

## PURCHASING INTENTION TOWARDS ORGANIC FOOD AMONG GENERATION Y IN MALAYSIA

Siti Hasnah Hassan\*

Loi Wai Yee

Kok Jean Ray

### ABSTRACT

*The demand for organic food is increasing due to greater consumer awareness of the nutritional value and food protection for health care. Consumers' purchasing intention is the most influential factor affecting the actual purchase of organic food. Therefore, this study aims to examine the Generation Y (Gen Y) consumers' purchasing intention towards organic food in Malaysia. The data were collected from 226 respondents using structured questionnaires. The results of the analysis show that environmental concern, health factors, and perceived value influence consumers' purchasing intention towards organic food. Interestingly, knowledge concerning organic food is not significant in influencing the intention to purchase organic food. The results of the study provide important insights to marketers and food manufacturers concerning the factors that influence consumers' intention to purchase organic food. The outcome of the study can provide guidance for marketers in communicating with their consumers using nonverbal methods, such as through their perception.*

**Keywords:** Consumer, food safety, health factors, Malaysia, organic food, perceived value, perception, purchasing intention

### INTRODUCTION

The demand for organic food consumption has increased due to the current trend in which consumers are becoming more concerned about the nutritional value of food and their health. As such, organic food is becoming more popular, as it is considered to be safer, more nutritious and tastier than conventional food. Due to the higher standard of living and healthier lifestyle, the demand for organic food products is accelerating, despite the products being sold at premium price.

The belief of the general public has created a "halo effect" that organic food is better. This belief is the catalyst for the increased consumption of organic food and an important motivational factor for the purchasing intention and purchase rate of organic food. Although the demand for organic food in Malaysia is still low, the trend for organic food consumption and consumer acceptance towards organic products is growing. Similar to

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\* School of Management, Universiti Sains Malaysia.  
e-mail : siti.hasan@usm.my

Malaysia, the organic food market in other countries is emerging and gaining acceptance as well. Based on the report by the International Federation of Organic Agriculture Movements (IFOAM), the global sales of organic food and drink increased by 5 billion US dollars between 2010 and 2012, reaching almost 64 billion US dollars in 2012 (Willer & Lernoud, 2014).

The literature showed that consumers perceive organic products to be healthier, more nutritious and an alternative to conventional food (Baker, Thompson, Engelken, & Huntley, 2004; Lea & Worsley, 2005; Lockie, Lyons, Lawrence, & Grice, 2004; Padel & Foster, 2005; Shafie & Rennie, 2012), as well as promoting their well-being (Williams & Hammitt, 2001). In addition, some studies indicated that consumers perceived organic food as being safer (Padel & Foster, 2005; Schifferstein & Oude Ophuis, 1998) and tastier than conventional food (Davies, Titterington, & Cochrane, 1995). As organic food is low in pesticides and fertilizer residue, some families purchase organic food for health reasons, as they believe that organic food is better for their children (Davies et al., 1995; Soil Association, 2000; Tregear, Dent, & McGregor, 1994). In addition, studies show that environmental concern is among the influential factors for the increase in the consumption of organic food, as consumers believe that organic food could help in preserving the environment (Gomiero, Pimentel, & Paoletti, 2011; Grunert & Juhl, 1995; Soil Association, 2000; Sparks & Shepherd, 1992).

Hence, this increase in demand is a cause for concern in the organic food industry because the supply of organic food in Malaysia is less than the demand (Zhen, 2013). It shows that there is a pressing need to determine the reasons behind the consumers' purchasing intention towards organic food. Therefore, this study aims to identify the important factors that influence the consumers' perception towards organic food, in general, and what motivates the purchasing intention among Malaysian Gen Y consumers, in particular. The results will provide guidance for marketers and organic food manufacturers in communicating with their consumers by applying the factors that influence their purchasing intention and understanding their perception towards organic food. Consequently, it could help in formulating an effective market communication and policy strategy to influence consumer behaviour and perception towards organic food.

## **LITERATURE REVIEW**

The concept of organic food was originally introduced and commercialized between the 1940s and 1950s (Pearson, Henryks, & Jones, 2011). Due to the growing awareness of consumers and their standard of living, organic food is now gaining recognition and importance. Many countries are further developing the concept of organic food, such as the 'ecological agriculture' in Switzerland and the 'biodynamic agriculture' in Austria and Germany. The development of the organic movement intensified during the 1960s and 1970s when consumers became more concerned about manmade products and their effect on the environment. The International Federation of Organic Agricultural Movements (IFOAM), which was formed during that period, has continued the effort to provide a

forum for the global coordination of the organic movement. In the 1990s, organic food finally gained significant recognition from many national governments as a food production system and was commercialized by the mainstream food industry.

