

## Customer-expected Quality in Organic Products: Evidence from Sarawak

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### ABSTRACT

This paper aims to present the customer-expected quality attributes and examine the relationships among product quality, customer satisfaction, and customer loyalty. In addition, the possible influences of customers' demographics on the quality expectation were also investigated to provide insights for effective market segmentation and targeting. The survey data obtained from the customers were quantitatively analysed and the exploratory factor analysis suggested four key quality expectations, namely authenticity, price, nutritional, and emotional values. All these dimensions are significantly and positively associated with the customer satisfaction and loyalty, with nutritional value being the most important dimension followed by the relative price. The findings also indicate that there are significant attitudinal differences among the customers whose levels of green knowledge are different.

**Keywords:** Customer-expected quality, product quality, customer satisfaction, organic products

### INTRODUCTION

There has been an increasing consumer demand for agricultural produce obtained by means of processes which have less impact on the environment, especially for organic produce. The trading of organic agriculture products in the world increases by 20-30 per cent every year (Reyer-Cantos, 2008). In fact, environmental and health protections have been emphasized since the 1960s and 1980s in USA and Europe, respectively (Klonsky and Tourte, 1998; Greenan *et al.*, 1997), and these have led to the rise and advancement of green marketing. The increasing consumers' concern over the quality of organic product and the protection of the environment are among the key factors stimulating the

demand and marketing of these products (e.g. Tsakiridou *et al.*, 2008).

Though organic product is one of the fastest growing areas of the food market in Europe, Northern America, Australia and Japan (Makatouni, 2002), as well as other advanced and emerging economies, the market potential for organic products in Sarawak is still at the introduction stage. Consumers need more knowledge and exposure. It is undeniable that consumers have become more concerned about the nutrition, health, and quality of the food they eat (e.g. Tsakiridou *et al.*, 2008). As such, there are more and more organic products retailers found in the major cities and towns in Sarawak such as Kuching. For instance, a few modern

organic product stores are found just in the BDC area (very near to Kuching International Airport). The retailers and marketing managers have acknowledged the fact that there is increasing number of health conscious consumers and their requirements need to be met or exceeded for their maximum loyalty and profitability. As such, the customers' expectations and attitudes towards organic products need to be understood and managed accordingly. Their impacts on purchasing behaviours should be investigated for achieving and sustaining organic marketing excellence. It is the aims of this paper aims to present the quality attributes of organic products from the customer's perspective and their probable effects on their customer and behavioural intentions/loyalty.

### **CUSTOMER ATTITUDES AND ORGANIC PRODUCT MARKETING**

Consumer attitudes include both the opinions and feelings that the consumers usually have towards something. These include perceptions, expectations, and interests. Their attitudes may differ across different products, including the organic product categories (Tsakiridou *et al.*, 2008).

Consumer interest in organically grown vegetables has increased rapidly in the recent years due largely to the concerns they have on food safety, health, and the environment. It is important that organic products are perceived as food without the use of chemicals or growth hormones, and are grown or produced naturally. Besides, marketers should know the contributing factors in order to maintain the high market share of organic products. It is also necessary to analyze the consumers' beliefs and values which are related to increased consumer demand for organic products. Notably, price and availability are considered as barriers on the pattern of purchasing behaviour and consumption (e.g. Lockie *et al.*, 2002).

In food service industry, personal values are among the potential factors influencing food choices and service expectation (Kueh

and Voon, 2007), and organic products may not be an exception. These influence attitude formation, cognition, and behaviours of the people through the mediation of beliefs and attitudes (e.g. Feather, 1982). There are also some potential socio-demographic differences in the belief and consumption behaviour towards organic products (Lockie *et al.*, 2002; Lea and Worsley, 2005). Research shows that organic food consumers tend to be more highly educated and are younger (Jolly, 1991) than non-organic consumers. On the other hand, organic product purchases are mainly attributed to consumers' concerns towards the environment and the quality of food they consume. Thus, the willingness to pay for organic products is one of the factors that influence customers to purchase these products. There are also consumers who are willing to pay for environmental friendliness, quality, and safety in food production. Therefore, price may be secondary to them.

