

The Effectiveness of Organic Certification Logos in Influencing Consumer's Attitudes to Purchase Organic Food

Song Bee Lian

Faculty of Business, Accounting and Management, SEGi University,
Jalan Teknologi No. 9, Taman Sains Selangor, Kota Damansara, PJU5,
47810 Petaling Jaya, Selangor, Malaysia

Abstract: This study investigates the effectiveness of organic certification logos in influencing consumer's attitudes to purchase organic food in Kuala Lumpur and Selangor, Malaysia. Consumer's actual purchase were used as a criterion for judging the effectiveness of Malaysia's organic certification logo initiatives. Low consumer's awareness and knowledge of organic certification logos has negatively affected consumer's attitudes and purchase of organic food. In this study, three main variables were used to measure the effectiveness of organic certification logos and they were labelling, quality and communications. The empirical research builds on a survey with a sample of 420 organic food consumers via convenience sampling technique. The structural equation modelling was used for data analysis and four hypotheses were tested. The results showed that all three variables of labelling, quality and communications of organic certification logos have significantly influenced consumer's attitudes of organic food. Consumer's attitudes was positively correlated to actual purchase of organic food. Based on the findings, manufacturers, retailers and policy makers should develop and promote organic certification logos to create and enhance positive consumer's attitudes towards organic food. It is recommended to introduce a standard and mandatory Asian organic certification logo for countries within Asian region to increase consumer's awareness, knowledge, trust and consumption of organic food.

Key words: Organic food, labelling, quality organic certification logo, awareness, consumption

INTRODUCTION

Economic growth, urbanisation, globalisation and trade liberalisation has significantly impact consumer's food choices and preferences. The global sales for organic food have reached US\$72 bln. in 2014 (IFOAM, 2015). The term "organic" is referred to as a process claim and not a product claim. The organic food production process utilizes sophisticated technology and input in order to certified the product as organic. An organic certification logo is a proof of certification that demonstrates compliance with specific requirements in production processes. The certification logos are important to differentiate between organic and non-organic food in the market. With the fulfillment of the organic production process, consumers perceived organic food products as environmentally friendly mode of production with intrinsic quality and safety characteristics. In 2002, Department of Agriculture (DOA) has outlined national standards and the government certification program known as Malaysia Organic Scheme or "Skim Organik Malaysia" (SOM) with the introduction of standard 'Organic Malaysia' logo in Malaysia.

Despite the rapid growth of organic food industry, consumer's awareness and knowledge of organic certification logo is rather low (Botonaki *et al.*, 2006). Inadequate promotion and communications, poor labelling and low availability of certified organic food products in the market have negatively influenced consumers attitudes to purchase organic food (Botonaki *et al.*, 2006; Gerrard *et al.*, 2013). Furthermore, little is known about the effectiveness of organic food certification logos in influencing consumer's purchasing behaviour. The primary objectives of this study are to investigate the effectiveness of organic certification logos in the aspect of labelling, quality and communications in influencing consumer's attitudes of organic food and to analyse the effect of consumer's attitude towards actual purchase of organic food.

In the aspect of managerial implications, the research findings will provide valuable information on consumer's attitudes to assist in the planning and implementation of marketing strategies by organic food producers or retailers. Policy makers can develop new policies or subsidy programmes to grow the organic food industry in Malaysia. This investigation will also contribute to

theoretical implications in the aspect of validation of the Theory of Planned Behaviour (TPB) (Ajzen, 1991).

Literature review

Hypotheses development

Theory of planned behaviour: The TPB Model has been widely used in the food studies related to consumer behaviour in food decision making and consumption. Attitudes refers to individual favourable or unfavourable evaluation of the behaviour in question (Ajzen, 1991; Intan, 2016; Krisnawati *et al.*, 2016). A person's attitude is influenced by his or her behavioural beliefs and evaluations. Ajzen (1991) stated that a behaviour is a function of compatible intentions and perceptions of behavioural control. Carrington *et al.* (2010) acknowledged the gap between consumer's attitude and actual purchase behaviour. Existed discrepancy between consumer's generally positive attitude towards organic food and their relatively low levels of purchase (Lian *et al.*, 2016). The conceptual framework for this study was developed based on TPB model to explore on the attitude-behaviour gap.