In Malaysia, the pioneering initiative behind organic food started in the early 1990s. This early initiative faced the double challenge of developing organic practices as well as devising a means to establish a market (UNESCAP, 2002). Now, the development of organic food is becoming more important and widely accepted.

Organic food has been analysed from many perspectives in many countries. The National Organic Standards Board of the U.S. Department of Agriculture (USDA) defines organic as follows:

*“Organic food, defined by how it cannot be made rather than how it can be made, must be produced without the use of sewer-sludge fertilizers, most synthetic fertilizers and pesticides, genetic engineering (biotechnology), growth hormones, irradiation and antibiotics”* (Ahmad, 2010).

A formal regulation under Council Regulation (E.C.) 2092/91 defines organic food as follows:

*“Organic food production refrains from using synthetic chemicals like pesticides and fertilizers”* (Schifferstein & Oude Ophuis, 1998).

In Malaysia, the production must comply with the established organic standard and be certified by a recognized certifying body. A Malaysian Standard, MS 1529: 2001, was established to implement the certification process, and the standards of production, processing, labelling, and marketing plant-based organically produced food were developed for adoption by growers and processors (Samik & Mohd. Nordin, 2014). In addition, (MIDA, 2013) highlighted that it is important to understand the tendency of consumers in purchasing organic food. However, as previous studies were mostly conducted in developed countries, there might be some differences concerning the socio-demographics of the respondents, acceptance level, and consumption behaviour. Hence, there is a need to examine the factors affecting consumers' purchase intention towards organic food products in Malaysia.

### **Purchase Intention towards Organic Food**

Spears and Singh (2004) define purchase intention as “an individual's conscious plan to make an effort to purchase a product”. The organic food industry is now growing in Malaysia, as demand has intensified due to consumers' increasing awareness concerning the benefits related to consumption of organic food. Consumers believe that the consumption of organic food is beneficial, and this positive attitude has significantly influenced the purchase intention of organic food (Suprpto & Wijaya, 2012). A previous study indicated that health concerns have influenced consumers to purchase organic food (Schifferstein &

Oude Ophuis, 1998). Magnusson, Arvola, Hursti, Åberg and Sjöden (2001), found that health is a stronger influential factor for the purchase intention of organic food compared with environmental motives. However, (Spears & Singh, 2004) argued that health is the predictor of attitude towards organic food. Furthermore, according to the study of Honkanen, Verplanken and Olsen (2006), environmental motives have a strong influence on attitude, which will lead to the purchase intention of organic food.

### **Environmental Concern**

For a sustainable tomorrow, environmental concern and awareness are important factors in preserving the environment (Crosby, Gill, & Taylor, 1981). More people are now vegetarian compared to the past few decades. Apart from the health concerns, another reason for people adopting a vegetarian lifestyle is their concern for the environment. According to Dunlap and Van Liere (1978), environmental concern is said to be a global attitude with indirect effects on behaviour through behavioural intention. Organic food, which is produced through natural farming methods, reduces the contamination of the soil and groundwater, as chemical pesticides and fertilizers, which are harmful to the environment, are not used. Recent studies found that organic buyers purchase organic food because of environmental factors (Ahmad, 2010; Gracia & de Magistris, 2013; Yin, Wu, Du, & Chen, 2010), and consumers perceived organic farming as having low environmental impact (Gomiero et al., 2011). Based on the research, the following hypothesis is proposed:

**Hypothesis 1:** Environmental concern has a positive relationship with consumers' purchase intention towards organic food.

### **Health Factors**

Health is wealth; hence, consumers are more concerned with health issues, thus creating a market for health products due to the increasing demand. Purchasing organic food because of the reduced presence of artificial ingredients and other harmful residue has become the trend. As reported by Lairon and Huber (2014), majority (94-100%) of organic food products do not contain synthetic pesticides. Research has found that consumers place a high value on health and food security, which is derived from organic products (Ahmad, 2010). According to Lea and Worsley (2005), majority of Australians believe that organic food products contain significantly more vitamins and minerals, which bring many health benefits, especially to women. This view is supported by Lairon and Huber (2014) that organic food contains more minerals and antioxidants. In addition, the consumption of organic food does not just bring benefits to those who are concerned about their own health, but also the well-being of their children (Huxley, Burke, Roderick, Main, & Whay, 2003), as it is safer and healthier than processed food. In their research, Davies et al. (1995) and Tregear et al. (1994) determined that consumers purchase organic food because they perceive that it is good for their children due to the reduced presence of pesticides. Moreover, occasional consumers are more concerned on food safety and health factor of organic food than frequent consumers (Pino, Peluso, & Guido, 2012; Yin et al., 2010). Hence, it is known that health is an important factor that influences consumers' purchase

intention as illustrated by previous research (Gracia & de Magistris, 2013). Therefore, it is hypothesised that:

