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AN EMPIRICAL INVESTIGATION TO EXTEND THE THEORY OF PLANNED BEHAVIOR IN THE ORGANIC FOOD CONTEXT

Yamna Khan
Lecturer, College of Business Management,
Institute of Business Management, Karachi, Pakistan
kyamnah@gmail.com

Irfan Hameed
Associate Professor, College of Business Management,
Institute of Business Management, Karachi, Pakistan
irfanhameed.iu@gmail.com
ORCID: 0000-0002-1484-6133

ABSTRACT
The study aims to utilize the extended model of the theory of planned behavior (TPB), to test the impact on organic food consumption in Pakistan. Despite having an increased awareness about the benefits of organic food, the translation of favorable attitude and positive purchase intention into actual buying behavior remains quite low. A final sample of 778 was taken from Karachi through an online medium by using the purposive sampling technique. The data was analyzed by implementing the partial least squares structural equation modeling (PLS-SEM) technique through SmartPLS software. Findings of the study suggested that all the variables of TPB had a significant positive relationship, whereas the additional variables, including food safety concern, health consciousness, and environmental concern, also had a significant impact on consumers' attitudes towards organic food. However, the moderating effect of trust between attitude-purchase intention as well as price consciousness between purchase intention-buying behavior relationship appeared to be insignificant. Thus, marketers can utilize the findings of the study to create appealing promotional messages by highlighting the benefits of organic food related to environmental sustainability, food safety as well as on consumers' well-being. Further, government and policymakers can take actions to create awareness about the organic food consumption among locals to promulgate its usage in Pakistan.

Keywords: Organic food, theory of planned behavior, trust, price consciousness.

1. INTRODUCTION

In the last two decades, global sales of organic food have exceeded USD 90 billion, as per the evidence provided through previous research studies (Sultan et al., 2020). Researchers have identified several diverse factors for this rise in the demand for organic food, where the most highlighted reasons are the health concerns of consumers as well the concern for ecological sustainability (H. Lee et al., 2018). According to Basha & Lal (2019) majorly, these concerns arise due to a variety of factors, including personal preferences and lifestyle choices made by consumers around the world, particularly in developed countries. Thus, this progression toward a healthier lifestyle is especially prevalent in developed economies (Soomro et al., 2022).

According to the available literature the majority of the studies in the field of organic food have concentrated on developed economies, notably the United States and a large portion of Western Europe (Bullock et al., 2017; Petrescu et al., 2015). This demonstrates the necessity of further research into this topic in the context of developing economies, where the organic food market is still growing slowly and is still in its very early phases of development. Additionally, public awareness of the beneficial value of organic food is extremely limited, which contributes significantly to the low purchase of organic food items (H. V. Nguyen et al., 2019 ; Yadav & Pathak, 2016b).

Pakistan has experienced an increase in environmental and pollution-related issues over the last decade. According to the Global Climate Risk Index 2018, Pakistan is one of the countries most afflicted by extreme environmental dangers, which has a negative impact on the standard of living for its citizens (Eckstein et al., 2019). As highlighted by Eckstein et al. (2019), more than 524000 lives were lost as a result of extreme environmental conditions between 1997 and 2006. More and more individuals are

looking for better ways to combat environmental pollution and its harmful effects on their health and well-being because of the rise in pollution.

People in Pakistan are being educated about the importance of adopting eco-friendly activities by the government as well as environmentalist practices (Hameed & Khan, 2020; Qasim et al., 2019). Additionally, growing concern about the use of fertilizers, synthetic pesticides, and chemicals used for food production has resulted in a gradual transition in Pakistan from inorganic to organic food items, though it is still in its early stages (Asif et al., 2018). Furthermore, a surge in the consumption of inorganic food items, including processed food, has resulted in the growth of health-related illnesses.

The reason for this is the presence of harmful chemicals and preservatives, which once again indicates the need to switch to organically produced food products (Mesnage et al., 2020). However, despite the efforts of environmental activists to raise awareness of the consequences of unsustainable human behavior, the problem continues to develop exponentially (Hameed et al., 2021). The question arises of whether a bottom-up approach would be more suited or whether it should be a top-down strategy? According to Peattie and Belz (2010), "unsustainable levels and types of consumption are the heart of the sustainable development challenge."

According to Freyer and Bingen (2015), health-related surveys of organic farmers, which were done in the last 20 years, showed the concerns among farmers regarding the health of their families, animals, and their consumers. This motivated them to shift towards the adoption of organic farming methods as inorganic practices resulted in the growth of health-related effects such as skin diseases, cancer, and respiratory diseases; due to the consumption of toxins and agrochemical residues found in food (Freyer & Bingen, 2015).

To propose a solution to the problem, it is important to understand the role of consumer behavior regarding food consumption and why people behave the way they do currently? Sustainable consumption means that the resources are utilized in such a way that it does not pose a threat of its diminution to future generations (Hameed et al., 2019). But the major question here is how to convince the masses to shift towards the consumption of organic food for a healthier lifestyle?

This research focuses on exploring the questions in a similar context to have a better understanding of what has already been learned and researched in the area of sustainable marketing and how the role of different variables adopted from the Theory of Planned Behavior (TPB Model) can lead towards the adoption of sustainable consumption attitude regarding organic food in the masses. Thus, the extended model of the theory of planned behavior is used for testing the effect on the consumption patterns of consumers and if it will lead to the promulgation of positive buying behavior regarding organic food. Many variables, including subjective norms (Chekima et al., 2017), cultural as well as geographical differences (Nuttavuthisit & Thøgersen, 2017), and environmental awareness (Ahmed et al., 2021), have been used to test the consumers' behavior regarding organic food in varying contexts. However, the current study aims to utilize additional variables in accordance with the antecedents of TPB to see if it leads to an increase in the consumption patterns of individuals regarding organic food (Shamsi et al., 2020; Khan et al., 2022).

