

# **Consumer Behaviour Towards Organic Vegetables and their Certification in Vietnam**

N. K. Veerapa	S. Wojtaszek	D. Veerapa	T.M. Chien
La Trobe University	La Trobe University	La Trobe University	VinaGap
Melbourne	Melbourne	Melbourne	Hanoi
Australia	Australia	Australia	Vietnam

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## **Abstract:**

**As consumers become more concerned about the environment and safe food consumption, their interest in organic food become more apparent. Several researchers have examined the behaviour of consumers of organic produce in western economies but little is known about the consumer of organic vegetables in transition economies. To date, literature neither describes the Vietnamese consumers of organic vegetables nor provides an understanding of the motivation behind purchasing of ‘organic’. This paper employed mixed interviews of key players in the supply chain of organic vegetables in Hanoi, Vietnam. The results were validated by the use of a small-scale survey of consumers before developing the profile of the organic vegetable buyer. The typical consumer is female, aged between 25 and 40 years old, well educated and earning an above average income. This person will be married with children or pregnant but yet not very knowledgeable about certification. The organic vegetable buyer associates organic vegetables with better health, quality and safety. This paper also addresses issues such as consumer perception of organic vegetables, certification and underlying benefits of consuming organic. It recommends more control at point of sales and better consumer education about the benefits of organic vegetables.**

## **INTRODUCTION**

This paper provides the context in which the organic vegetable consumer operates in terms of choice set, socio-economic context and behavioural factors. From the extant of literature available and previous research the researcher indentified gender, age, marital status, education and income to be the key aspects of the behaviour of consumers of organic vegetables in Hanoi, Vietnam. These aspects informed the driving themes and design of this research (Davis et al. 1995; Wandel and Bugge 1997; Thompson and Kidwell 1998; Magnusson et al. 2001; Tsakiridou et al. 2008.) Field research comprising of a mix of interviews and questionnaire administration were used to determine, the profile of the typical organic produce buyer in Hanoi, Vietnam.

Veerapa and Manh (2010) examined the supply-chain of organic vegetables in Hanoi, identifying the participating intermediaries and their roles in the promotion of sustainable agricultural practices. Consumers buy vegetables that are either directly from “the wet-market” (presenting the lowest level of sustainable agricultural practices), or “SAFE” (with a governmental certification for ‘clean and safe to consume vegetables’) or ‘organic’ (standing for the highest level of sustainability). However, there is no literature available to describe Vietnamese consumers of organic vegetables, and to understand their motives behind the purchase of ‘organic’.

With the expansion of the organic sector, comes the need to develop certification procedures that will satisfy each member of the supply chain in order to be successful (Krystallis et al., 2005). The Vietnamese certification for organic vegetables, the 'PGS' is conducted by a multi-stakeholder group instituted in 2009 and supported by a non-governmental organisation, ADDA (Agricultural Development Denmark Asia) in 2009. Based on the 2010 study by Veerapa and Manh (2010), the PGS certification scheme is either limited or has no impact on consumers' purchase decisions.

Socio-demographics have been the most widely used variables for consumer profiling purposes due to the relative ease of measurement and application since "they are standard and readily available and marketers believe that consumer behaviors are highly related to these variables" (as cited in Greenwell, Fink and Pastone 2002, after Sallah et al. 2010,). Socio-demographic variables affect consumer attitude and buying behaviour towards organic food (Tsakiridou et al. 2008; Salleh et al. 2010).

Several studies previously found that consumer attitudes and buying decisions are influenced by their gender, age, income and education, as well as the number of children in their household (Davis et al. 1995; Wandel and Bugge 1997; Thompson and Kidwell 1998; Magnusson et al. 2001; Tsakiridou et al. 2008). This study also investigates the impact of health concerns on the consumption of organic vegetables since Vietnam has been notable for dealing with with starvation and consumption of infected water and foods in the past (Veerapa and Manh, 2010; Mergenthaler et al. 2009; Simmons and Scott 2007).