**Hypothesis 2:** Health factors have a positive relationship with consumers' purchase intention towards organic food.

### **Organic Food Knowledge**

Hill and Lynchehaun (2002) and Gracia and de Magistris (2013) discovered that knowledge is an important factor when purchasing organic products. Knowledge pertaining to organic food, such as ingredients and nutritional value, is the only means for consumers to distinguish organic food from non-organic food (Fricke & Von Alvensleben, 1997). Insufficient information will deter consumers from purchasing organic food because, although they are aware of the main components of the organic products, they do not have enough knowledge about the agricultural process (Padel & Foster, 2005). In addition, in their study, Yiridoe, Bonti-Ankomah and Martin (2005) stated that consumers do not purchase organic food for two reasons – lack of knowledge and their inability to clearly distinguish the unique attributes of organic products from the conventionally grown alternatives because of insufficient detailed information. Therefore, the following hypothesis is developed:

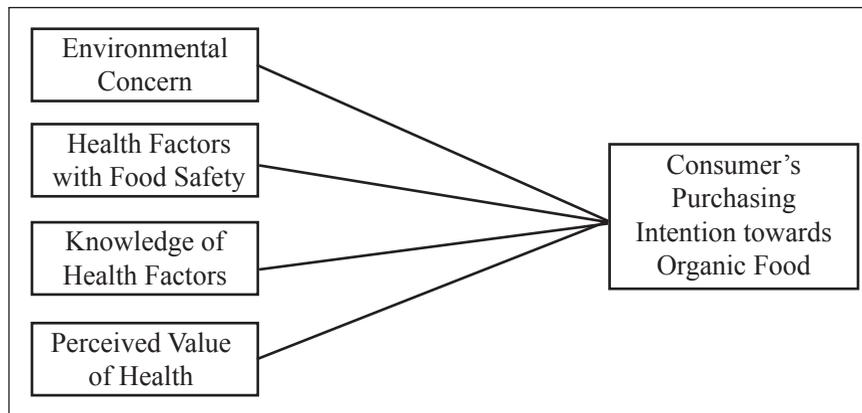
**Hypothesis 3:** Organic food knowledge has a positive relationship with consumers' purchase intention towards organic food.

### **Perceived Value of Organic Food**

Perceived value can be illustrated as the consumers' assessment of the utility of a product based on the consumers' perceptions of what they give and receive in return (Naylor & Frank, 2000; Zeithaml, 1988). In other words, the consumers' perceived value is a trade-off between the perceived benefit and cost (Chiou, Droge, & Hanvanich, 2002; Lin & Wang, 2006). The consumers' perceived value of organic food is important, as a number of previous research showed a positive perception towards organic food products (Ahmad, 2010). Consumers are willing to pay more for organic food, as they believe it is healthier, safer and environment friendly. Hutchins and Greenhalgh (1997) found that majority of consumers are willing to pay a premium price for organic food.

Moreover, Zakowska-Biemans (2011) stated that individuals' sensory factors are the most important factor in affecting organic food purchasing intention, followed by price and safety. In other words, if consumers do not have a good perception of organic food, they are less inclined to purchase organic food. It describes the importance of the perceived value of organic food in determining the organic food purchasing intention. As suggested by Hjelm (2011), consumers need to be continually convinced that organic food products confer high perceived value to maintain the purchasing rate of pragmatic customers. Therefore, it is hypothesised that:

**Hypothesis 4:** The perceived value of organic food has a positive relationship with consumers' purchase intention towards organic food.



**Figure 1: Research Framework**

## METHODOLOGY

The research was conducted under a non-contrived setting as a cross sectional study in which data were gathered over a period of one month using online survey. The population comprised individuals who were in the Gen Y category in Malaysia and with knowledge of organic food. According to Hair, Anderson, Tatham and Black (2010), the sample sizes for structural equation modeling commonly run from 200 to 400 for models with 10 to 15 indicators. Thus, for this study, 350 structured questionnaires were disseminated through social media to Gen Y consumers who have experienced purchasing organic food. This was done using a few pre-screening questions with regard to the type of organic food purchased by the respondents before they can proceed to answer the questionnaire. Based on this method, only 226 final usable questionnaires were used for data analysis using the SmartPLS 2.0 software to evaluate the relationships among the constructs.

