, the following hypotheses were tested:

- H1. Consumer's subjective SN towards purchasing local food increases their buying intention.
- H2. Consumer's attitude towards purchasing local food increases their buying intention.
- H3. Consumer's trust towards purchasing local food increases their buying intention.
- H4. Consumer's PBC towards purchasing local food increases their buying intention.
- H5. COVID-19 pandemic increases their buying intention.

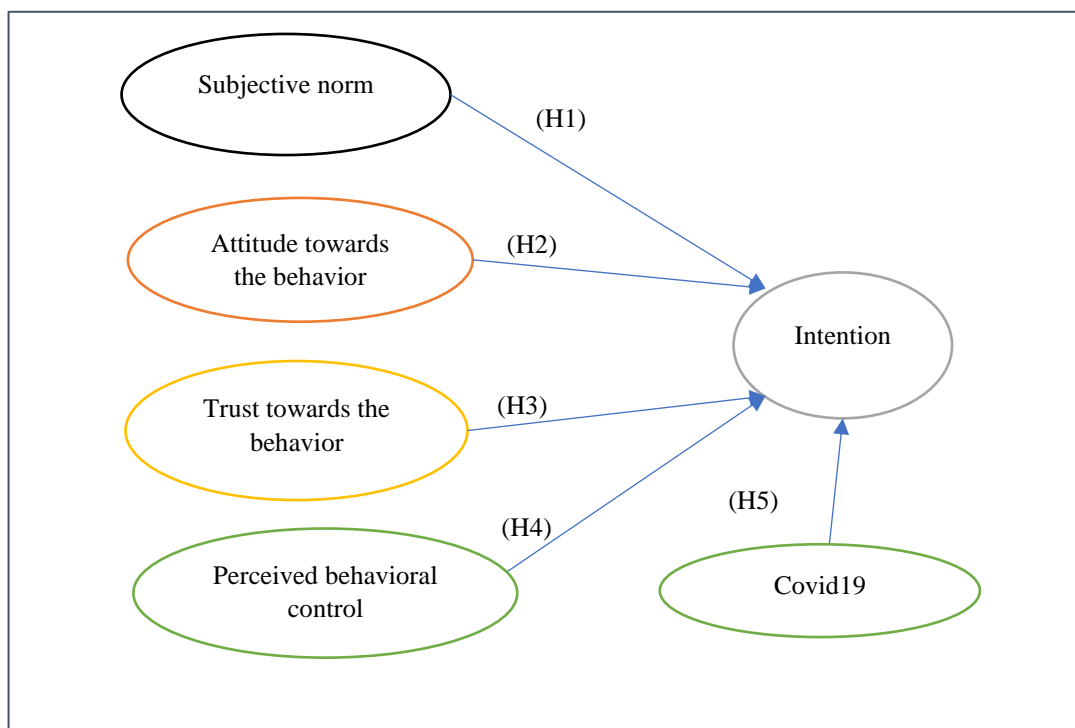


Fig. 1. The extended Theory of Planned Behavior model related to Vietnamese consumer intention to buy local food

Questionnaire development. All items used in this study are measured by five-point scales that ranged from 1 (strongly disagree) to 5 (strongly agree) in relation to local food purchase behaviors of the respondents. The scales used were adapted from previous studies. The questions were revised by discussing and testing within two group discussions (7 people each group) with consumers in Hanoi to clarify the meaning of the questions in Vietnamese. The variable COVID-19 was also developed via discussions in the groups. The original sources of the questions used in the survey are described in Table 1.

Table 1. The items used in this study and sources

Variables	Items		Reference
INT	INT1	I intend to purchase more local food during COVID-19	(Ajzen, 2006; Giampietri et al., 2018; Lam and Hsu, 2006; Zeithaml et al., 1996)
	INT2	I plan to purchase more and more local food from local producers during COVID-19	
	INT3	I am willing to buy more local food during COVID-19	
	INT4	I will make an effort to purchase more local food during COVID-19	
SNO	SNO1	My acquaintances understand me buy more local food as a wellbeing food	(Ajzen, 2006; Lam and Hsu, 2006; Lim and An, 2021)
	SNO2	My acquaintances think that I should eat more local food	
	SNO3	My acquaintances approve me eating more local food	
ATT	ATT1	Purchasing more local food is pleasurable	(Ajzen, 2006; Lam and Hsu, 2006)
	ATT2	Purchasing more local food is favorable	
	ATT3	Purchasing more local food is enjoyable	
TRUST	TRUST1	I perceive purchasing more local food to be reliable	(Giampietri et al., 2018; Mazzocchi et al., 2008)
	TRUST2	Purchasing more local food appears trustable to me	
	TRUST3	I trust in purchasing more local food.	
PBC	PBC1	I can easily eat more local food whenever I want	(Ajzen, 2006; Giampietri et al., 2018; Lam and Hsu, 2006; Lim and An, 2021)
	PBC2	If I wanted to, I could easily purchase more local food	
	PBC3	Purchasing more local food is up to me.	
COVID-19	COVID1	COVID-19 pandemic had made my life change	(Meixner and Katt, 2020; Qi and Ploeger, 2021)
	COVID2	COVID-19 pandemic has change society	
	COVID3	COVID-19 pandemic will shift my consumption behavior	

Data collection. Five provinces were chosen to conduct the survey that include Hanoi, Quang Ninh, Dong Thap, Ninh Thuan, and Dak Lak, which represent areas and regions of Vietnam as urban, rural areas, coastal, plains, and mountain areas of the country (Table 2). The number of 286 respondents was chosen randomly by available resources to interview “face to face”. Six trained interviewers conducted the interviews from December 2020 to March 2021 in local markets and supermarkets in each province. The interview length was 40 minutes on the average.