### **THEORETICAL FRAMEWORK**

In view of the attitudinal nature of customer-defined quality, it was hypothesized that there are numerous dimensions of quality expectations for organic products from the customers' perspective. The theoretical framework (*Fig. 1*) illustrates that quality expectations consist of Authenticity, Price, Nutritional, and Inner/Emotional. The related marketing literature and organic product research indicate that what the customers are mostly concerned with the originality and authenticity of the products (i.e. whether they are indeed organic in nature). Besides, customers would like to get good value for the money they spend on organic products which are nutritional as well (e.g. Tsakiridou *et al.*, 2008). Price plays an important role as a quality proxy (Cicia *et al.*, 2002). Organic products are also expected to provide them with emotional value such as assuring them stress relief. The customers' knowledge on environment was hypothesized to influence the quality-satisfaction/loyalty relationships, respectively.

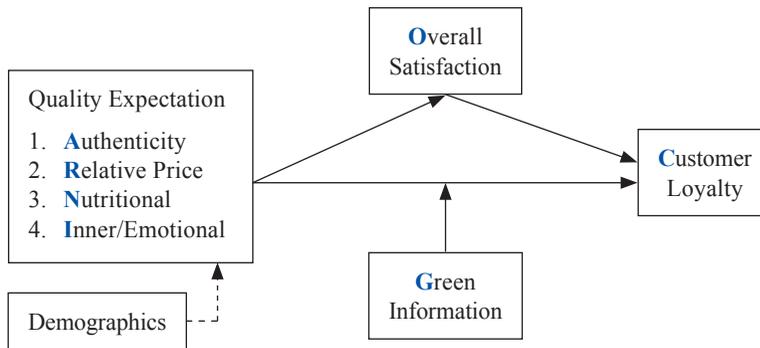


Fig. 1: Theoretical framework for the ORGANIC Model

**METHODOLOGY**

This paper presents the findings from an exploratory survey research carried out in Kuching, Sarawak. The questionnaire survey was carried out to understand the quality expectation towards organic products and its relationships with customers’ satisfaction and loyalty. The customers are believed to be the most qualified and informed ‘judges’ for the quality of organic products. Related marketing theories and research literature were referred to in order to understand the marketing and measurement of organic products. More than 20 statements were used to measure the users’ expectation of organic products (e.g. Fotopoulos and Krystallis, 2002). For this reason, the questionnaire was carefully designed and the items were measured using 5-point Likert scale (1=Strongly Disagree and 5=Strongly Agree). Meanwhile, the customers’ information on environmental issues (hereby named Green Information) was measured using six items which are mainly related to pollution. The overall satisfaction was a single-item measure, whereas customers’ loyalty comprised of five items (Table 1).

The data collection was done after the duly designed questionnaire was validated and pre-tested. A total of 300 structured questionnaires were distributed to the customers who had knowledge about and experience with organic products. They were also students from other parts of Sarawak. Quota sampling was used with the demographic factors as the controlled

characteristics (i.e. gender, age, and residence). Though the personal-contact data collection method yielded a 100% response rate after the questionnaire checking process, only 263 questionnaires were found to be usable for the analysis. The respondents who participated in the survey (Table 3) were mainly female customers (i.e. 71%) and most of them (55%) were young adults (21 years old or below). About 75% of them were degree holders and 66% had a monthly family income of RM2,000 or less. Almost half of the respondents were staying in the urban area.

**FINDINGS AND DISCUSSION**

As shown Table 1, the results of the exploratory factor analysis (using principal component analysis with varimax rotation) show that the quality expectation measure consists of four dimensions, namely Authenticity, Price, Nutritional, and Emotional. The four factors (each with Eigenvalue more than 1) explain 70.1% of the total variance. The Kaiser-Meyer-Olkin Measure stood at 0.901, indicating a good sampling adequacy. The results from the reliability analysis indicate that all the variables were reliable measures, with satisfactory levels of internal consistency. The Cronbach’s Alpha coefficients met the mandatory level of 0.70 (Nunnally and Bernstein, 1994). The corrected item-total correlations for the items within the dimensions also portray a good internal consistency (i.e. higher than 0.40).