Also, new variables are tested to see their impact on consumers' attitudes and how well it is translated into actual buying behavior regarding organic food. This includes environmental concerns (Yadav & Pathak, 2016a; Davies et al., 1995), food safety concerns (Michaelidou & Hassan, 2008), and health consciousness (Chakrabarti, 2010; Davies et al., 1995). Moreover, two moderating variables are incorporated into the framework based on their relevance shown through past literature, i.e., trust (Nuttavuthisit & Thøgersen, 2017) and price consciousness (Janssen, 2018). This will address the persisting gaps that exist between consumers' attitudes and their translation into purchase intention and buying behavior (Tandon et al., 2020).

Additionally, this study will be focusing on a developing economy, i.e., Pakistan, as organic food consumption is still in the early stages and increasing at a gradual pace (Akbar et al., 2019). Also, much of the previous work has been done on other emerging economies such as India, Vietnam, Brazil, and others (Basha & Lal, 2019). This can further add value by offering fruitful insights to policymakers, practitioners, and government authorities to design policy guidelines and interventions, leading to the promulgation of organic food consumption among Pakistani consumers. The following research questions have been developed:

1. Do health concern, food safety concern, and environmental concern lead to a significant impact on the attitude of consumers?

2. Does consumers' level of trust moderates the association between attitude, purchase intention, and buying behavior of organic food among Pakistani household consumers?
3. Does consumers' degree of price consciousness moderates the association between attitude, purchase intention, and buying behavior of organic food among Pakistani household consumers?

Considering the global marketing perspective about increasing awareness regarding organic food items and eco-friendly products, it has become more of an essential practice for marketers to understand the changing consumer behavior regarding the consumption of organic food items. This is important to consider to better understand how such practices which target consumers' self-identity and social image can lead to an increase in eco-friendly consumption behavior among the masses (Qasim et al., 2019).

The major aim of this study is to understand the root cause of the low adoption rate of consumers regarding organic food in an emerging economy, i.e., Pakistan. For this purpose, the Theory of Planned Behavior (TPB) is utilized to develop the model for testing the relationships of different variables on the buying behavior of consumers. TPB is the advanced version of the Theory of Reasoned Action and has been widely used in the Social sciences to predict the buying behavior of consumers in varying contexts (Ahmed et al., 2021). The study aims to achieve a comprehensive understanding of whether antecedents of TPB and other major variables, including health concern (HC), environmental concern (EC), and food safety concern (FC), lead to an impact on buying behavior. Further, the goal of the study is to understand how a sustainable consumption attitude can be developed, which can lead to buying behavior through positive purchase intention.

2. REVIEW OF LITERATURE

2.1. Theory of Planned Behavior and Organic Food

To understand the dynamics of consumer behavior in detail, the Theory of Planned Behavior (Ajzen, 1991) is being referred to, which highlights three major determinants of behavioral intention. According to TPB, the behavior is determined by intention, which is dependent on three variables, i.e., attitudes, subjective norms, and perceived behavioral control (Russell et al., 2017). Attitudes are defined in terms of the favorable behavior of an individual regarding any situation or stimuli. Subjective norms depend upon the perspectives and perceived expectations of other people (peers and society), who are important to the individual. It can also be termed as social or peer pressure on the individual to engage in a certain kind of behavior. Lastly, perceived behavioral control refers to the degree to which people believe/perceive that they have the required resources and skillsets to engage in a particular behavior (Russell et al., 2017).

Through previous literature, empirical evidence has been gathered that proves that the above-mentioned antecedents positively impact consumers' purchase intention regarding organic food. However, it is interesting to note that the findings regarding the impact of these three variables taken from the TPB have appeared to be inconsistent and restricted to the specific research context for which the study was conducted. In the general context, these variables have had a direct positive impact on the purchase intention of consumers (T. Nguyen et al., 2019). An example can be the research carried out by Chen (2007) in Taiwan, where the mentioned antecedents taken from the TPB model were found to have a significant positive relationship with the purchase intention of consumers toward organic food (Chen, 2007). Another study by Liang (2014) provided sufficient evidence to support the significant positive relationship of all three variables with purchase intention, where the strongest relationship was between attitude and purchase intention and the weakest was between subjective norm and purchase intention (Liang, 2014).

2.2. Environmental concern and consumer's attitude toward organic food

Individuals' concern for the environment is a fundamental societal phenomenon, and this results in the creation of a favorable attitude toward eco-friendly items, including the consumption of organic food products (Yadav & Pathak, 2016a). At the same time, environmental concern (EC) has been examined and investigated since the early 1970s; its interpretation changes according to the circumstances in which it has been employed in previous publications (Kilbourne & Pickett, 2008). Kilbourne and Pickett (2008) examined environmental concern at the individual and communal levels, where they defined EC as the degree to which an individual is concerned about environmental degradation and his willingness to take protective measures.

As indicated by earlier literature, consumers believe that organic food is more environmentally friendly and does not contribute to environmental degradation in the same manner that conventional

food does (T. T. M. Nguyen et al., 2019). Thus, compelling evidence from prior research indicates that EC is the main motivator for the establishment of a favorable consumer attitude towards organic food items (Petrescu & Petrescu-Mag, 2015; Hasegawa & Witt, 2019). Hence, the following hypothesis is being proposed to test the relationship:

Hypothesis 1 (H1). Environmental concern has a positive impact on consumers' attitudes towards organic food purchases.