Table 2. Distribution of the sample

Provinces	Areas	Region	Sample	
			Frequency	Percent (%)
Dong Thap	Rural, Plain areas	South	73	25.5
Dak Lak	Rural, Mountainous area	Middle	52	18.2
Ninh Thuan	Plain, rural, coastal areas	Middle	51	17.8
Quang Ninh	Coastal, plain and mountain	North	60	21.0
Hanoi	Urban, plain	North	50	17.5
Total			286	100

Source: Survey data, 2021

Data analysis tools. Descriptive statistics were used to describe the demographic characteristics of the respondents. An exploratory factor analysis was conducted, and Cronbach's alpha was used to check the internal consistency of the variables. However, the total sample must be more than 5 times Items for Exploratory Factor Analysis (Hair et al, 1998). In this analysis, we have 18 items; the total sample is more than 90 observations, so 286 respondents is enough for Exploratory Factor Analysis. After that, a regression analysis was conducted within a TPB framework to estimate the relationship between behavioral intention and its determinants (Mazzocchi et al. 2008). A multiple regression

model was utilized to analyze the relationship between the intention to purchase local food by Vietnamese consumers and its determinants.

The multiple regression model can be specified as follows:

$$INT = \beta_1 * SNO + \beta_2 * ATT + \beta_3 * TRUST + \beta_4 * PBC + \beta_5 * COVID-19 + \text{error}$$

Where: INT: intention to buy local food
 SNO: subjective norm
 ATT: attitude towards local food
 TRUST: trust in local food
 PBC: perceived behavioral control
 COVID-19: impact of COVID-19
 β_i : estimated coefficients

RESULTS AND DISCUSSION

Profile of the respondents. The majority of the respondents were aged from 25 to 54 years. Around 56% of them were female, the rest were male. Regarding the educational level, the proportion of the respondents with the high school level was 36.7%, the number with college and vocational education level was 34.5%. The highest percentages of jobs were farmers (25.2%) and workers (17.1%). Most family incomes were under 200 million Vietnam Dong¹ per year, with an average household size of 4.2 persons. Vietnamese ethnicity occupied 95.8%, the rest were minority ethnicities (Table 3).

Table 3. Demographic characteristics of the respondents (N=286)

Variable	Category	Frequency	Percent (%)
Age (years)	< 24	47	16.4
	25 to 34	97	33.9
	35 to 54	66	23.1
	45 to 54	46	16.1
	55 to 64	19	6.7
	> 64	11	3.8
Gender	Male	126	44.1
	Female	160	55.9
Education	Under high school	35	12.2
	High school	105	36.7
	College and vocational	98	34.3
	University and higher	48	16.8
Occupation	Worker	49	17.1
	Farmer	72	25.2
	Officer and staff	32	11.2
	Businessman/woman	37	12.9
	Others	96	33.6
Family income (million Dong)	< 100	101	35.3
	100 to 199	125	43.7
	200 to 299	42	14.7
	300 to 399	10	3.5
	≥400	8	2.8

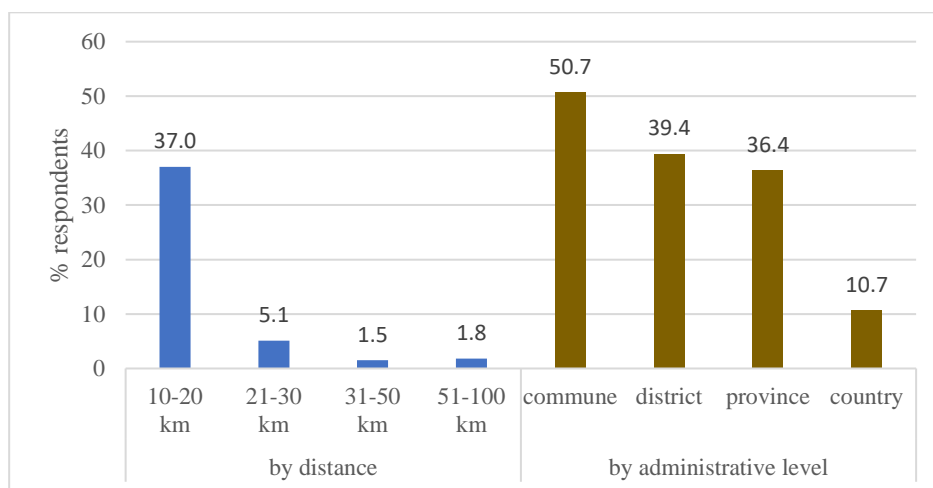
¹ Dong is the currency of Vietnam. 01 USD=23,095 Vietnam Dong. <https://portal.vietcombank.com.vn/en-US/Personal/TG/Pages/exchange-rate.aspx?devicechannel=default>. Consulted on 28/07/2021.