Labelling: A certification label is a label or symbol indicating a product that compliance with standards has been verified. An effective product labelling is a valuable asset because it provides primary source of information to consumers to assist in their decision making process (Xia and Zeng, 2008). Poor organic certification and logos on the product labelling has negatively affected consumer's attitude towards organic food (Henryks *et al.*, 2015; Gerrard *et al.*, 2013). Consumer will not trust and purchase organic products without proper certification on the labelling (Aryal *et al.*, 2009). According to Padel and Foster (2005), certification logos helped consumers to easy identify and recognise organic food products and subsequently contributed to consumer's buying behaviour. The better consumer's recognition on organic certification labelling, the more positive consumer's attitudes and intention to obtain organic products (Chen, 2007, 2009). Kai *et al.* (2013) found that certification and labelling has positively influenced consumer's attitude to pay for organic food.

- H₁: Product labelling with organic certification logo has a positive influence on consumer's attitudes of organic food

Quality: Organic certification logo is an economic signal, representing proof of objective quality because the product has been produced following environmentally friendly requirements. The certification logo provides a

means to communicate the quality assurance of organic food to consumers. However, in the organic food context, it was reported that some consumers were skeptical on the quality standard of organic foods (Byrne, 2001; Chen, 2009). Particularly organic food products without bearing the organic certification logo and consumers were doubtful on whether the products are produced without the use of synthetic fertilizers, pesticides and chemicals. Consumer's perceived quality of organic food products not only based on its taste or visual characteristic but also certification of organic food (Midmore *et al.*, 2005). Certification mark served as a quality benchmark for a product and positively influenced consumer's attitudes to purchase in Malaysia (Hassan and Hamdan, 2013). Consumers were skeptical on the quality standard of organic foods on whether the products are grown without using synthetic fertilizers, pesticides and chemicals (Zhen, 2013; Chen, 2009)

- H₂: Quality of product with organic certification logo has a positive influence on consumer's attitudes of organic food

Communications: Xia and Zeng (2008) found that consumers acquired information about organic food from the green logo attached to the products and television. Media communications played an important role in consumer's knowledge and attitudes towards organic food. Certification mark in an advertisement assists consumers in their purchase decisions for particular products and created positive consumer's attitudes on brand image of the products (Hassan and Hamdan, 2013). Henryks and Pearson (2010) reported that poor marketing communication strategies has created a degree of confusion among consumers and negatively affected consumer's attitudes to purchase organic food:

- H₃: Communication of organic certification logo has a positive influence on consumer's attitudes of organic food

Consumer's attitudes: An attitude is 'a tendency or disposition to respond favourably or unfavourably to an entity'; for example, an event, situation or individual (Eagly and Chaiken, 1993). Lim *et al.* (2014) found positive relationship between consumer's intention to purchase attitude and actual purchase of organic food. Consumers with positive attitude towards organic food based on belief and evaluation leads to purchase organic food because it is considered beneficial for them (Suprpto and Wijaya, 2012). According to Henryks and Pearson (2010)

existed a gap between consumer's generally positive attitude towards organic food and their relatively low level of actual purchases.

Actual purchase: Actual purchase is an important final stage in consumer's process of purchasing a product or service (Ajzen, 1991). Consumer's attitudes had a significant direct effect on actual purchase of organic food in Malaysia (Voon *et al.*, 2011). Henryks and Pearson (2010) found that exist a gap of knowledge in the aspect of consumers generally have positive attitude towards organic food but relatively low level of actual purchases. Therefore, to explore the relationship between consumer's attitude and actual purchase, the following hypothesis will be examined:

- H₄: Consumer's attitude is directly and positively correlated to the purchase of organic food

MATERIALS AND METHODS

Sampling and measurement: This study is based on data collected from a survey of existing organic food consumers in Kuala Lumpur and Selangor, Malaysia. A sample size of 420 was determined and non-probability convenience sampling method was adopted for this study. During May and June 2016, a total of 420 self-administered questionnaires were distributed to the respondents who were consumers present at the selected supermarkets and specialty retail outlets selling organic food products (Aeon, Country Farm Organics and BMS Organic). The survey instrument was designed with 25 items assessed by a 6-point Likert scale: strongly disagree and 6: strongly agree) and demographic variable with 4 items. Statistical Package for Social Sciences (SPSS) version 22 was used to perform descriptive analysis, validity and reliability analysis. Subsequently, SPSS AMOS Version 21 was used to perform the SEM analysis to test the hypotheses.