## RESULTS AND DISCUSSION

### Profile of Respondents

The demographic profile of the respondents is shown in Table 1. Out of the 226 respondents, 41.6% are male, and 58.4% are female. The age of the respondents ranges from 18 to 25 years old (96%) and 26 to 35 years old (4%). With respect to educational background, the majority are undergraduate students (88.1%), 7.5% are diploma/STPM holders, and

the remaining are SPM (1.3%), masters (2.7%), and other educational levels (0.5%). The majority of the respondents earn a monthly income of below RM 2,000 (95.1%).

**Table 1: Profile of the Respondents**

<b>Item</b>	<b>Frequency</b>	<b>%</b>
<b>Age</b>		
18-25	217	96.0
26-35	9	4.0
<b>Gender</b>		
Male	94	41.6
Female	132	58.4
<b>Education Level</b>		
SPM	3	1.3
Diploma/STPM	17	7.5
Undergraduate	199	88.1
Masters	6	2.7
PhD	0	0
Others	1	0.5
<b>Income Level</b>		
Less than RM 2,000	215	95.1
RM 2,000 – RM 2,999	6	2.7
RM 3,000 – RM 3,999	2	0.9
RM 4,000 – RM 4,999	2	0.9
RM 5,000 – RM 5,999	1	0.5
RM 6,000 or more	0	0

### **Measurement Model**

The measurement model with a reflective indicator was modelled using SmartPLS. The measurement model was evaluated by examining the reliability of the individual items, internal consistency or construct reliability, average variance extracted, and discriminant validity.

A measurement model has satisfactory internal consistency reliability when the composite reliability (CR) of each construct exceeds the threshold value of 0.7; CR above 0.8 is considered good (Sekaran, 2003). Table 2 shows that the CR of each construct for this study ranges from 0.8 to 0.9, which is above the recommended threshold value of 0.7. Thus, the results indicate that the items used to represent the constructs have satisfactory internal consistency reliability. The indicator reliability of the measurement model is measured by examining the item loadings. A measurement model is said to have a satisfactory indicator

reliability when the loading of each item is at least 0.7 and is significant at least at the level of 0.05. Based on the analysis, all the items in the measurement model exhibited loadings that exceed 0.68, ranging from a lower bound of 0.68 to an upper bound of 0.92. All the items are significant at 0.01 level. Table 2 shows the loading for each item. Based on the results, all the items used for this study have demonstrated satisfactory indicator reliability.

**Table 2: Overview of the Validity and Reliability of the Model**

		Loading	AVE	Composite Reliability	Cronbach's Alpha	Communality
<b>Environmental Concern (CE)</b>	CE2: organic food is friendly to the environment.	0.857	0.687	0.868	0.772	0.687
	CE3: organic farming avoids pollution.	0.867				
	CE4: no use of chemicals in organic farming.	0.757				
<b>Health Factors (HF)</b>	HF2: avoid eating processed food.	0.678	0.717	0.882	0.801	0.717
	HF4: choose food carefully to ensure good health.	0.919				
	HF5: I am health conscious.	0.920				
<b>Organic Food Knowledge (K)</b>	K1: free from conventional pesticides	0.832	0.656	0.930	0.912	0.656
	K2: free from artificial fertilizers	0.839				
	K3: free from human waste	0.738				
	K4: free from sewage sludge	0.802				
	K6: free from chemicals	0.839				
	K7: safer to be consumed	0.868				
	K8: taking organic food is the best way for food safety	0.740				

Table 2 (continued)

		Loading	AVE	Composite Reliability	Cronbach's Alpha	Communality
<b>Perceived Value (PV)</b>	PV1: more freshness	0.886	0.693	0.918	0.888	0.693
	PV2: superior quality	0.884				
	PV3: natural	0.859				
	PV4: tastier	0.711				
	PV5: more nutritional value	0.810				
<b>Purchase Intention (CPI)</b>	CPI1: intend to buy organic food for environmental concern	0.876	0.765	0.929	0.897	0.765
	CPI2: intend to buy organic food for food safety.	0.903				
	CPI3: intend to buy organic food for nutrients	0.894				
	CPI5: intend to buy organic food in the future	0.822				

In this study, the discriminant validity of the measurement model is assessed by using the Fornell and Larcker (1981) criterion. The results in Table 3 show that a measurement model has discriminant validity when the square root of the AVE exceeds the correlations between the measure and all other measures and the loadings of the indicators are higher against their respective constructs compared to the other constructs. Hence, the results confirmed that the Fornell and Larcker criterion was met.