2.3. Health consciousness and consumer's attitude toward organic food

Jayanti and Burns (1998) explain health consciousness as " the degree to which the health concerns are incorporated into an individual's regular activities" (Jayanti & Burns, 1998). When it comes to food purchases, consumers regard their health as a topmost priority (Yadav & Pathak, 2016a). In Paul and Rana's (2012) study, more health-conscious consumers exhibited a more positive attitude towards the consumption of organic food. Organic foods, on the other hand, are viewed as healthier and more beneficial to one's health than conventional ones because they are produced without the use of harmful artificial methods (Yadav & Pathak, 2016a). Thus, health consciousness is viewed as a significant motivator that contributes to the establishment of a positive attitude towards organic food among consumers. This may result in the development of positive purchase intentions that may translate into the actual buying behavior (Chakrabarti, 2010; Davies et al., 1995). Thus, the following hypothesis has been developed:

Hypothesis 2 (H2). Health consciousness has a positive impact on consumer's attitudes toward organic food purchase

2.4. Food safety concerns and consumer's attitudes toward organic food

Food safety means the dearth of toxic residues in food owing to the usage of synthetic pesticides, chemicals, artificial preservatives as well as additives used during inorganic farming practices (Michaelidou & Hassan, 2008). Consumers often believe that organically cultivated food poses fewer health risks than conventionally grown food (Williams & Hammitt, 2001). Consumers choose organic food because of the lower health risks associated with pesticide use, and they believe it is safer to eat than food prepared through inorganic methods. Therefore, the following hypothesis has been developed:

Hypothesis 3 (H3). Food safety Concern has a positive impact on consumer's attitude toward organic food purchase

2.5. Attitude and purchase intention

Hasan and Suciarto (2020) tested the aforementioned antecedents derived from the TPB Model in the case of organic food consumers of Indonesia. This study adopted a quantitative research approach and found that attitude had a significant positive impact on the purchase intention of Indonesian consumers. So, an increase in positive consumer attitudes regarding organic food will increase their purchase intentions (Hasan & Suciarto, 2020). A study was carried out by Yazdanpanah and Forouzani (2015) on Iranian students where the attitude to purchase intention relationship regarding organic food consumption was tested. This study adopted the TPB model for investigating the relationship between the attitudes of consumers and purchase intention. TPB is a well-established theory that is widely used in the domain of social & management sciences for testing the behavior of consumers from different perspectives (Waris et al., 2022). Results of the study concluded that the attitude of the students was the major predictor of their purchase intentions regarding organic food consumption (Yazdanpanah & Forouzani, 2015). Therefore, the following hypothesis has been developed:

Hypothesis 4 (H4). The attitude of consumers regarding organic food purchases has a positive impact on their purchase intentions

2.6. Subjective norm and purchase intention

A study related to organic food purchase among Taiwanese residing in urban areas showed that subjective norms played a much stronger role in creating an impact on purchase intention as compared to attitude (Teng & Wang, 2015). Another study by Li et al. (2020) tested the extended model of TPB on Chinese consumers regarding their purchase intention of environmental-friendly agricultural (EFA) food in China. The empirical analysis of the study provided sufficient evidence proving the significant positive impact of subjective norms on consumers' purchase intention regarding organic food (Li et al., 2020). Therefore, the following hypothesis has been developed related to the current area of study:

Hypothesis 5 (H5). Consumers' subjective norm regarding organic food has a positive impact on their purchase intentions.

2.7. Perceived behavioral control and purchase intention

A study carried out in Indonesia by Hasan and Suciarto (2020) on consumers of organic food tested the impact of perceived behavior control on their purchase intentions regarding organic food. The study investigated the relationship of the aforementioned variables and concluded that perceived behavior control has a significant positive impact on the purchase intention of consumers who prefer organic food (Hasan & Suciarto, 2020). Ahmed et al. (2021) used the extended model of the theory of planned behavior (TPB) to investigate the purchase Intention of young Chinese consumers. The major aim was to understand the impact of perceived behavioral control on their purchase intentions regarding the consumption of organic food in China. The results showed a significant positive impact of perceived behavioral control on the purchase intentions of these respondents. Another study by Shin et al. (2018) regarded perceived behavioral control as the major latent variable, which leads to a strong influence on the selection of organic food menus by consumers. Therefore, the following hypothesis has been proposed for further analysis:

Hypothesis 6 (H6). Consumers' perceived behavioral control regarding organic food purchases has a positive impact on their purchase intentions

2.8. Purchase intentions & buying behavior

Purchase intention, an important construct depicted from the TPB model, has been explained by Ajzen (2002) as "the measure of an individual's degree of readiness to perform a certain task." Moreover, significant evidence is found where the TPB model has been used, and proof regarding the existence of the relationship between PI and consumer buying behavior (BB) has been found (Yadav & Pathak, 2017). In the study by Yadav and Pathak (2017), the focus is on the willingness of consumers to indulge in the act of purchase of green products (including organic food items) and how well it translates into the actual buying behavior. Here it is proved that a significant positive relationship exists between purchase intentions & consumers' buying behavior regarding organic food (Yadav & Pathak, 2017). Moreover, many other past studies of a similar context show that a positively significant relationship exists between PI and BB regarding products that are ranked as energy-efficient (Yadav & Pathak, 2017), eco-friendly (Chen & Tung, 2014; Kim et al., 2013) and green products (Liobikiene et al., 2016). Furthermore, intention or willingness to purchase is the significant predictor of buying behavior (Ajzen, 1991). Therefore, the following hypothesis is being developed:

Hypothesis 7 (H7). Consumers' intention to purchase organic products positively impacts the consumers' actual buying behavior

2.9. Trust

According to the previous research, consumers are skeptical of environmental-friendly product claims, particularly those made by organic food manufacturers and distributors. (Nuttavuthisit & Thøgersen, 2017; Janssen & Hamm, 2011). The reason for this is that the majority of consumers lack the resources necessary to validate these claims, which comprise technical knowledge of products and other relevant resources that enable them to differentiate organic from non-organic food. In the context of this research, trust is defined as "a consumer's psychological state that displays an intention to accept based on favorable expectations about another's intention or action" (Rousseau et al., 1998). As a result, the trust of the consumer in the legitimacy and originality of a product is critical for the development of a positive attitude as well as the conversion of an individual's purchasing intentions into the actual buying behavior (Nuttavuthisit & Thøgersen, 2017).