Intention to purchase local food.....

Variable	Category	Frequency	Percent (%)
Ethnic	Vietnamese (Kinh)	274	95.8
	Minority ethnic	12	4.2
Total		286	100

Source: Survey data, 2021

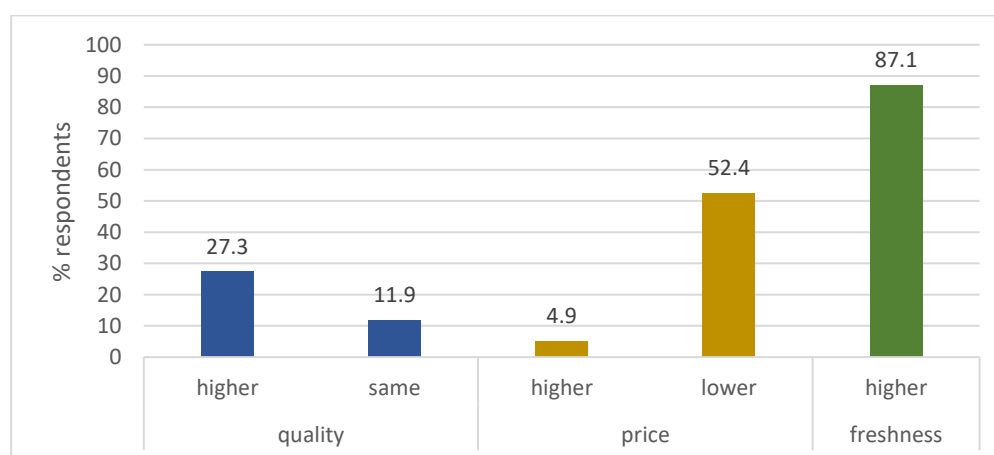
Local food is a product that is produced within their commune (50.7%), or district (39.4%), or within their province (36.4%). However, there were some people who thought that local food could be extended to the food with a national brand name, such as Vinacafe (a Vietnamese company that produces and distributes roast and instant coffee). There were 37% respondents who thought that local food is produced within 20 km from their place and 8.4% that gave higher numbers for the distance in kilometers (Fig. 2).



Source: Survey data, 2021

Fig. 2. Opinion of respondents about local food (N=286)

Most of the respondents answered that the local food was fresher (87.1%) and cheaper than other foods. Some others thought that the quality of the local food was higher (27.3%). These results can be explained by the fact that local food is produced and sold near the producer's areas. The farmers do not spend much time and cost on storage and transportation. So, the local food is normally fresher and cheaper than imported food (Fig. 3).

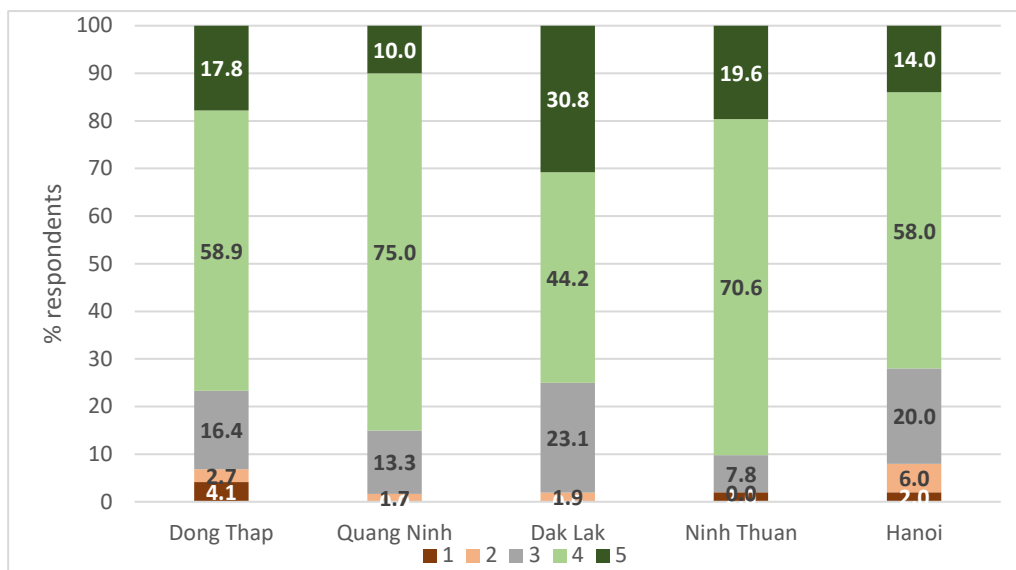


Source: Survey data, 2021

Fig. 3. Evaluation of respondents about local food (N=286)

COVID-19 pandemic has influenced the food consumption of the Vietnamese (Nga et al., 2021). Figure 4 shows the impact of the COVID-19 pandemic to the respondents by provinces. Almost all the respondents agreed or strongly agreed that the COVID-19 affected their life, with varying shares per province: Dong Thap (76.7%), Quang Ninh (85.0%), Dak Lak (75.0%), Ninh Thuan (90.2%), and Hanoi (72.0%). This has created a change in their activities

and purchasing behavior. The respondents' opinion differed among provinces due to the different impacts of the COVID-19 pandemic on different provinces before survey time.