## **METHODOLOGY**

There is an absence of profiling studies about the Vietnamese organic food consumer. This research identified the existence of a consumer segment with a specific socio-demographic profile and purchasing pattern. The major part of this research is qualitative in design and provides insight in the retailers' perspective on their consumers' attitudes and perceptions towards organic vegetables. A minor part, however, consists of a small-scale survey of the consumers themselves to validate the findings from the interviews of the retailers. It further analyzed consumer attitudes and perceptions towards organic vegetables and their certification. To meet this objective, a sample of urban retailers and consumers in the metropolitan city of Hanoi is examined, since the metropolitan areas of a country usually "have leading roles in the food system transformation for the rest of the country" (Mergenthaler et al. 2009, p. 268).

This study is a cross-sectional field study, with a one-time measurement from a sample of the population, since the research is being conducted in Hanoi, among organic vegetable consumers, during the period of May to November 2011. Retailers and consumers of organic vegetables are the respondents. Retailers were contacted through a network-list, listed by a previous study of Veerapa and Manh (2010) (with retailers being questioned about their experience with organic vegetable consumers and their attitudes and perceptions.) Consumers were selected based on the availability of email contact details and they were sent a corresponding questionnaire electronically.

The main method used was semi-structured interviews and they were undertaken in vegetable shops and the offices of Non Governmental Organisations (NGOs). Since the NGOs provided a variety of intermediary services to the organic sector, they possess knowledge of the organic vegetable consumer base. The sampling method was non-probability in nature, wherein the chances for respondents to take part in are not equal.

This method therefore uses convenience sampling (Burns and Bush, 2010) which is based on an inherently biased selection process, directly depending on the network-list and availability of consumer contact details, rather than take every possible existing organic vegetable retailer or consumer into account.

## **INTERVIEW FINDINGS**

### **The Vietnamese organic vegetable consumer profile**

#### *Gender*

The interviewees were unanimous that the organic vegetable buyers were mostly female. This was evidenced by the retail stores displaying posters where pregnant women figure prominently. Organic vegetable is promoted to the pregnant woman to satisfy their need for particularly 'good food' under these special circumstances. They believe that there is a growing trend to feed babies and toddlers organic food as long as the family budget allows it.

#### *Age and marital status*

The majority of organic vegetable buyers are aged of 25 and 40, married and mostly with children. Retailers surveyed report that their organic vegetable consumers were rarely 'single' individuals who had no children. It is believed that younger people eat on a regular basis outside home, and does not cook at home and that older people do not generally have the buying power.

#### *Income and education*

The income range of organic vegetable buyers per month is mostly 20,000,000 VND (1100 US\$), with very few reaching over 40,000,000 VND (2200 US\$). The typical consumer is described as being an office worker with a job requiring university education and belonged to the "upper middle class". Higher education appears to take upon a big part of the profile characteristics. Retailers have observed that over 90% of their consumers have university degree. The small shops' walk-in consumers are mainly Vietnamese, whereas consumers who orders on-line or by phone are expatriates (30%).

Regarding the knowledge about organic vegetables, the interviewees agree that consumers are generally not aware about the products they consume, but they are 'interested' in being provided with valuable information, particularly on the subject of food quality and safety. Moreover, they tend to get food related information from the TV and through 'word of mouth' from friends and family mostly while 'opinion leaders' like doctors or pharmacists were ranked last.

Non-government organization representatives described two types of educated consumers. The first one (20%) having knowledge on details, a high level of understanding and not complaining and the second type (80%) as having a "kind of understanding" and complaining about price changes and supply. However, both these sub-segments can distinguish clearly between organic and SAFE vegetables.

#### *Vegetable variety and frequency of purchase*

The interviews of retailers indicated that the Vietnamese diet includes approximately a hundred different vegetables, with around 30 being provided by any typical retailer in Hanoi at any one point in time. This information is closely supported by the findings of a report by Johnson et al. (2008). This creates a cultural phenomenon whereby a variety of vegetables are required to make a proper meal. This seems entrenched in the dietary habits and purchasing behaviour of vegetable consumers in

general so much so that they will not preclude buying non-organic vegetable in order to achieve the variety sought although they may understand the health risks associated.