Hypothesis 8a (H8a). Trust moderates the association between attitude and purchase intention, such that consumers with increased trust in organic food product claims would be more intended to exhibit favorable buying intention toward organic food

2.10. Price consciousness

The price is defined by consumers as "what is surrendered or sacrificed in order to receive product" (Zeithaml, 1988). As previously said, consumers use price as an extrinsic indicator to gauge the quality of a product. The value of the price is linked with roles that customers assign to it. In the negative role, high prices indicate a need for a sacrifice from the customers, while in the positive role, these are a sign of higher quality (Völckner & Hofmann, 2007) and status (Lichtenstein et al., 1993). Thus, consumers' willingness to pay for organic food items is dependent upon the extent of negative or positive roles assigned to them (Aschemann-Witzel et al., 2017). As a result of their lower incomes, customers may place a higher value on the negative role, which can lead to reduced willingness to pay and the idea that price is a barrier to entry. Low-income consumers are more likely to engage in price comparison shopping (Urbany et al., 1996) and to be concerned about the price of their purchasing decisions

(Aschemann-Witzel et al., 2017). Consumers frequently regard the premium price of organic products as a major purchasing barrier (Magnusson et al., 2001; Molinillo et al., 2020). Although people do maintain a good attitude towards the usage of organic food products due to their many health-related benefits, however, the percentage of consumers who actually do purchase organic food remains quite low (Aertsens et al., 2009). Nevertheless, many customers are willing to pay a premium for organic food because of the perceived benefits they obtain (McFadden & Huffman, 2017). Therefore following hypothesis is proposed:

Hypothesis 8b (H8b). Price consciousness moderates the association between purchase intention and buying behavior, such that consumers with higher price consciousness would be less inclined to exhibit favorable buying behavior towards organic food

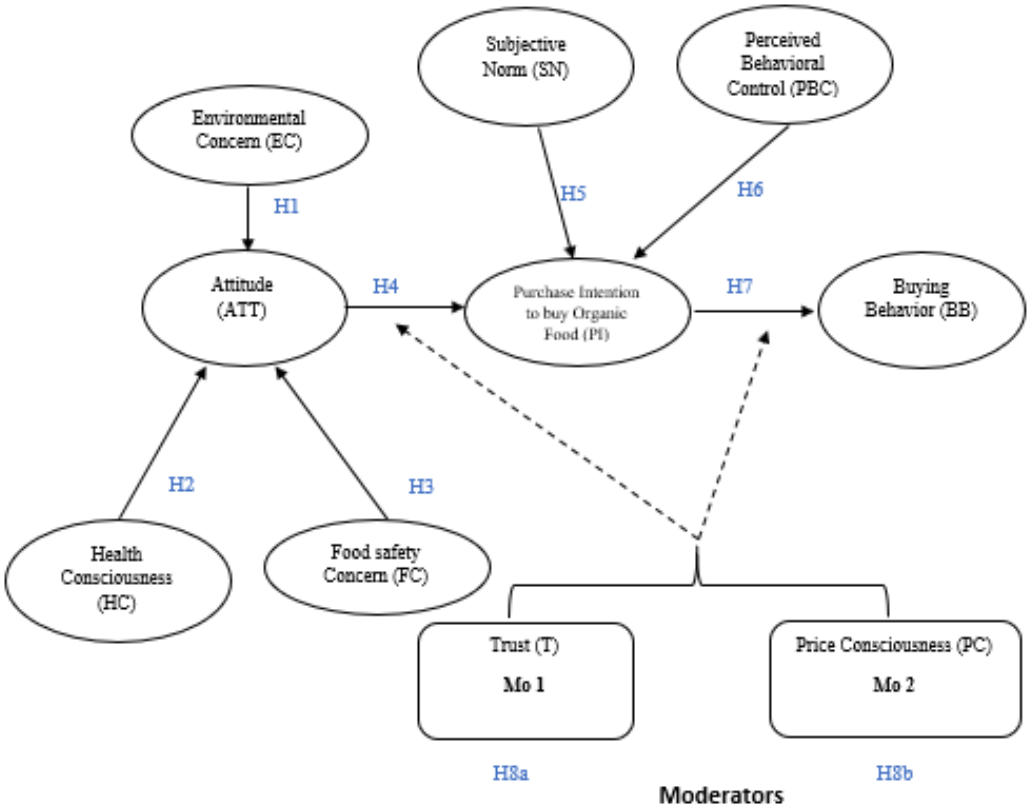

Figure 1. Research model

3. METHODOLOGY

3.1. Sample and procedure

To gather deep insights, a non-probability-based purposive sampling technique has been used. The research has employed a survey method to collect data from household consumers belonging to diverse socio-demographic backgrounds in Pakistan to better represent the household consumers (Waris & Hameed, 2020). The aim is to better understand their food consumption patterns and the key drivers for the consumption of organic food. Major socio-demographic variables considered are gender, age, household income, and qualification.