Note: 1 strongly disagree - 5 Strongly agree
 Source: Survey data, 2021

Fig. 4. Impact of COVID-19 pandemic to respondents by provinces

Descriptive statistics of items are shown in Table 4. All of the items' means are more than 3.0. Most of respondents also agreed that Covid-19 had variable effects on consumer behavior.

Table 4. Descriptive statistics of the factors

Variables	Items	Mean	Std. Deviation	
INT	INT1	I intend to purchase more local food during COVID-19	3.83	.432
	INT2	I plan to purchase more and more local food from local producers during COVID-19	3.88	.366
	INT3	I am willing to buy more local food during COVID-19	3.84	.402
	INT4	I will make an effort to purchase more local food during COVID-19	4.24	.201
SNO	SNO1	My acquaintances understand me buy more local food as a wellbeing food	3.02	1.036
	SNO2	My acquaintances think that I should eat more local food	4.46	.693
	SNO3	My acquaintances approve me eating more local food	3.84	1.159
ATT	ATT1	Purchasing more local food is pleasurable	3.40	.764
	ATT2	Purchasing more local food is favorable	3.37	.796
	ATT3	Purchasing more local food is enjoyable	3.33	.805
TRUST	TRUST1	I perceive purchasing more local food to be reliable	4.02	.586
	TRUST2	Purchasing more local food appears trustable to me	3.97	.609
	TRUST3	I trust in purchasing more local food.	4.07	.554
PBC	PBC1	I can easily eat more local food whenever I want	4.61	.615
	PBC2	If I wanted to, I could easily purchase more local food	4.27	.841
	PBC3	Purchasing more local food is up to me.	3.98	.844
COVID-19	COVID1	COVID-19 pandemic had made my life change	3.38	.969
	COVID2	COVID-19 pandemic has changed society	3.20	.925
	COVID3	COVID-19 pandemic will shift my consumption behavior	3.40	.930

Source: Survey data, 2021

Exploratory factor analysis (EFA) of intention to local food. The reliability of the scale was determined by computing the alpha coefficient. The items which have a corrected item-total correlation less than 0.3 were excluded. The items with a credibility alpha of more than 0.6 was deemed acceptable as they imply that the research concept is new to the respondents (Peterson 1994; Slater 1995). Thus, those with Cronbach Alpha of more than 0.6 was used in this research in the context of Vietnam' consumers during COVID-19. After dropping INT4 because the corrected item-total correlation was less than 0.3, the results of Cronbach's Alpha reliability are shown in Table 5.

Table 5. Explorative Factor Analysis

Factors	Code	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
Subjective norm	SNO1	.560	.572	.707
	SNO2	.570	.626	
	SNO3	.520	.653	
Attitude	ATT1	.711	.710	.818
	ATT2	.684	.736	
	ATT3	.620	.802	
Trust	CON1	.693	.755	.828
	CON2	.683	.766	
	CON3	.684	.766	
	CON4	.693	.755	
Perceived behavioral control	PBC1	.709	.782	.833
	PBC2	.724	.740	
	PBC3	.690	.778	
COVID-19	COVID1	.658	.758	.816
	COVID2	.650	.764	
	COVID3	.696	.718	
Intention	INT1	.431	.506	.614
	INT2	.355	.603	
	INT3	.491	.411	

Source: Survey data, 2021

Exploratory factor analyses (EFA) were conducted to elicit if items measuring consumer's intention to purchase local food as well as items measuring TPB constructs allow for computing the respective scales. The extraction method used was Principal Component Analysis, and the rotation method used was Varimax. The EFA obtained Kaiser-Meyer-Olkin (KMO) value of 0.702. The KMO value reflects the sampling adequacy and should exceed the minimum value of 0.6 (Hoque 2018).

The eigen value for each component should be greater than 1.0 and the cumulative variance explained should be greater than 60% (Shkeer and Awang 2019). The eigen values obtained ranged between 2.082 and 2.710; the variance explained for component 1 is 22.580%, component 2 is 19.830%, component 3 is 17.351%, component 4 is 13.038%. The total variance explained for measuring this construct is 72.799%. The results showed the four components that emerged with the respective items under each component.

The EFA procedure for exploring the measuring items for intention to purchase local food in Vietnam has resulted in four components with three items each. The total items retained were 12. The EFA of intention to purchase value for the dataset was then determined using principal axis factoring and promax rotation. Items with factor loadings below 0.45 and communalities of less than 0.5 were considered for removal Comrey and Lee (1992). The result showed that 12 items with factor loading greater than 0.7 are selected (Table 6). This result showed that measuring items could explore purchase intention to local food in Vietnam.