An organic vegetable retailer reported that while “a foreigner buys what is available in ‘organic’; a Vietnamese consumer buys what he/she believes needs to be eaten”. Organic vegetables are mainly bought 2 to 3 times a week, in small specialty shops, or delivered home or into offices (orders are being taken via phone or online).

#### *Switching propensity and loyalty*

Organic vegetable consumers appear to observe a regular purchasing pattern and purchase during lunch breaks, have deliveries made to their offices or buy on their way home from work. If, however, ‘organic’ is not available, the majority buys ‘non-organic’ (SAFE or from the wet market) right away. They will neither delay their purchase nor find another store where organic vegetable is available. Only a small number of organic vegetable consumers are assumed to buy only organic vegetables. These buyers, called “hard core organic buyer”, typically order by phone or on-line. They will tend to visit the organic farms, develop a relationship with specific farmers or check into the reputation of retailers before becoming a customer of any farmer or retailer.

## **DISCUSSION**

### **Health and Environment**

Farmers of organic vegetables report that they have remained in the business to contribute to the improvement in public health and the well being of society and country (Veerapa and Manh 2010). The study also revealed, both through the interviews and through the survey of end consumers, that Vietnamese consumers eat organic vegetables because of the ‘health aspect’. The ‘environment aspect’ is the least important concern of the respondents. This finding is in line with Chakrabarti (2010) who determined that the motivation to look after an unwell family member also represents a key reason for organic food purchase (Makatouni, 2002; Padel et al., 2005), as well as ‘nutrition, taste, curiosity, and the need to protect the environment’ listed in this order (Tregear et al., 1994; Davis et al., 1995; Grunert et al., 1995; Magnusson et al., 2001; Chinnici, D’Amico and Pecorino, 2002). According to Ahmad et al. (2010), over 85 per cent of regular buyers of organic food products purchase because of a family member’s history of suffering from chronic illness (p. 108).

Moreover, organic vegetables are purchased for quality and food safety purposes as opposed to SAFE and wet-market-vegetables. Consumers stay loyal, though they complain about the high prices, on a regular basis, without switching retailers. This research suggests that price is the biggest deterrent to ‘buy organic’ followed by the limited variety and not availability (Chakrabarti 2010). While younger consumers seem to care about the environment, the latter is clearly not perceived as being high enough a priority to get them engaged in encouraging sustainable agriculture.

### **Socio-Demographics**

This research has also confirmed that age of the Vietnamese buyer of organic vegetable tend to be younger than that of non-buyers (Bellows et al. 2008; Onyango et al. 2007; Lea et al. 2005; Baxter, 2006; Jolly, 1991 cited by Tsakiridou et al. 2008,). While the environmental consciousness of younger individuals is greater their income is usually lower (Wandel et al. 1997; von Alvensleben 1998; Fotopoulos and Krystallis 2002b).

In terms of gender, this study has confirmed that women are more likely to purchase organic vegetables more frequently than men (Bellows et al. 2008; Davis et al.

1995; Wandel et al. 1997; Tsakiridou et al. 2008). The presence of children in the household has also been regarded as a significant factor, which positively influences consumers' organic food attitudes as well as buying behaviour (Davis et al. 1995; Fotopoulos et al. 2002b; Ahmad et al. 2010). The research has also established that the typical organic vegetable food buyer, besides being female is also married and has children.

Customers with higher income tend to have a more positive attitude towards organic food (Grunert and Kristensen 1991; Magnusson et al. 2001; Tsakiridou et al. 2008), but it does not necessarily indicate a higher likelihood of organic purchases, since studies show that customers with lower incomes are more dedicated buyers (Fotopoulos et al. 2002b). The present research, however, found that the typical organic vegetable buyer is from the upper middle class of the Vietnamese society.

### **Education and Certification**

This research has established that education influenced the likelihood of consumers to purchase organic products. Consumers with higher level of education are most likely to buy organic food products (Krystallis et al. 2006; O'Donovan and McCarthy 2002; Fotopoulos et al. 2002b; Magnusson et al. 2001)

This fact did not translate in a higher acceptance of the PGS certification. Organic vegetable buyers in Hanoi place more trust in their relationship with their retailers than in the PGS certification. As a result, they will prefer to purchase unlabelled organic vegetables from the small retailers than properly labeled produce carrying the PGS certification label. This situation could be remedied by having a more comprehensive certification system for farms and retailers.