Due to the spread of Covid-19, the only online medium has been used to collect data from participants to ensure their safety. Online sources include informal social media applications such as Facebook and WhatsApp and only included participants who were willing to be part of this research. As per the provisional summary results of the 6th population & housing census 2017 carried out by the Pakistan Bureau of Statistics, the total population (rural and urban) of 4 districts of Karachi (East, West, Central, South) was 11.59 million. Out of which, the total number of households was 2.01 million (Pakistan Bureau of Statistics, 2017). Therefore, the minimum sample size required is 385 household consumers at a 95% confidence interval, which is calculated by using the Raosoft sampling tool.

In order to calculate the sample size, Leguina (2015) has suggested the rule of thumb of a 1 to 5 ratio (5 responses per item), and the current study fulfills the requirement (39 items x 5=195). Furthermore, as per Hair et al. (2014), a sample size of a minimum of 400 respondents is suggested for a multivariate study. Therefore, this study meets the minimum required criteria. A total of 800 responses were gathered over the period of four months (Nov 21-Feb 22), out of which 778 responses

were retained for further analysis after the removal of outliers. The data has been analyzed by making use of the PLS-SEM technique through SmartPLS Software, where analysis was done in two parts. Firstly, model fit was checked through the PLS algorithm method, where reliability and validity were checked by utilizing standard indicators. After this, the 5000 boot-strapping method was applied to test the significance of the proposed hypothesis.

Standard categories of organic food have been defined for the sake of understanding and clarity; i.e., grains; lentils, vegetables; fruit; dairy; animal protein sources (including meat & eggs); and extra foods including honey, vinegar, salt, sugar, rice, wheat, ghee (Oates et al., 2012). However, in the context of the current study, organic food has been defined as the food products which are manufactured by companies who claim to produce these by using organic sources. Therefore all such organic finished products, including bread, cereals, frozen goods, dairy products, juices, oils, etc., are included in the study. Some of the organic food companies operating in Pakistan are Taj Foods (Pvt) Ltd, The Soul Food Company, Organic Jiyo, and Health Homie-Premium Organic Grocery Store.

3.2. Questionnaire and scale

The questionnaire has been developed by adopting reliable scales from the previous well-established studies(Cronbach α more than 0.7), which meets the acceptable criteria (Hair et al., 2010). The questionnaire includes the items to measure the variables of the theory of planned behavior, moderators, and other independent variables. For the measurement of consumers' attitudes, 6 items were taken from Yazdanpanah, and Forouzani (2015), a 2-item scale for subjective norm, a 3-item scale for perceived behavioral control (Chan & Lau, 2002); 6 items for Buying Behavior, and 6 items for purchase intention were taken from Wee et al. (2014). 4 items for health concern are taken from Chryssohoidis and Krystallis (2005); 8 items for food safety concerns from McEachern and McClean (2002); 4 items for environmental concerns, which were adopted from Kareklas et al. (2014). Moderating variables, including trust, are being tested by adopting a 3-item scale from Curvelo et al. (2019), while 3 items for price consciousness are taken from T. H. Lee et al. (2020) study.

Table 1: Demographic Profile of respondents

Variables	Attributes	Frequency	Percent
Gender	Male	375	48.2
	Female	403	51.8
Age	Under 20 years	251	32.3
	21-30 years	468	60.2
	31-40 years	39	5.0
	41-50 years	16	2.1
	Above 50 years	4	.5
Qualification	Matriculation	4	.5
	Intermediate	458	58.9
	Graduation	221	28.4
	Post graduation (Masters)	87	11.2
	PhD	8	1.0
Household Income	Under 20,000/ month	73	9.4
	20,001-40,000/month	57	7.3
	40,001-60,000/month	79	10.2
	60,001-80,000/month	87	11.2
	80,001-100,000/month	55	7.1
	Above 100,000/month	427	54.9
	Total	**778**	**100.0**

4. RESULTS

4.1. Measurement Model

Major indicators such as reliability, validity, and model fit test have been checked through Smart-PLS. Composite Reliability (CR) has been taken to check the reliability of the variables, where the required threshold is 0.7. According to Hair et al. (2010), Composite reliability is an acceptable measure for testing validation of construct validity. Since all the values meet the requirements, therefore it is depicted that the data taken in the study is reliable and fit for use.

The average variance extracted (AVE) is an indicator of validity, which is responsible for measuring the variance amount that a construct captures in relation to the variance which is caused due to the measurement error. The minimum required value of AVE should be 0.5, which shows that the constructs taken in the study are responsible for causing more variance as compared to the variance amount caused by an error in the model. Through table 2, it is depicted that the constructs taken in the study meet the threshold criteria of AVE; therefore, data is proved to be valid for testing the model (Soorani & Ahmadvand, 2019).

Moreover, for checking model fitness and predictive relevance of data, indicators such as SRMR and R-Square are being used. In PLS-SEM, the required value of SRMR should be ideally less than 0.08, and the value in this study is 0.062, which is again meeting the required threshold. Furthermore, the value of R-square for attitude is 21%, for purchase intention 38%, and for buying behavior is 29%, which are recognized as decent variances. Hence both of these indicators depict that there is no issue with the fitness of the model, and it is fit to be taken for this study to predict the outcome, as shown in figure 2.