TABLE 1  
Quality expectations, green information, satisfaction, and loyalty

Dimensions and Items		Alpha (Mean)	Item-to-Total correlation	Factor Loadings	Mean	Std. Deviation
Authenticity	1. Production method		0.558	0.643	4.03	0.875
	2. Taste		0.491	0.532	4.14	0.958
	3. Freshness	0.85	0.710	0.742	4.46	0.872
	4. Healthiness	(4.32)	0.771	0.800	4.57	0.816
	5. Naturalness		0.796	0.826	4.52	0.795
	6. Environmental		0.571	0.705	4.20	0.944
Price	7. Not expensive		0.660	0.835	3.93	1.014
	8. Relatively cheaper	0.82	0.681	0.861	3.88	1.040
	9. Value for money	(3.95)	0.639	0.692	3.99	0.955
	10. Relatively better price		0.592	0.605	4.02	0.897
Nutritional	11. Rich in vitamin		0.858	0.795	4.52	0.800
	12. Rich in protein	0.93	0.845	0.808	4.44	0.822
	13. Rich in fibre	(4.45)	0.803	0.762	4.36	0.858
	14. Overall nutritional value		0.819	0.717	4.46	0.794
Emotional	15. Help to control stress		0.695	0.706	4.26	1.001
	16. Help in my day		0.770	0.761	4.18	0.987
	17. Help me to relax	0.90	0.847	0.818	4.18	0.986
	18. Keep me awake	(4.11)	0.720	0.833	3.95	1.073
	19. Make me feel good		0.736	0.813	3.96	1.091
	Overall	0.92			4.21	
Green information	About acid rain problem		0.658	NA	3.40	0.959
	About water pollution		0.720	NA	3.52	0.956
	About ozone problem	0.89	0.756	NA	3.42	1.015
	About nuclear wastes	(3.46)	0.788	NA	3.27	1.019
	About world over-population		0.723	NA	3.36	0.986
	About world pollution		0.568	NA	3.73	0.964
Overall satisfaction	Overall satisfaction on the organic products	NA	NA	NA	3.58	0.878
Customer loyalty	Usually purchase		0.616	NA	3.43	0.970
	Usually spend		0.655	NA	3.27	0.972
	Will spend more	0.80	0.630	NA	3.23	0.904
	Like to be customer again	(3.45)	0.492	NA	3.65	0.868
	Will recommend to others		0.543	NA	3.66	0.931

Besides, the validity of measure was also assessed. The correlation coefficients (Table 2) were found to range from 0.42 to 0.66, indicating that they were not highly correlated. Hence, there was discriminant validity among the four dimensions. On the other hand, the dimensions were moderately or strongly correlated with the overall quality (0.74 to 0.85) which was

evidenced as a convergent validity of the measure. Meanwhile, the correlations with the overall satisfaction ranged from 0.24 to 0.32, whereas customer loyalty ranged from 0.19 to 0.24. All the associations were found to be significant at 0.01 level.

The results indicated that customers were expecting the organic products to be authentic,

TABLE 2  
Correlations among quality expectation dimensions and variables

Dimensions/Variables		Authenticity	Price	Nutritional	Emotional	Quality	Satisfaction
Price	Correlation	0.42*					
Nutritional	Correlation	0.66*	0.45*				
Emotional	Correlation	0.42*	0.44*	0.60*			
Quality	Correlation	0.77*	0.74*	0.85*	0.80*		
Satisfaction	Correlation	0.24*	0.24*	0.30*	0.24*	0.32*	
Loyalty	Correlation	0.19*	0.21*	0.24*	0.19*	0.26*	0.62*

\* Correlation is significant at 0.01 level (2-tailed)

typically on the healthiness, naturalness, and freshness. This suggests that customers have to be consistently assured of the authenticity of organic products and the certification of authenticity is definitely necessary for effective marketing of organic products. Nevertheless, farmers are still facing certification challenges (Ong and Jumat, 2008). Thus, their awareness on the importance of certification needs to be enhanced. Besides, all organic products should

be nutritional (e.g. rich in vitamins) in order to attract buyers.

The findings also indicate that the average expectations on price and emotional value are relatively lower (Table 3). On the contrary, the analysis of mean difference indicated that most of the customer demographic information (i.e. gender, age, and income) generally did not exert any significant influence on their quality expectations of organic products. However,

TABLE 3  
Respondents' demographic variables and difference in quality expectations

Demographic Variables	N	%	Mean	Sig.	Difference
Gender					
Male	76	29	4.14	0.26	No
Female	187	71	4.23		
Age (Years)					
≤18	45	17	4.15	0.48	No
19-21	100	38	4.17		
>21	118	45	4.26		
Education					
SPM	29	11	4.23	0.10	No
Diploma	37	14	4.13		
Degree and above	197	75	4.30		
Monthly family income (RM)					
≤2000	173	66	4.19	0.82	No
2001-3000	43	16	4.24		
>3000	47	18	4.24		
Residence					
Rural	72	27	4.12	0.04	Yes
Suburbs	74	28	4.36		
Urban	117	45	4.11		

place of residence (at  $\alpha=0.05$  level) and education (at  $\alpha=0.10$  level) might have influence on their expectations. These are in line with Tsakiridou *et al.* (2008) who also found that educational level had influence on the customers' attitude towards organic products.