Table 6. Exploratory factor analyses of independent variables

Items	Component				
	1	2	3	4	5
Perceived Behavioral Control 1	.882				
Perceived Behavioral Control 2	.872				
Perceived Behavioral Control 3	.860				
Trust towards the behavior 2		.869			
Trust towards the behavior 1		.868			
Trust towards the behavior 3		.850			
Attitude towards the behavior 1			.871		
Attitude towards the behavior 2			.848		
Attitude towards the behavior 3			.846		
COVID2				.867	
COVID3				.862	
COVID1				.831	
Subjective Norm 2					.849
Subjective Norm 1					.813
Subjective Norm 3					.753

Source: Survey data, 2021

Factors influencing the intention to purchase local food. The extracted factors from the explanatory factor analysis were incorporated into the linear regression analysis in order to examine the impact of independent variables on the dependent variable, purchase intention (Table 7).

Table 7. Regression model – Factor influencing the intention to buy local food

Variables	Coefficients	t	p-value	Collinearity Statistics	
				Tolerance	VIF
SNO	.375	8.583	< .001	.922	1.085
PBC	.356	8.331	< .001	.961	1.040
TRUST	.404	9.408	< .001	.955	1.047
ATT	.253	5.812	< .001	.928	1.078
COVID-19	.051	1.178	.240	.929	1.077

Source: Survey data, 2021

Results showed that the model adjusted R² = 0.508, indicating that 50.8% of the variance in purchase intention on local food is explained by the five factors SNO, PBC, TRUST, ATT, and COVID-19. With p-value < 0.001, the result confirmed that the regression model is consistent with the data collected. With p-value > 0.05, COVID-19 pandemic had no significant impact on intention to purchase local food, but the rest of the variables are statistically significant at 1% significance level. Thus, the regression model is written as:

$$INT = 0.375SNO + 0.356PBC + 0.404TRUST + 0.253ATT$$

With the regression coefficient of 0.375 for SNO and $p < 0.001$, H1 is accepted, suggesting a positive relationship between subjective norm and behavioral intention identified in this study, which is consistent with previous studies (Giampietri et al. 2018; Lam and Hsu 2006; Lim and An 2021). This result shows that sample consumers behave in such a way that the more the people around them approve of them buying local food, the more willing they are to purchase them. So behavioral intention to purchase local food is related to perceived social pressure from important people around them.

The regression coefficient 0.356 for PBC at $p < 0.001$ means that the more positive the perceived behavioral control is, the higher the intention to purchase local food. This result is similar to studies of Lam and Hsu (2006), Giampietria et al. (2018), Lim and An (2020) that indicated perceived behavioral control is a significant predictor in positively influencing consumers' behavioral intention to purchase a product. A similar study conducted during COVID-19 in Indonesia and Malaysia to determine food safety and evaluated intention to practice safe eating out measures showed perceived behavioral control had a significant influence on Vietnamese behavioral intention to purchase local food in a COVID-19 pandemic context (Soon et al. 2021).

Intention to purchase local food.....

Similarly, for TRUST with coefficient of 0.404 and $p < 0.001$, H3 is accepted, indicating that consumer's trust is the most important factor that affects positively the intention to purchase. This positive relation is consistent with the findings of Giampietria et al. (2018) and Mazzocchi et al. (2008). The stronger the trust in the product and its seller, the higher is the intention to purchase a product. In this study, when consumers have more trust on local food and local sellers, it is easier for them to consume said local food.

With regression coefficient of 0.253 for ATT and $p < 0.001$, H2 is accepted which means that attitude towards purchase of local food was positively related to behavioral intention. That is, if sample consumers have a more positive attitude toward local food, they will have a stronger intention to purchase local food. This finding is not surprising since Lam and Hsu (2006) and Giampietria et al. (2018) had similar results.

Finally, with a regression coefficient for COVID-19 of 0.051 with $p > 0.2$, H5 is rejected, suggestive of the fact that perceptions of the pandemic did not alter the behavioral intention of the consumers. This result is not consistent with previous studies of Minh et al. (2021) and Kumar et al. (2021). This result may be due to earlier survey time (2021) wherein Vietnam controlled well COVID-19 pandemic, thus it did not clearly show the change in behavioral intention of the consumers.

CONCLUSIONS AND IMPLICATIONS

This study confirmed four identified determinants affecting the intention to purchase local food of consumers in the COVID-19 pandemic context. These factors are subjective norm, trust in the sellers and local food, perceived behavioral control and attitude of consumers to local food. The COVID-19 pandemic did not affect significantly behavioral intention. This may be due to the behavioral intention for local food has been present even before the COVID-19 pandemic. However, it might also be the case that the COVID-19 variable is endogenously influenced by the other factors so that the effect of the COVID-19 pandemic is also captured by the other variables.