Table 2: Validity, reliability, and model fitness

Construct	Items	Outer loadings	Cronbach's Alpha	Composite Reliability (CR)	AVE	SRMR	R-Square
ATT	ATT1	0.770	0.880	0.914	0.681		0.214
	ATT2	0.906					
	ATT3	0.890					
	ATT4	0.695					
	ATT6	0.846					
BB	BB1	0.751	0.786	0.853	0.539		0.287
	BB2	0.658					
	BB3	0.760					
	BB5	0.728					
	BB6	0.767					
PBC	PBC1	0.820	0.794	0.879	0.708	0.062	
	PBC2	0.863					
	PBC3	0.840					
PC	PC2	0.839	0.691	0.865	0.762		
	PC3	0.905					
PI	PI1	0.745	0.840	0.883	0.558		0.375
	PI2	0.743					
	PI3	0.802					
	PI4	0.820					
	PI5	0.736					
	PI6	0.619					
SN	SN1	0.916	0.810	0.913	0.841		
	SN2	0.917					
T	T2	0.866	0.688	0.865	0.762		

	T3	0.880			
	EC1	0.722			
	EC2	0.802			
EC	EC3	0.770	0.778	0.856	0.599
	EC4	0.799			
	FC2	0.645			
	FC3	0.644			
	FC4	0.660			
FC	FC5	0.689	0.83	0.874	0.502
	FC6	0.599			
	FC7	0.841			
	FC8	0.840			
	HC1	0.709			
	HC2	0.770			
HC	HC3	0.810	0.775	0.856	0.598
	HC4	0.799			

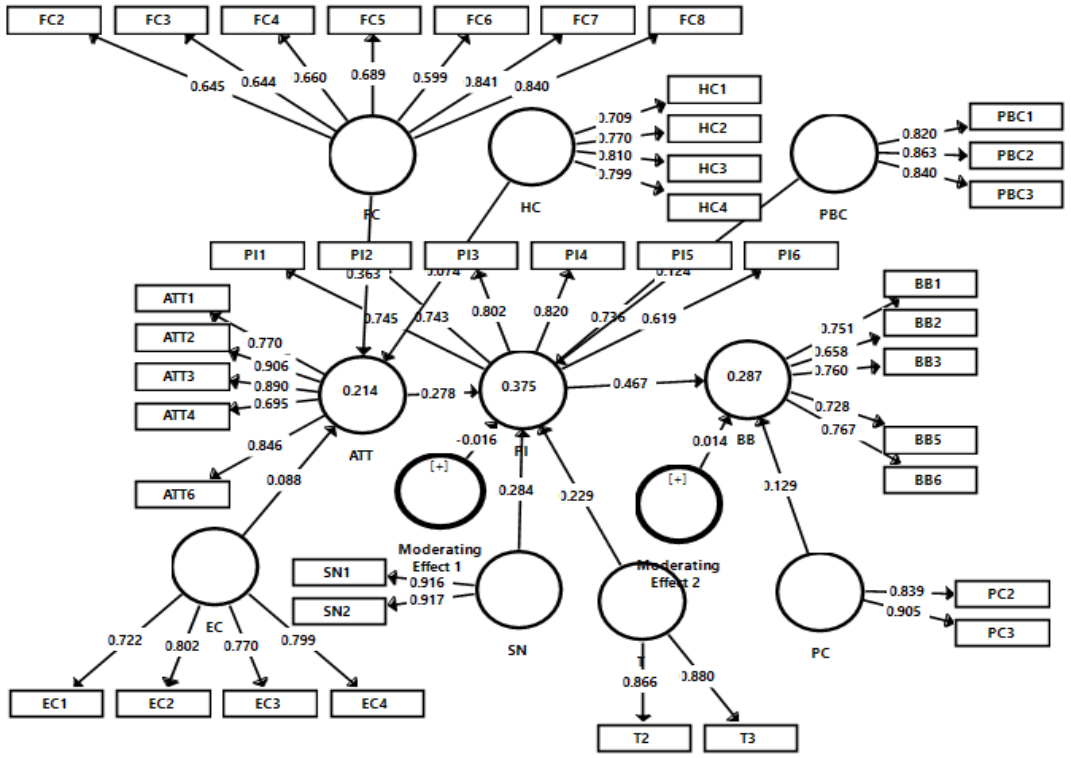

Figure 2: Measurement model

4.2. Discriminant and convergent validity

Discriminant validity is responsible for measuring the distinctiveness and uniqueness of each variable in the model (Hair et al., 2010). It is represented through two methods, which are the Fornell-Larcker method and the HTMT method. In the Fornell-Larcker method, all the diagonal values are found to be greater as compared to the values on their left and those which are below them. HTMT results also appear to be valid; hence it is established that there is no issue related to discriminant validity present in the data, as shown in Table 3.

Convergent validity is also conducted by using the techniques of factor loadings and Average Variance Extracted (AVE). Acceptable criteria of factor loadings are greater than 0.5, and the values of the data satisfy the requirements of convergent validity (Henseler et al., 2016), as presented in Table 4.

Table 3: Discriminant validity by Fornell-Larcker method

	ATT	BB	EC	FC	HC	ATT*T*PI	PI*PC_BB	PBC	PC	PI	SN	T
ATT	0.825											
BB	0.316	0.734										
EC	0.327	0.360	0.774									
FC	0.448	0.464	0.548	0.708								
HC	0.303	0.436	0.548	0.499	0.773							
ATT*T*PI	-0.068	0.049	0.044	-0.005	0.037	1.000						
PI*PC_BB	0.028	0.000	-0.009	0.034	0.040	0.206	1.000					
PBC	0.222	0.239	0.279	0.321	0.306	-0.023	-0.018	0.841				
PC	0.200	0.334	0.347	0.396	0.232	0.050	0.084	0.192	0.873			
PI	0.438	0.522	0.616	0.620	0.543	-0.031	-0.058	0.301	0.436	0.747		
SN	0.284	0.430	0.322	0.399	0.334	0.006	-0.025	0.249	0.287	0.449	0.917	
T	0.223	0.297	0.333	0.403	0.275	0.024	0.038	0.192	0.326	0.383	0.242	0.873