Table 3: Discriminant Analysis

	AVE	Environmental Concern (CE)	Health Factors (HF)	Organic Food Knowledge (K)	Perceived Value (PV)	Purchase Intention (CPI)
Environmental Concern (CE)	0.687	<b>0.829</b>				
Health Factors (HF)	0.717	0.418	<b>0.847</b>			
Organic Food Knowledge (K)	0.656	0.617	0.476	<b>0.810</b>		
Perceived Value (PV)	0.693	0.555	0.468	0.711	<b>0.833</b>	
Purchase Intention (CPI)	0.765	0.478	0.496	0.524	0.624	<b>0.875</b>

Note: Values in the diagonal (bolded) are the square root of the AVE, while the off-diagonals are the inter-construct correlations.

### Path Coefficients and Hypothesis Testing

The major emphasis in PLS analysis concerns the variance explained as well as establishing the significance of all path estimates. Specifically, the predictive power of the structural model is assessed by the  $R^2$  values of the endogenous constructs. Figure 2 and Table 4 present the results of the model and the path analysis to test the hypotheses. Based on the path coefficient and t-test results of the four hypotheses, only three hypotheses are supported. The remaining hypothesis, which relates to knowledge of organic food, is not supported. The results show that health factors and perceived values of organic food positively influence consumers' purchase intention at the significance level of  $p < 0.01$ . Environmental concern positively influences consumer purchase intention at the significance level of  $p < 0.05$ .

The  $R^2$  value is 0.455, which suggests that 45.5% of the variance in customers' purchase intention can be explained by environmental concerns, health factors, and perceived values. This means that consumers who intend to buy organic food in the near future will do so because of environmental concern, food safety, and nutritional value.

**Table 4: Path Coefficient**

Hypothesis	B	Std. Beta	Std. Error	t-value
Environmental Concern (CE) -> Purchase Intention (CPI)	0.125	0.130	0.071	1.765*
Health Factors (HF) -> Purchase Intention (CPI)	0.228	0.231	0.070	3.257**
Organic Food Knowledge (K) -> Purchase Intention (CPI)	0.041	0.042	0.097	0.421
Perceived Value (PV) -> Purchase Intention (CPI)	0.418	0.412	0.085	4.921**

Note: if the t-value is greater than 1.645 (\* $p < 0.05$ ), 2.33 (\*\* $p < 0.01$ ).

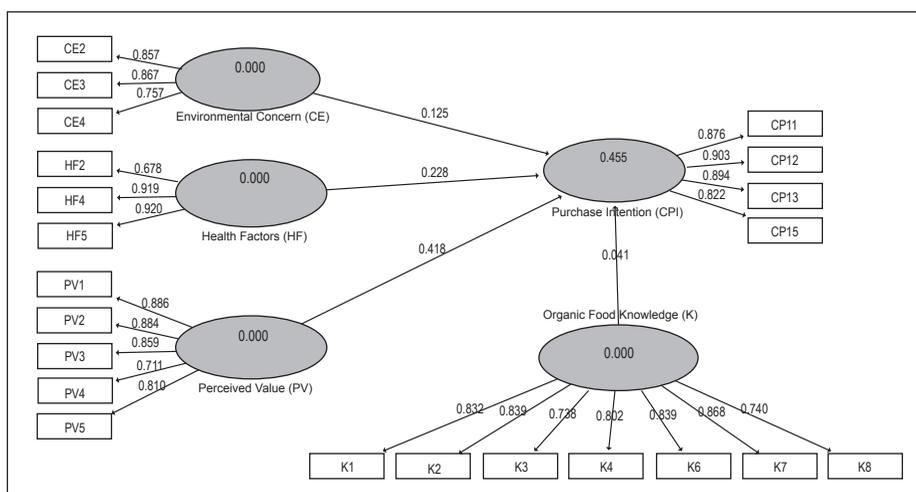


Figure 2: Measurement Model

The results of the hypothesis testing in this study are supported by previous research that has associated organic food consumption with behavioural attitudes, such as health consciousness, environmental consciousness, and perceived value in organic food claims. In this study, the result indicates that health factor is the most important factor in the intention to purchase organic food products among Gen Y consumers. This result is supported by a previous study that stated that health-conscious consumers will positively develop favourable attitudes towards the health enhancing attributes of organic food (Davies et al., 1995), thus influencing their purchase intention of organic food. According to organic food market analysis in 2009, the average annual growth of organic food industry is increasing at a rate of between 16% and 21% (2001-2008), and it is expected to grow at 13% combined annual growth rate during 2010-2014 due to increasing acceptance and health concern factors across the country (Gitlin, 2010).