It is recommended that policymakers, businesses, and producers promote the consumption of local food in order to better satisfy consumers' needs and get the highest business efficiency:

- Since the intention to purchase local is affected by the subjective norm, it is necessary to strengthen communication, promotion, and raising people's awareness about local food through many communication channels such as local media channels, leaflets, social networks, websites, etc., especially through the well-known people in the society.
- Producers should increase the trust of the consumers by applying good practice in the production process, providing enough and clear information on the production and processing through traceability, labels, and brand name.
- The local government should better support local producers by organizing events, festivals, tourist markets, night markets to create the chance for local consumers to join, try and buy local products.
- The national government should create a good environment and policies to promote and ensure the quality of food supply to improve the trust and change the attitude of consumers toward food supply in general and local food in particular.

Because the survey was implemented at the first period of the COVID-19 pandemic when the situation was not serious, the results would differ in the later period when COVID-19 became severe and the government applied social distancing, thus changing consumer behavior. Future research will involve in-depth qualitative interviews to get more information about the real motivation and intention to buy local food of the consumers in the post-COVID-19 period.

ACKNOWLEDGEMENT

The authors would like to thank the Vietnam Institute for European Studies (IES) and Faculty of Accounting and Business Management, Vietnam National University of Agriculture for supporting us and sharing their experiences and information during the conduct of this research.

REFERENCES CITED

- Adams, D. C., and A. E. Adams. 2011. De-Placing Local at the Farmers' Market: Consumer Conceptions of Local Foods. *Journal of Rural Social Sciences*. 26: 74-100.
- Aggestam, V., E. Fleiß, , and A. Posch. 2017. Scaling-up short food supply chains? A survey study on the drivers behind the intention of food producers. *Journal of Rural Studies*. 51: 64-72.

- Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior and Human Decision Processes*. 50(2): 179-211.
- Ajzen, I. 2006. Constructing a Theory of Planned Behavior Questionnaire. Available at <http://people.umass.edu/ajzen/pdf/tpb.measurement.pdf>
- Bianchi, C., and G. Mortimer. 2015. Drivers of local food consumption: a comparative study. *British Food Journal*. 117(9): 2282-2299. <https://doi.org/10.1108/BFJ-03-2015-0111>
- Brown, C. (2003). Consumers' preferences for locally produced food: A study in southeast Missouri. *American Journal of Alternative Agriculture*. 18(4): 213-224.
- Bucak, T., and S. Yiğit. 2021. The future of the chef occupation and the food and beverage sector after the COVID-19 outbreak: Opinions of Turkish chefs. *International Journal of Hospitality Management* 92: 102682. <https://doi.org/https://doi.org/10.1016/j.ijhm.2020.102682>
- Bui, T. N., Nguyen, A. H., T. T. Le, N. V. Phuong., T. T. Le, T. T. Tran, N. M. Nguyen, T. K. Le, T. K. Nguyen, T. T. Nguyen, H. V. Dao, T. N. Doan, T. H. Vu, V. H. Bui, H. C. Hoa, and P. Lebailly. 2021. Can a Short Food Supply Chain Create Sustainable Benefits for Small Farmers in Developing Countries? An Exploratory Study of Vietnam. *Sustainability* 13(5). <https://doi.org/10.3390/su13052443>
- Carroll, B. E., and F. Fahy. 2015. Locating the locale of local food: The importance of context, space and social relations. *Renewable Agriculture and Food Systems* 30(6): 563-576.
- CFIA. 2019. Local food claims interim policy. Available online at: <http://www.inspection.gc.ca/food/requirements-and-guidance/labelling/industry/origin/local-food-claims/eng/1368135927256/1368136146333>
- Comrey, A. L., and H. B. Lee. 1992. *A first course in factor analysis*, 2nd ed. Lawrence Erlbaum Associates, Inc.
- Creswell, J. W., A. C. Klassen, V. L. P. Clark and K. C. Smith. 2011. *Best practices for mixed methods research in the health sciences*. Bethesda, MD: National Institutes of Health. Available online at: http://obssr.od.nih.gov/mixed_methods_research
- Darby, K., Batte M. T., S. Ernst, and B. Roe. 2008. Decomposing Local: A Conjoint Analysis of Locally Produced Foods. *American Journal of Agricultural Economics*. 90(2): 476-486.
- Djekic, I., A. Nikolić, M. Uzunović, A. Marijke, A. Liu, J. Han, M. Brnčić, N. Knežević, P. Papademas, K. Lemoniati, F. Witte, N. Terjung, M. Papageorgiou, K. G. Zinoviadou, A. D. Zotte, E. Pellattiero, B. G. Sołowiej, R. P. F. Guiné, P. Correia, A. Sirbu, L. Vasilescu, A. A. Semenova, O. A. Kuznetsova, U. V. Brodnjak, M. Pateiro, J. M. Lorenzo, A. Getya, T. Kodak and I. Tomasevic. 2021. Covid-19 pandemic effects on food safety - Multi-country survey study. *Food Control*. 122: 107800. <https://doi.org/https://doi.org/10.1016/j.foodcont.2020.107800>
- Durham, C., R. P. King and C. Roheim. 2009. Consumer definitions of "locally grown" for fresh fruits and vegetables. *Journal of Food Distribution Research*. 40: 56-62.
- Feldmann, C. and U. Hamm. 2015. Consumers' perceptions and preferences for local food: A review. *Food Quality and Preference*. 40: 152-164.
- Flanagan, E. W., R. A. Beyl, S. N. Fearnbach, A. D. Altazan, C. K. Martin and L. M. Redman. 2021. The Impact of COVID-19 Stay-At-Home Orders on Health Behaviors in Adults. *Obesity (Silver Spring)*. 29(2): 438-445.
- Gerritsen, S., V. Egli, R. Roy, J. Haszard, C. D. Backer, L. Teunissen, I. Cuykx, P. Decorte, S. Pabian, K. V. Royen and L. T. Morenga. 2020. Seven weeks of home-cooked meals: changes to New Zealanders' grocery shopping, cooking and eating during the COVID-19 lockdown. *Journal of the Royal Society of New Zealand*. 51: S4 - S22.
- Giampietri, E., A. Finc and T. D. Giudice. 2015. Exploring consumers' attitude towards purchasing in short food supply chains. *Quality - Access to Success*. 16: 135-141.
- Giampietri, E., F. Verneau, T. D. Giudice, V. Carfora and A. Finco. 2018. A Theory of Planned behaviour perspective for investigating the role of trust in consumer purchasing decision related to short food supply chains. *Food Quality and Preference*. 64: 160-166.
- Hartmann, M., J. Klink and J. Simons. 2015. Cause related marketing in the German retail sector: Exploring the role of consumers' trust. *Food Policy*. 52: 108-114.