### **CONCLUSION:**

This study indicates that examining metropolitan areas of a country can provide a good indication about food habits and policies that will permeate a nation. Hence this qualitative research, although limited in scope and by language and other cultural hurdles, has led to the emergence of a typical consumer profile for the buyer of organic vegetable in Hanoi, Vietnam.

- Female, between 25 and 40 years old, with an above average income. She will be well educated, most probably tertiary educated but still trusting her local retailer more than the PGS certification label. There will be a high likelihood of her being married with young children or pregnant.
- As a typical organic vegetable buyer her purchase will stem more out of health and safety concerns than from environmental consciousness.
- Willingness to purchase organic vegetables is heavily shaped by gender, marital status, the age of children in family, income and education.

The consumer profile developed in this research will be of critical importance to the different supply chain partners in the organic food supply chain. Through this enhanced understanding, they will be able to forecast both qualitative and quantitative demand and plan supply and distribution in order to respond adequately to the market for organic vegetables.

It is however worth noting that education campaigns about the environmental and health related benefits of consuming organic vegetables must be intensified in order to reach more women and younger people. Should organic vegetable demand and production be increased, a reduction in prices will result from the enhanced scale of

operations thereby making organic produce more accessible to consumers having a lower income.

### **Further research**

A quantitative phase is going to follow this initial research to gauge buyer attitudes and map their profiles in order to attempt to establish correlations between the two sets of observations. It will be conducted on a wider scale than the present study by way of a questionnaire survey.

Krystallis et al. (2005) studied consumers' willingness to pay (WTP) for organic food, claiming that WTP can be a useful predictor of the demand for organic food products. Therefore WTP also presents an interesting construct that merit further investigation.

### **LITERATURE CITED:**

- Ahmad, S. and Judhi, N. 2010. Organic Food: A Study on Demographic Characteristics and Factors Influencing Purchase Intentions among Consumers in Klang Valley, Malaysia, *International Journal of Business and Management*, 5(2): 105-118.
- Baxter, B. 2006. Who's Buying Organic? Demographics 2006," *HartBeat*, May 17(online). Available: [www.hartman-group.com/products/HB/2006\\_05\\_17.html](http://www.hartman-group.com/products/HB/2006_05_17.html) (Accessed on 5.05.2011)
- Bellows, A.C., Diamond, A., Onyango, B. and Hallman, W.K. 2008. Understanding Consumer Interest in Organics: Production Values vs. Purchasing Behaviour, *Journal of Agricultural & Food Industrial Organization*, 6(2):
- Burns, A.C. and Bush, R.F. 2010. *Marketing Research*, 6<sup>th</sup> ed., Pearson Education
- Charabarti, S. 2010. Factors influencing organic food purchases in India, *British Food Journal*, 112(8): 902-915.
- Chinnici, G., D'Amico, M., Pecorino, B. (2002): A multivariate statistical analysis on the consumers of organic products, *British Food Journal*, Vol. 104 No. 3/5, pp. 187-99
- Davis, A., Titterington, A.J. and Cochrane, C. 1995. Who buys organic food? A profile of the purchasers of organic food in N. Ireland, *British Food Journal*, 97(10): 17-23
- Fotopoulos, C. and Krystallis, A. 2002a. Organic product avoidance: reasons for rejection and potential buyers' identification in a country-wide survey, *British Food Journal*, 104(3-5): 233-260.
- Fotopolous, C. and Krystallis, A. 2002b. Purchasing Motives and Profile of the Greek Consumer of Organic Products: A Countrywide Survey, *British Food Journal*, 104(9): 730-765.
- Greenwell, T.C., Fink, J.S. and Pastone, D.L. 2002. Perceptions of the service experience: Using demographic and psychographic variables to identify customer segment. *Sport Marketing Quarterly*, 11(4): 233-241.
- Grunert, C.S. and Juhl, J.H. 1995. Values, environmental attitudes and buying of organic foods, *Journal of Economic Psychology*, 6: 39-62.
- Johnson, G.I., Weinberger, K., Wu, M.H. 2008. *The Vegetable Industry in Tropical Asia: An overview of production and trade, with a focus on Thailand, Indonesia, the Philippines, Vietnam, and India* [CD-ROM]. Shanhua, Taiwan: AVRDC – The World Vegetable Center. 56 pp. (Explorations series; no. 1).
- Krystallis, A., Fotopoulos, C. and Zotos, Y. 2006. Organic Products Consumers' Profile and Their Willingness To Pay (WTP) for Selected Organic Food Products in Greece,