The findings indicated that positive value perceptions tend to influence the purchase intention towards organic food products. Many of the respondents perceived that organic food products are natural and are of good quality, fresher, tastier, and have more nutritional value compared to the conventionally produced food products. This finding is consistent with the findings of earlier studies, which stated that, generally, consumers perceive organic food to be more nutritious and safer than conventionally produced food products (Baker et al., 2004; Lea & Worsley, 2005; Lockie et al., 2004; Padel & Foster, 2005; Shafie & Rennie, 2012). This finding shows that Malaysian consumers have a good perceived value of organic food, and this could bring insights to market practitioners, which will be discussed in the next section.

In addition, the result shows that environmental concerns significantly influence the intention to purchase organic food products. This could be due to the increasing knowledge

about environmental awareness among the young generation, as organic food production has a positive impact on the environment. According to Gomiero et al. (2011), consumers tend to purchase organic food because organic farming methods are known to have a lower impact on the environment compared to the conventional agricultural practice that might use chemical substances. The results also show that, although respondents might have knowledge about organic food, the knowledge itself will not significantly affect the purchase intention towards organic food. The insignificant relationship might be explained by several reasons. Past research on organic consumption has shown that the most important reasons for not purchasing organic food include the availability and higher price of the products compared to conventionally produced food products that are relatively cheaper and easier to obtain (Boccaletti & Nardella, 2000; Fotopoulos & Krystallis, 2002; Zanolli & Naspetti, 2002). As a young generation, Gen Y's income level can still be considered as at a lower range, which makes it virtually impossible for them to purchase organic food products.

### **Implications of the Study**

The findings of this study shed some insight to food producers and marketers to develop marketing campaigns that will create positive perceptions towards organic food products. Based on the results, organic food providers have to understand the important predictors that influence the consumers' intention to purchase organic food, which might prompt the actual purchase of the products. Good and positive perceptions motivate the consumers' purchasing intention and their repeated purchase of organic food products.

The important factor that contributes to this study is that the intention to purchase organic food is highly dependent on the consumers' perceived value towards organic food, health factors, and environmental concerns. Thus, practitioners could use the results as a basis to develop strategic marketing plans concerning the most effective communication message to promote organic food, as communication and sources of information significantly affect the consumer behaviour and perception (Hassan & Mustapha, 2010). In addition, the communication message could educate consumers about the benefits of consuming organic food, in as much as organic food consumption helps in enhancing one's health and in preserving the environment.

Furthermore, due to the insignificant relationship between organic food knowledge and purchase intention, the authorities could promote knowledge about organic food because the lack of knowledge deters people from purchasing organic food. In addition, as consumers claim they do not have sufficient information to distinguish between conventional food and organic food, the differences between the two products should be emphasised (Yiridoe et al., 2005). Practitioners should educate young consumers concerning the health and environmental benefits of consuming organic food, as they are now the largest consumer group. In fact, young consumers are not aware of the issues pertaining to health and the environment.

Finally, the Ministry of Agriculture could provide additional assistance to farmers to practise large-scale production to achieve economies of scale and, thus, minimize the cost of production and increase production. With this effort, the price of organic food would be lower and affordable for the citizens, as the premium price is one of the reasons for not buying organic food.

## **CONCLUSION**

The future of organic food products will largely depend on consumer demand. This study attempts to reveal that the perceived value of organic food products and the health and environmental concerns are factors that influence consumers' purchasing intention towards organic food among the young consumers. Based on a previous study, it is concluded that the proportion of consumers who purchase organic foods varies across countries and product categories. The research findings are believed to provide the organic food producers and marketers with a better understanding of the purchasing intention of Gen Y consumers towards organic food. The practitioners can use this knowledge in improving their marketing communication methods to increase the sale of organic food in the market. Although Gen Y might be knowledgeable about the benefits of organic food, there are other factors that contribute more significantly towards consumers' intention to purchase organic food. It is suggested that future research should focus more comprehensively on other factors affecting customer's purchase intention towards organic food products with the more extended target segments.

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