- Hedberg, R. C. and K. S. Zimmere. 2020. What's the market got to do with it? Social-ecological embeddedness and environmental practices in a local food system initiative. *Geoforum*. 110: 35-45.
- Holt, J., J. Rumble, R. Telg and A. Lamm. 2018. Understanding Consumer Intent to Buy Local Food: Adding Consumer Past Experience and Moral Obligation Toward Buying Local Blueberries in Florida Within the Theory of Planned Behavior. *Journal of Applied Communications*, 102. <https://doi.org/10.4148/1051-0834.2203>
- Hoque, A. S. M. M. 2018. Upshot of generation 'Z' entrepreneurs' E-lifestyle on bangladeshi SME performance in the digital era. 5: 97-118.
- Hunt, A. 2007. Consumer Interactions and Influences on Farmers' Market Vendors. *Renewable Agriculture and Food Systems*. 22: 54-66.
- Hunterpr. 2020. Special report. America gets cooking: The impact of COVID-19 on Americans' food habits. Food study 2020: Complete study results. Available online at: https://www.hunterpr.com/foodstudy_coronavirus/1
- Jensen, J. D., T. Christensen, S. Denver, K. Ditlevsen, J. Lassen and R. Teuber. 2019. Heterogeneity in consumers' perceptions and demand for local (organic) food products. *Food Quality and Preference*. 73: 255-265.
- Jo, H., E. Shin and H. Kim. 2021. Changes in Consumer Behaviour in the Post-COVID-19 Era in Seoul, South Korea. *Sustainability*. 13(1): 136. <https://doi.org/10.3390/su13010136>
- Kor, K. and B. A. Mullan. 2011. Sleep hygiene behaviours: an application of the theory of planned behaviour and the investigation of perceived autonomy support, past behaviour and response inhibition. *Psychol Health*. 26(9): 1208-1224.
- Kumar, S., M. Murphy, S. Talwar, P. Kaur and A. Dhir. 2021. What drives brand love and purchase intentions toward the local food distribution system? A study of social media-based REKO (fair consumption) groups. *Journal of Retailing and Consumer Services*. 60: 102444.
- Kumpulainen, T., A. Vainio, M. Sandell and A. Hopia. 2018. The effect of gender, age and product type on the origin induced food product experience among young consumers in Finland. *Appetite*. 123: 101-107.
- Lam, T. and C. H. C. Hsu. 2006. Predicting behavioral intention of choosing a travel destination. *Tourism Management*. 27(4): 589-599.
- Lim, H.-R. and S. An. 2021. Intention to purchase wellbeing food among Korean consumers: An application of the Theory of Planned Behavior. *Food Quality and Preference*. 88: 104101.
- Lim, K. H. and W. Hu. 2016. How Local Is Local? A Reflection on Canadian Local Food Labeling Policy from Consumer Preference. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*. 64(1): 71-88.
- Mäkineniemi, J. P. and A. Vainio. 2014. Barriers to climate-friendly food choices among young adults in Finland. *Appetite*. 74: 12-19.
- Mazzocchi, M., A. Lobb, W. B. Traill and A. Cavicchi. 2008. Food Scares and Trust: A European Study. *Journal of Agricultural Economics*. 59(1): 2-24.
- Meixner, O. and F. Katt. 2020. Assessing the Impact of COVID-19 on Consumer Food Safety Perceptions—A Choice-Based Willingness to Pay Study. *Sustainability*. 12(18) <https://doi.org/10.3390/su12187270>
- Memery, j., R. Angell, P. Megicks and A. Lindgreen. 2015. Unpicking motives to purchase locally-produced food: Analysis of direct and moderation effects. *European Journal of Marketing*. 49: 1207-1233.
- Meyer, S., J. Coveney, J. Henderson, P. Ward and A. Taylor. 2012. Reconnecting Australian consumers and producers: Identifying problems of distrust. *Food Policy*. 37(6): 634-640.
- Minh, H. T. P., D. T. Nhan, H. T. P. Minh and D. T. Nhan. 2021. Determinants of consumers purchasing intentions toward organic foods: A study in Ho Chi Minh City, Vietnam. *Ho Chi Minh City Open University Journal of Science* 9(1): 90-104.
- Motta, V. and A. Sharma. 2016. Benefits and transaction costs of purchasing local foods in school districts. *International Journal of Hospitality Management*. 55: 81-87.