- Journal of International Consumer Marketing, 19(1):
- Krystallis, A. and Chryssohoidis, G. 2005. Consumers' willingness to pay for organic food, *British Food Journal*, 107(5): 320-343
- Lea, E. and Worsley, T. 2005. Australians' organic food beliefs, demographics and values, *British Food Journal*, 107(11): 855-69.
- Magnusson, M.K., Arvola, A., Hursti, U.K., Aberg, L. and Sjoden, P.O. 2003. Choice of organic food is related to perceived consequences for human health and to environmentally friendly behavior, *Appetite*, 40(2): 109-17.
- Magnusson, M.K., Arvola, A. and Hursti, U.K. 2001. Attitudes Towards Organic Foods Among Swedish Consumers, *British Food Journal*, 103(3): 209-226.
- Makatouni, A. (2002): What motives consumers to buy organic food products in the UK? Result from a qualitative study. *British Food Journal*, Vol.104 No.3/4/5, pp. 345-352
- Mergenthaler, M., Weinberger, K. and Qaim, M. 2009. Consumer Valuation of Food Quality and Food Safety Attributes in Vietnam, *Review of Agricultural Economics*, 31(2): 266-283,
- O'Donovan, P. and McCarthy, M. 2002. Irish Consumer Preference for Organic Meat, *British Food Journal*, 104(3/4/5): 353-370.
- Onyango, B.M., Hallman, W.K. and Bellows, A.C. 2007. Purchasing organic food products in U.S. food systems: A study of attitudes and practice, *British Food Journal*. 109(5): 399-411
- Padel, S., Foster, C. (2005): Exploring the gap between attitudes and behaviour – understanding why consumers buy or do not buy organic food”, *British Food Journal*, Vol. 107 No. 8, pp. 606-25
- Salleh, M.M., Ali, S.M., Harun, E.H., Jalil, M.A. and Shaharudin, M.R. 2010. Consumer's Perception and Purchase Intentions Towards Organic Food Products: Exploring Attitude Among Academicians, *Canadian Social Science*, 6(6): 119-129.
- Schifferstein, H.N.J., Oude Ophuis, P.A.M. (1998): Health-related determinants of
- Simmons, L. and Scott, S. 2007. Health concerns drive safe vegetable production in Vietnam, *LEISA Magazine (Low External Input Sustainable Agriculture, Netherlands)*, 23(3): 22-32
- Tregear, A., Dent, J.B., McGregor, M.J. (1994): The demand for organically grown produce, *British Food Journal*, Vol. 96 No. 4, pp. 21-50
- Tsakiridou, E., Boutsouki, C., Zotos, Y. and Mattas, K. 2008. Attitudes and behavior towards organic products: an exploratory study, *International Journal of Retail and Distribution Management*, 36(2): 158-175.
- Veerapa, N. and Manh, C. 2010. Sustainable Agricultural Practices in Vietnam: A Supply Chain Perspective of Organic Vegetable production in Hanoi. *Proceedings of the ISHS Symposium on Sustainable Agricultural Practices in South East Asia, Salatiga, March 2011.*
- Von Alvensleben, R. 1998. Ecological aspects of food demand: the case of organic food in Germany, *AIR-CAT 4th Plenary Meeting: Health, Ecological and Safety Aspects in Food Choice*, 4(1): 68-79.
- Wandel, M. and Bugge, A. 1997. Environmental concern in consumer evaluation of food quality, *Food Quality and Preference*, 8(1): 19-26.