Validity and reliability assessment: The pilot study comprises the Exploratory Factor Analysis (EFA) to eliminate variables with factor loading <0.3. According to Pallant (2007), the Bartlett's test of sphericity value should be significant at $p < 0.05$ and Kaiser-Meyer-Olkin (KMO) value should be 0.6 or above. In examining EFA using Maximum Likelihood extraction and Promax rotation, it has yielded five dimensions (KMO score of 0.903, Bartlett's test $p = 0.000$ ($p < 0.05$). The factor loading for all the 25 proposed items is above 0.3 and also the Cronbach's alpha values for all constructs were above 0.7. According to Pallant (2007), the Cronbach's alpha values of 0.7 and above are preferable to demonstrate a

Table 1: Reliability test

Variables	Cronbach's alpha	No. of items
Labelling	0.965	7
Quality	0.869	5
Communications	0.918	4
Attitude	0.916	5
Actual purchase	0.889	4

high level of internal consistency in the data. The reliability test results are presented in Table 1. The Cronbach's alpha values were 0.965 (Labelling), 0.869 (Quality), 0.918 (Communications), 0.916 (Attitudes) and 0.889 (Actual purchase). Hence, all constructs were valid and reliable for further inferential analyses.

RESULTS AND DISCUSSION

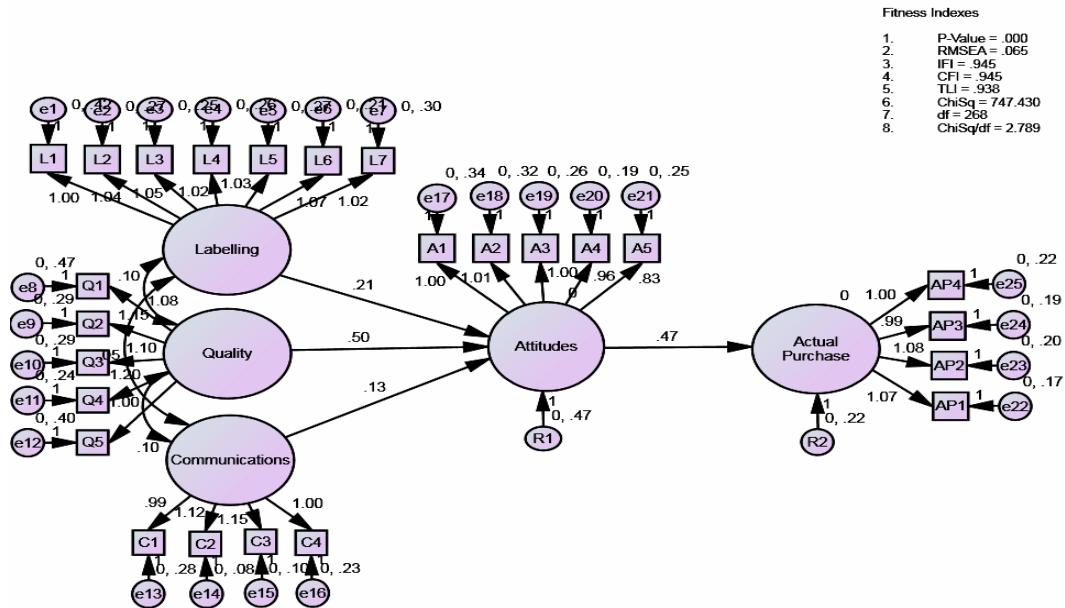
Demographic profile of the respondents: Respondents were 420 existing consumers of organic food and who have purchased organic food at least once in their lifetime. The demographic profile of respondents are presented in Table 2.

Model compatibility testing: Overall, the research model has achieved a good fit. Table 3 shows the results of model compatibility testing using Chi-square, χ^2/df , RMSEA, IFI, CFI and TLI.

The chi-square value was 747.430 and Chi-square probability value greater than 0.05 indicates acceptable model fit (Barrett, 2007). The ratio of χ^2/df was 2.789, lower than the value 3.0 as recommended by Byrne (2001). Incremental fit values were greater than 0.9 with IFI of 0.945, CFI of 0.945 and TLI of 0.938. As for the absolute index, RMSEA of 0.065 which was <0.8 as recommended by Browne and Cudeck (1993). Subsequently, estimated path coefficients were derived for the examined relationships and the research hypotheses were examined.

Model causality testing: The regression weights and probability value which indicates its significance is shown in Table 4 and final structural model is shown in Fig. 1. Labelling (0.205), Quality (0.497) and Communications (0.131) has significant effect on attitudes with significant p-value. Therefore, H₁-H₃ is accepted. Lastly, consumer's attitudes had direct positive effect (0.466) on actual purchase of organic food and shown significant p-value. Hence, it was concluded that H₄ is accepted.