Table 4: Discriminant validity by HTMT method

	ATT	BB	EC	FC	HC	ATT*T*PI	PI*PC_BB	PBC	PC	PI	SN	T
ATT												
BB	0.373											
EC	0.386	0.443										
FC	0.521	0.569	0.669									
HC	0.364	0.543	0.699	0.619								
ATT*T*PI	0.073	0.074	0.048	0.046	0.079							
PI*PC_BB	0.030	0.051	0.026	0.039	0.065	0.206						
PBC	0.267	0.290	0.356	0.397	0.391	0.044	0.027					
PC	0.256	0.445	0.461	0.530	0.307	0.062	0.103	0.257				
PI	0.502	0.627	0.761	0.738	0.668	0.046	0.069	0.369	0.571			
SN	0.337	0.535	0.398	0.490	0.419	0.026	0.028	0.310	0.388	0.539		
T	0.287	0.397	0.453	0.530	0.373	0.029	0.045	0.259	0.465	0.502	0.323	

4.3. Structural Model

Structural modeling has been done through the boot-strapping method of 5000 sub-samples by using SmartPLS. The results have been presented in Table 5 and Figure 3. The decision to accept or reject hypotheses was made on the basis of t-statistics and p-values. Haenlein and Kaplan (2004) suggested that the acceptance criteria for t-statistics are 1.65 or more. In the current study, all the hypotheses except for moderating effects are being accepted as their p-values are less than 0.05 and t-values are greater than 1.65. The first hypothesis talks about the impact of EC on ATT of consumers, which is accepted (p-value =0.022, t-value=2.011) and explains the variance of 8.8%. Hypothesis 2 discusses the impact of HC on ATT, which appears to be significant (p value=0.046, t-value= 1.689), and the variance explained is 7.4%. Hypothesis 3 is also accepted, which talks about the significant impact of FC on ATT of consumers toward organic food (p-value=0.000, t-value=8.67). The relationship appears to be highly significant, and 36.3% of the variance is explained through this relationship.

Hypothesis 4 states that ATT has a significant positive impact on the PI of consumers, which appears to be highly significant (p-value=0.000, t-value= 9.011) and the variance explained is 27.8%. Hypothesis 5 proposes that SN has a significant positive impact on PI, which is accepted as p-value=0.000, t-value=9.048, and the variance explained is 28.4%. Hypothesis 6 depicts that PBC has a

positive impact on PI, which is accepted as p-value=0.000, t-value=3.962, and the variance explained is 12.4%. H7 is also accepted where PI has a significant impact on BB (p-value=0.000, t-value=12.569), and the variance explained is 46.7%. H8a proposes that tryst moderates the relationship of ATT and PI, which is rejected as the p-value is 0.317, which is more than the required threshold of 0.05. H8b proposes that PC moderates the relationship of PI and BB, which is again rejected as the p-value is more than 0.05,i.e., 0.321.