Multiple regression analysis was used to explore the relative importance of the quality dimensions (using the standardized beta coefficient values) in determining the customers' satisfaction and loyalty, respectively. Thus, VIF values were used to check the existence of collinearity. The VIF values were found to range from 1.375 to 2.310, indicating that there was no collinearity problem among the independent variables. The results shown in Table 4 indicate that the customer-perceived nutritional value and price (value for money) were among the potentially important determinants which influenced their satisfaction and loyalty to organic products. This is similar to the findings by Tsakiridou *et al.* (2008) also found that health and pricing issues were among the key concerns for the customers. Nevertheless, the nutritional dimension was found to be the most important (with the ranking of 1) in this study, and this was followed by price.

The influence of customers' knowledge on environmental issues (green knowledge) and thus on the quality expectations, customer satisfaction, and loyalty were also explored. The customers were categorized into two groups, namely with low and high levels of green knowledge. The results (Table 5) indicate

that there are significant attitudinal differences among those customers.

The results suggest that the participating customers with higher level of green knowledge tend to have relatively higher expectations of quality. This was also found to be true across the four dimensions of quality expectations (except for price which was significant only at 0.10 level), satisfaction, and loyalty. This implies that the provision of environmental information and promotion via appropriate green marketing strategies is necessary.

Regression models were done to carry out further investigation so as to explore the influence of customers' knowledge of environmental issues on the quality-satisfaction and quality-loyalty relationships. The findings indicate that their green knowledge positively moderates (slightly) the relationship between the customer-perceived quality expectations and their loyalty. On the contrary, the green knowledge negatively moderates (slightly) the relationship between the customer-perceived quality expectations and customer satisfaction.

### CONCLUSION AND FUTURE RESEARCH

This survey-based exploratory study found that the probable quality dimensions of the organic products as expected by the customers include authenticity, price, nutritional, and emotional values. All these dimensions were found to be significantly and positively associated with the

TABLE 4  
Relative importance of quality attributes in determining customers' satisfaction and loyalty

Dimensions	Customer Satisfaction			Customer Loyalty		
	Standardized Coefficients	VIF	Rank	Standardized Coefficients	VIF	Rank
Authenticity	0.04	1.835	4	0.03	1.835	3
Price	0.12*	1.375	2	0.11	1.375	2
Nutritional	0.18**	2.310	1	0.14	2.310	1
Emotional	0.06	1.640	3	0.05	1.640	4

\* Significant at  $\alpha = 0.10$ , \*\* Significant at  $\alpha = 0.05$

TABLE 5  
Attitudinal differences according to the levels of green knowledge

	Green Knowledge	Mean	Std. Deviation	Sig.	Outcome
Quality	Low	4.13	0.622	0.000	Supported
	High	4.44	0.490		
i. Authenticity	Low	4.25	0.702	0.003	Supported
	High	4.52	0.528		
ii. Price	Low	3.90	0.781	0.053*	Supported
	High	4.11	0.793		
iii. Nutritional	Low	4.36	0.785	0.002	Supported
	High	4.68	0.559		
iv. Emotional	Low	3.98	0.857	0.000	Supported
	High	4.45	0.813		
Satisfaction	Low	3.45	0.839	0.000	Supported
	High	3.92	0.894		
Loyalty	Low	3.32	0.633	0.000	Supported
	High	3.78	0.741		

\* Significant at  $\alpha = 0.10$

customers' satisfaction and loyalty. However, the expected nutritional value of the organic product was among the most important dimensions in influencing customers' satisfaction and loyalty, followed by the relative price. The findings also suggested that customers' satisfaction was positively and significantly associated with customers' loyalty. Meanwhile, the customers' knowledge of environmental issues was found to have significant influences on their quality expectations, as well as satisfaction and loyalty on organic products.

On the contrary, the expected quality-satisfaction, and loyalty relationships were found to be relatively weak compared to the findings from other studies on perceptions and customers' experience. Hence, empirical investigations on perceived quality of organic products and its impacts on behavioural intentions are useful for effective marketing of organic products and customer relationship management. The role of retailing service quality in affecting the customer-perceived quality, customer satisfaction and loyalty should also be examined for more holistic organic product marketing. The focus of this exploratory investigation

was mainly on the Generation Y, as the young customers could be the potential target market in the future. However, the inclusion of adults and more elderly customer samples in future would probably provide a more representative perspective of customer-defined qualities for organic products. Besides, with the more comprehensive measure of quality, conclusive causal relationships could therefore be obtained and applied.

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