Overall, the results indicated that the certification logos of organic food have contributed to positive consumer's attitudes and purchase of organic food. Although labelling is positively related to attitudes (H₁), the correlation coefficient value still considered as weak according to 'Guilford Rule of Thumb' with r value of below 0.4 (Guilford, 1956). Hence, it is suggested that



Fitness Indexes

1.	P-Value = .000
2.	RMSEA = .065
3.	IFI = .945
4.	CFI = .945
5.	TLI = .938
6.	ChiSq = 747.430
7.	df = 268
8.	ChiSq/df = 2.789

Fig. 1: Final structural model

Table 2: Respondent’s demographic profile

Demographic variables	Frequency (n)	Percentage (%)
Gender		
Male	140	33.0
Female	280	67.0
Age		
18-20	35	8.3
21-38	107	25.5
39-49	205	48.8
≥50	73	17.4
Income		
<RM1500	2	0.5
RM1500-RM3000	60	14.3
RM3000-RM6000	130	30.9
RM6000-RM10000	158	37.6
>RM10000	70	16.7
Proportion of organic food consumption from the total food diet (%)		
0-25	2	0.5
26-50	305	72.6
51-75	103	24.5
76-100	10	2.4

Table 3: Goodness of fit

Index	Level of acceptance	Results	Model evaluation
Chi-square	p>0.05	747.430	Good
χ^2/df	$\chi^2/df < 3.0$	2.789	Good
RMSEA	RMSEA < 0.08	0.065	Good
IFI	IFI > 0.9	0.945	Good
CFI	CFI > 0.9	0.945	Good
TLI	TLI > 0.9	0.938	Good

Table 4: Regression weights and the probability value which indicates its significance

Paths	Estimate	SE	CR	p-value	Results
Attitudes<---Labelling	0.205	0.038	5.439	***	Supported
Attitudes<---Quality	0.497	0.073	6.809	***	Supported
Attitudes<---Communications	0.131	0.058	2.247	0.025	Supported
Actual Purchase<---Attitudes	0.466	0.041	11.435	***	Supported

manufacturers or retailers should emphasize on placing reliable certification logos on the labelling of organic food products to increase consumer’s trust and attitude to purchase. Furthermore, a standard and mandatory Asian organic certification logo should be introduced in the Asian market to increase trade and proliferation of the common Asian organic standards, certification, enforcement and labelling. For example, the introduction of the mandatory European (EU) organic logo since 2010 has enhanced consumer’s awareness, knowledge and trust of organic food in the market (Janssen and Hamm, 2012). The standard certification logo is important to

enable organic food products much more easier to be identified by the consumers and increased consumer’s trust in consumption of organic food.

Quality has recorded the highest correlation coefficient value with consumer’s attitude and the results have supported the previous study by Hassan and Hamdan (2013). Consumers believed that a certain organic food products with organic certification logo have quality standard and were organically produced, safe and can be consumed with the highest level of confidence. Product quality should be enhanced through more reliable certification logo mark by building good image on organic food to increase consumer’s perceived value of the organic food and build positive attitude to purchase. These strategies will help convert those who are infrequent organic purchasers and skeptical of the perceived values of organic food to regular purchasers.

Communications was significantly related to attitudes (H_3) but the correlation coefficient value was weak at 0.131. It can be concluded that communications strategies were not intensively carried out to the public by explaining the meaning of the certification and what the logo indicates. Advertisements, events and promotions focusing on organic certification logo should be implemented to create the awareness towards the quality marks. Collaboration between the government, retailers and Non-Government Organisations (NGOs) in roadshow events to promote organic food certification logo is important. Effective communications will enhance consumer's trust which reflect the mark for the quality assurance of the organic food products.

CONCLUSION

This study is confined to the elements of organic certification logos, attitudes and purchase of organic food. Future studies should explore on other influencing factors such as marketing stimuli factors, lifestyle, demographic and cultural factors in influencing consumer's attitudes to purchase organic food.