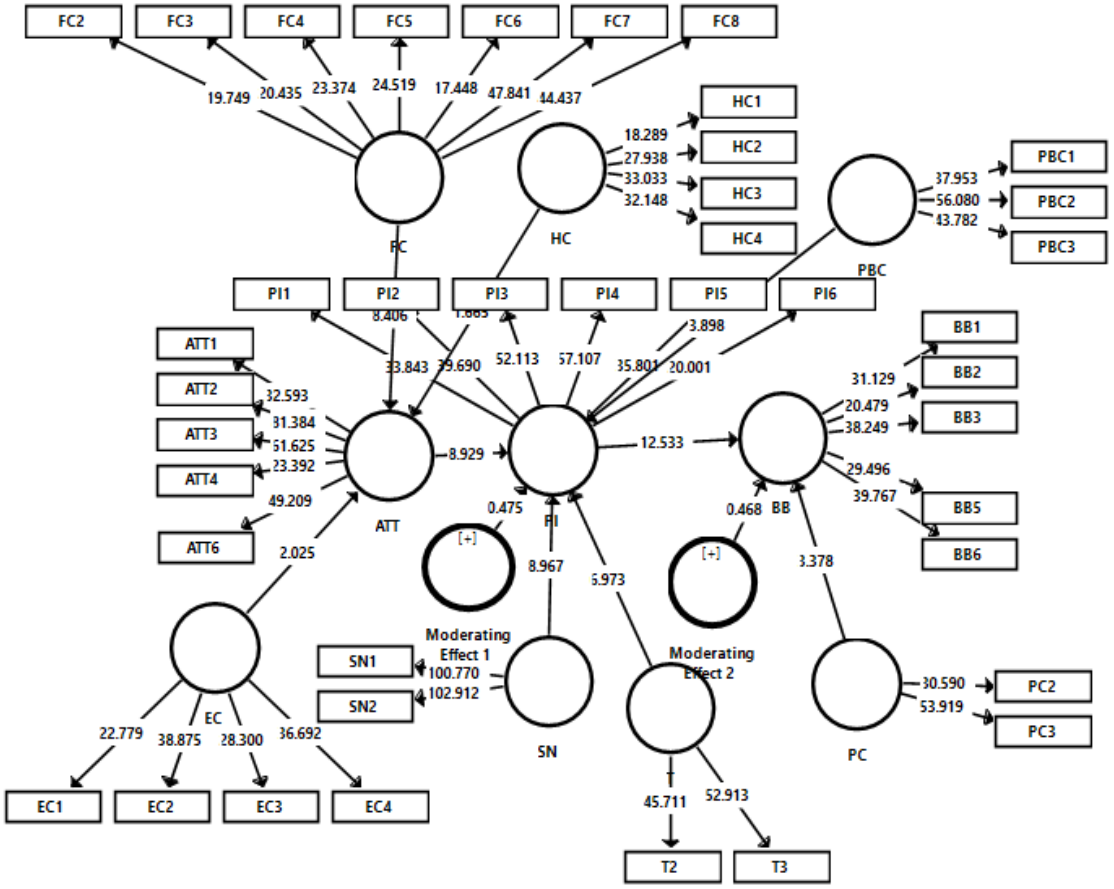

Figure 3: Structural model

Table 5: Hypotheses testing using 5000 sub-samples

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
ATT -> PI	0.278	0.279	0.031	9.011	**0.000**	Accept
EC -> ATT	0.088	0.089	0.044	2.011	**0.022**	Accept
FC -> ATT	0.363	0.364	0.042	8.671	**0.000**	Accept
HC -> ATT	0.074	0.077	0.044	1.689	**0.046**	Accept
Moderating Effect 1->PI	-0.016	-0.015	0.033	0.476	**0.317**	Reject
Moderating Effect 2->BB	0.014	0.013	0.030	0.464	**0.321**	Reject
PBC -> PI	0.124	0.126	0.031	3.962	**0.000**	Accept
PC -> BB	0.129	0.132	0.038	3.423	**0.000**	Accept
PI -> BB	0.467	0.467	0.037	12.569	**0.000**	Accept
SN -> PI	0.284	0.284	0.031	9.048	**0.000**	Accept
T -> PI	0.229	0.230	0.032	7.056	**0.000**	Accept

5. DISCUSSIONS AND CONCLUSION

The results of the study show that the predictors taken from TPB as well as the additional constructs taken to check the impact on the buying behavior of consumers, successfully adhere to the major

objectives of the study. This study aims to identify the major constructs which lead to an impact on the buying behavior of the consumers of organic food in Pakistan. The study aims to contribute significantly towards the promulgation of organic food purchases in Pakistan, which will positively impact the consumers due to its many health benefits as well as its environmental sustainability. It is evident that the antecedents taken from TPB (ATT, SN, PBC) are causing a significant positive impact on the purchase intention (PI) of consumers, which then leads to positive buying behavior. Each relationship was tested individually, where the only direct effects were checked.

The findings of our study are in line with the study done on Indian consumers of organic food, where the TPB model was used to draw conclusions (Yadav & Pathak, 2016a). However, the study by Yadav and Pathak (2016) showed that ATT and PBC had a significant impact on the PI, but SN did not lead to any impact on the PI. Whereas, our findings show that all three predictors have a significant impact on PI when checked in the Pakistani context. Therefore, our study makes significant contributions by testing the TPB model in the context of an emerging economy, i.e., Pakistan. The effect of the moderator, trust on the attitude of consumers, and purchase intention was found to be insignificant. This finding is inconsistent with the Taiwanese research conducted by Teng and Wang (2015) on the consumers of organic food, where trust in the organic food due to credibility, authenticity, brand name, etc, appeared to be an important factor when it came to the translation of consumer's attitude into purchasing intention.

The second moderating relationship, which was taken to see if price consciousness moderates the relationship between purchase intention and buying behavior was also found to be insignificant. This showed that consumers of organic food in Pakistan are not impacted by the prices of organic food and may buy organic food despite higher prices if they have a positive intention towards it. This finding is inconsistent with the Malaysian study by Saleki et al. (2019), where the Malaysian consumers of organic food were found to be impacted by the prices of organic food, where positive purchase intention was not translating into actual buying behavior as consumers regarded high prices as the major impacting factor.

5.1. Implications and recommendations

As the attitude of consumers is being impacted by environmental concerns, food safety concerns, and health consciousness, therefore it offers fruitful insights for policymakers, government regulatory bodies, as well as organic food manufacturers. Policies can be designed keeping in consideration the above-mentioned constructs, and awareness can be created amongst consumers regarding the health benefits of organic food vs. non-organic food. It depicts that Pakistani consumers may have concerns regarding their health and food safety as well as the sustainability of the environment. Hence, government and local manufacturers of organic food can take action to run positive awareness campaigns regarding the increased benefits of organic food, which may lead to an increase in its consumer demand in urban, suburban as well as remote rural areas of Pakistan.

Additionally, mass advertising through television, radio and social media can focus on the health-related diseases which are caused due to the routine consumption of non-organic food. This may lead to the development of positive purchasing intention, which can then translate into actual buying behavior. Further, the subjective norm and perceived behavioral control appeared to have a significant impact on consumers' purchase intention; therefore, these variables can be utilized to increase the consumer's PI regarding organic food consumption.

If the individuals are convinced of the benefits of organic food through positive word of mouth (societal influence), then it may lead to an increase in the adoption rate as well. Therefore, marketers can run engaging promotional campaigns through social media to promulgate the use of organic food in society so that more and more people adopt it, and it becomes the general norm in Pakistani society.

5.2. Limitations and future research

Although the current study has made significant contributions to the research, it does have a few limitations as well. For the purpose of this research, data has been collected from different cities in Pakistan. In the future comparative analysis can be done by collecting data from different countries, whereas cross-country analysis can be done to compare the results of different emerging economies. Further to this, the current study focuses on household consumers only, where the TPB model was applied to understand the perspective of Pakistani household consumers regarding organic food. Future studies can extend the scope of the study by applying the model to business markets and incorporating their perspective as well.

The current study has used a quantitative research technique, where a survey method was used to collect data from the masses. Significant contributions can be made by making use of qualitative research techniques or by opting for a mixed-method approach to understand the issue in much detail. Furthermore, the current study makes use of a cross-sectional approach where data is collected at one time. Future researchers can opt for longitudinal research as well to understand the varying dimensions of the study.

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