- Moya, K., V. Laura, S. Ulrich, B. Bálint, T. Liz, E. W. Trish, B. Elizabeth, S. Gemm and B. Matthew. 2013. Short Food Supply Chains and Local Food Systems in the EU. In *A State of Play of Their Socio-Economic Characteristics; Scientific and Policy Reports; European Commission, Joint Research Centre, Institute for Prospective Technological Studies: Seville, Spain, 2013.*
- Nakat, Z. and C. Bou-Mitri. 2021. COVID-19 and the food industry: Readiness assessment. *Food Control*. 121: 107661. <https://doi.org/10.1016/j.foodcont.2020.107661>
- Peterson, R. 1994. A Meta-Analysis of Cronbach's Coefficient Alpha. *Journal of Consumer Research*. 21: 381-391.
- Phuong, N. V., B. T. Nga, N. A. Ha, H. H. Cuong and B. V. Hung. 2021. Consumer awareness and buying behavior towards local agricultural products in the context of the COVID-19 pandemic. *Vietnamese Journal of Economic Studies*. 7 (518): 7-2021.
- Qi, X. and A. Ploeger. 2021. Explaining Chinese Consumers' Green Food Purchase Intentions during the COVID-19 Pandemic: An Extended Theory of Planned Behaviour. *Foods*, 10(6). <https://doi.org/10.3390/foods10061200>
- Rizou, M., I. Galanakis, T. Aldawood and C. Galanakis. 2020. Safety of foods, food supply chain and environment within the COVID-19 pandemic. *Trends in Food Science and Technology*. <https://doi.org/10.1016/j.tifs.2020.06.008>
- Sabah, S. 2016. Entrepreneurial Intention: Theory of Planned Behaviour and the Moderation Effect of Start-Up Experience. In. <https://doi.org/10.5772/65640>
- Shalender, K. and N. Sharma. 2021. Using extended theory of planned behaviour (TPB) to predict adoption intention of electric vehicles in India. *Environment, Development and Sustainability*. 23. <https://doi.org/10.1007/s10668-020-00602-7>
- Sheth, J. 2020. Impact of Covid-19 on consumer behavior: Will the old habits return or die? *Journal of Business Research*. 117: 280-283.
- Shkeer, A. and Z. Awang. 2019. Exploring the Items for Measuring the Marketing Information System Construct: An Exploratory Factor Analysis. *International Review of Management and Marketing*. 9: 87-97.
- Skallerud, K. and A. H. Wien. 2019. Preference for local food as a matter of helping behaviour: Insights from Norway. *Journal of Rural Studies*. 67: 79-88.
- Slater, S. F. 1995. Issues in conducting marketing strategy research. *Journal of Strategic Marketing*. 3(4): 257-270.
- Sniehotta, F. F., J. Pesseau and V. Araújo-Soares. 2014. Time to retire the theory of planned behaviour. *Health Psychology Review*. 8(1): 1-7.
- Soon, J. M., I. Vanany, I. R. A. Wahab, R. H. Hamdan and M. H. Jamaludin. 2021. Food safety and evaluation of intention to practice safe eating out measures during COVID-19: Cross sectional study in Indonesia and Malaysia. *Food Control*. 125: 107920.
- Thilmany, D., Y. Onozaka and G. Nurse. 2010. Local Food Consumers: How Motivations and Perceptions Translate to Buying Behavior. *Choices*, 25.
- Tien, N. 2020. Change consumer behavior after COVID 19 (in Vietnamese). Project: CRM, Marketing and Branding. <https://doi.org/10.13140/RG.2.2.17719.34725>
- Tregear, A. 2011. Progressing knowledge in alternative and local food networks: Critical reflections and a research agenda. *Journal of Rural Studies*. 27(4): 419-430.
- Wang, Y., J. Wang and X. Wang. 2020. COVID-19, supply chain disruption and China's hog market: a dynamic analysis. *China Agricultural Economic Review*. 12(3): 427-443.
- Zeithaml, V., L. Berry and A. Parasuraman. 1996. The Behavioral Consequences of Service Quality. *Journal of Marketing*. 60. <https://doi.org/10.2307/1251929>
- Zhang, T., K. G. Grunert and Y. Zhou. 2020. A values-beliefs-attitude model of local food consumption: An empirical study in China and Denmark. *Food Quality and Preference*. 83: 103916 p.