REFERENCES

- Ajzen, I., 1991. The theory of planned behavior. *Organiz. Behav. Hum. Decis. Process.*, 50: 179-211.
- Aryal, K.P., P. Chaudhary, S. Pandit and G. Sharma, 2009. Consumers willingness to pay for organic products: A case from Kathmandu Valley. *J. Agric. Environ.*, 10: 15-26.
- Barrett, P., 2007. Structural equation modelling: Adjudging model fit. *Pers. Individual Differences*, 42: 815-824.
- Botonaki, A., K. Polymeros, E. Tsakiridou and K. Mattas, 2006. The role of food quality certification on consumers' food choices. *Br. Food J.*, 108: 77-90.
- Browne, M.W. and R. Cudeck, 1993. Alternative Ways of Assessing Model Fit. In: *Testing Structural Equation Models*, Bollen, K.A. and J.S. Long (Eds.). SAGE Publication, Newbury Park, USA., ISBN-13: 9780803945074, pp: 136-162.
- Byrne, B.M., 2001. *Structural Equation Modeling with AMOS: Basic Concepts, Application and Programming*. 1st Edn., Lawrence Erlbaum Associates, Mahwah, New Jersey, USA., ISBN-13: 9780805841046, Pages: 352.
- Carrington, M.J., B.A. Neville and G.J. Whitwell, 2010. Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. *J. Bus. Ethics*, 97: 139-158.
- Chen, M.F., 2007. Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits. *Food Qual. Prefer.*, 18: 1008-1021.
- Chen, M.F., 2009. Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes and the mediating effects of a healthy lifestyle. *Br. Food J.*, 111: 165-178.
- Eagly, A.H. and S. Chaiken, 1993. *The Psychology of Attitudes*. Harcourt Brace Jovanovich College Publishers, Belmont, USA., ISBN, 13: 9780155000971 pp: 794.
- Gerrard, C., M. Janssen, L. Smith, U. Hamm and S. Padel, 2013. UK consumer reactions to organic certification logos. *Br. Food J.*, 115: 727-742.
- Guilford, J.P., 1956. *Fundamental Statistics in Psychology and Education*. McGraw-Hill Education, New York, USA.,
- Hassan, S.H. and H. Hamdan, 2013. Experience of non-muslim consumers on halal as third party certification mark in Malaysia. *Asian Soc. Sci.*, 9: 263-271.
- Henryks, J. and D. Pearson, 2010. Marketing communications create confusion: Perception versus reality for Australian organic food consumers. *Proceedings of the Australian and New Zealand Communications Association Conference on Media Democracy and Change*, July, 7-9 2010, Victoria University of Technology, Melbourne, Australia, pp: 7-9.
- Henryks, J., D. Pearson, T. Anisimova and P. Sultan, 2015. Are organic food labels inadequate? Evidence from consumers in Australia. *Bus. Manage. Stud.*, 1: 45-54.
- IFOAM, 2015. *The World of Organic Agricultural: Statistic and Emerging Trend 2015*. IFOAM, Switzerland, Europe, ISBN:9783944372112, Pages: 301.
- Intan, W.S., 2016. The analysis factors of experiential marketing, product quality and customer satisfaction of motor bike as a main transportation mode in Bandung-Indonesia. *Int. J. Bus. Administrative Stud.*, 2: 6-8.
- Janssen, M. and U. Hamm, 2012. The mandatory EU logo for organic food: Consumer perceptions. *Br. Food J.*, 114: 335-353.
- Kai, S.B., O.B. Chen, C.S. Chuan, L.C. Seong and L.L.T. Kevin, 2013. Determinants of willingness to pay for organic products. *Middle East J. Sci. Res.*, 14: 1171-1179.
- Krisnawati, N., L.K. Perangin-angin, M. Zainal and I. Suardi, 2016. Brand equity analysis and its impact on the loyal customer of local batik to develop its competitiveness (An empirical study of Batik Banten in South Tangerang). *J. Admin. Bus. Stud.*, 2: 189-207.

- Lian, S.B., M. Safari and S. Mansori, 2016. The marketing stimuli factors influencing consumers attitudes to purchase organic food. *Int. J. Bus. Manage.*, 11: 109-119.
- Lim, W.M., J.L.S. Yong and K. Suryadi, 2014. Consumers perceived value and willingness to purchase organic food. *J. Global Marketing*, 27: 298-307.
- Midmore, P., S. Naspetti, A.M. Sherwood, D. Vairo and M. Wier *et al.*, 2005. Consumer attitudes to quality and safety of organic and low input foods: A review. *Qual. Low Input Food*, 1: 1-63.
- Padel, S. and C. Foster, 2005. Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *Br. Food J.*, 107: 606-625.
- Pallant, J., 2007. *SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows (Version 15)*. 3rd Edn., McGraw-Hill, UK., ISBN: 978-0335223664, Pages: 352.
- Suprpto, B. and T. Wijaya, 2012. Intentions of indonesian consumers on buying organic food. *Int. J. Trade Econ. Finance*, 3: 114-119.
- Voon, J.P., K.S. Ngui and A. Agrawal, 2011. Determinants of willingness to purchase organic food: An exploratory study using structural equation modeling. *Int. Food Agribusiness Manage. Rev.*, 14: 103-120.
- Xia, W. and Y. Zeng, 2008. Consumers willingness to pay for organic food in the perspective of meta-analysis. *Proceedings of the International Conference on Applied Economics (ICOAE)*, May, 15-17 2008, Technological Educational Institute of Western Macedonia, Kozani, Greece, pp: 933-943.
- Zhen, M., 2013. Organic food still not taken seriously despite sectors strong potential. *Business Circle*, Malaysia.