A Study of Consumers' Perception of Risk on Organic Tea in Taiwan

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Abstract

Because the impact of Taiwan jointing WTO and Taiwanese initiative of health, nature and no burden of life principle, so as to spur Taiwan to start promoting new tide of drinking organic tea. However, the needs of the information concerning with risk perception for organic tea consumer are more curious, thus the organic tea industry should know what the demands and concerns of their consumers. Hence, the purposes of this paper are to analyze what the concerns for organic tea consumers are and what the risk perceptions for the organic tea consumers are. The data used by this paper were from the sampling survey to interview 387 consumers located in middle Taiwan. This paper adopted AIO (Activity, Interest, and Opinion) to analyze the characteristics of consumers and then use the theory of risk perception to identify its risk perception. As the results, this paper gets three segments of perception risk, i.e., financial risk oriented, physical risk oriented, and performance risk oriented. Final, this paper suggests organic tea sellers could build a construction of organic tea that includes the production and pack product to the sale process.

Keywords: *Perception of risk, Cluster Analysis, Organic tea*

Introduction

Tea is a valuable country drink in Taiwan. It had discovered nearly thousand of years and it has a necessary important position in Taiwanese daily drink. However, because of revolution of industry which affecting the environmental pollution directly/ indirectly with tea growth so the ill tea is through the food channel into the human body. The ill tea affects many negative effects to human, thus Germany and Swiss provided the concept of organic agriculture for producing organic food in 1920, and both countries (Germany and Swiss) produce the organic tea via organic concept in 1983. Because of the life quality of people is raised, most of people are hoped to have pure nature, nonpolluting, high quality food wildly, the organic tea is become a focus to the tea enthusiast.

Nowadays, it have 115 countries are adopted organic food positively in the world. In addition, the organic tea was providing from Britain, India, Tasmania, Japan, and China one another in 1989 (Shih, 2001). The organic tea is popular in the developed countries that per capita of income is higher than the those of developing countries, but it does not start in Taiwan.

Based on the impacts of Taiwan joining WTO, thus Taiwan is to promote organic tea positively and the Taiwanese are initiated to health, nature, and no burden of life principle at the same time. Therefore, the organic tea is taking the new phenomenon at recently in Taiwan. Taiwan

has four issued certifications of organic tea, including Tse-Xin Organic Agricultural Foundation (TOAF), Taiwan Organic Production Association (TOPA), Mai-Ui Organic Association (MOA), and Taiwan Formosa Organic Association (FOA). According to Taiwan Organic Agriculture Information Centers' statistic, there have 75 hectares of organic tea grown in Taiwan and only 100 organic tea farmers.

Hence, there are few of organic tea plants and farmers but it has a lot of organic tea drinker, so some of unworthy businessmen caught that point to sale "malicious

However, the needs of the information concerning with risk perception for organic tea consumer are more curious, thus the organic tea industry should know what the demands and concerns of their consumers.

Hence, the purposes of this paper are to analyze what the concerns for organic tea consumers are and what the risk perceptions for the organic tea consumers are. Therefore, this paper adopted AIO (Activity, Interest, and Opinion) to analyze the characteristics of consumers and then use the theory of risk perception to identify its risk perception. Because most of organic tea plants are set up in middle Taiwan, thus the data survey offered by the consumers who living in middle Taiwan.

The 400 samples were sampling by randomly without adjustment, only 388 samples used in this paper. Finally, this paper will give some policy implications drawn from the empirical results for the organic tea industry to improve its decision of promoting organic tea.

Conceptual Framework

Perception of risk is recognized as a fundamental concept in consumer behavior. Bauer (1967) suggested that consumer behavior involves risk in the sense that any action of a consumer will produce consequences that he cannot anticipate with anything approximating certainty, and some of which are likely to be unpleasant. Jacoby and Kaplan (1972) discussed six risk dimensions that include financial, performance, psychological, physical, social, and time risk in the overall perception of risk structure. Financial risk, the product purchased will not attain the best possible monetary gain for the consumer. The performance risk means the product function is not complete aspiration of consumers' demands. The psychological risk is mentioned about the risk that the selection or performance of the product will have a negative effect on the consumers' safety of mind or self-perception. The physical risk means that product will affect healthy issues to the consumer. The social risk is that the selection of the product will affect the other of individual perception to the consumer in the negative way. For last, the time risk that the consumer will waste time and lose convenience or waste effort to getting a product redone (Garner, 1986).

According to above, this paper adopts Jacoby's six risk facts as a conception of perception of risk via lifestyle approach to identify the

The lifestyle is a systematic conception (Lazer, 1963), which mainly uses segment markets/ society into different market groups or society groups. Lifestyle is to affect consumer needs and attitudes; moreover, it is to affect consumer purchase and behavior. Consumers expect that the lifestyle is to give rise to have many of purchase decisions and then change or improve their lifestyle, thus consumers usually adopt lifestyle as a factor of purchase process. This paper adopts the AIO scale, provided by Well & Tigert (1971). The AIO scale has three structures including activity, interest, and opinion. The activity is a particular action such as

watch TV, shopping etc.; the interest means that consumer has a special or continuing attention on some things or subjects, the opinion is consumers' express of stimulate of environment and it can use to explain expect and evaluate of consumers.

Background on the organic tea industry in Taiwan

As mentioned above, there is a phenomenon of seeking health, nature and environmental protection in Taiwan at recently, thus it is taking a serious issue on organic tea market. Because the impact of Taiwan jointing WTO and Taiwanese initiative of health, nature and no burden of life principle three years ago, so as to spur Taiwan to start promoting new tide of drinking organic tea.

Taiwan started to promote the organic agriculture in 1995. The Agricultural Improvement Station (AIS) selected some of particular framers to deal with organic cultivation, taught the farmers to demonstrate how to farm the organic crops, inspect and learn from each other work, and form a product sale team.

At beginning, organic tea plant only had 5 hectares to tally in 1996. However, AIS transfers the certification system to the nongovernmental groups and they are devoted to the organic tea improvement. So far, there are 76 hectares for organic tea grown in 2004, as shown in Table1. Although, the hectares grown cannot compare with other countries, but Taiwan is still working on it.

Table 1. The planted scales of organic tea in Taiwan   unit: hectare

Years	1996	1997	1998	1999	2000	2001	2002	2003	2004
scale	5	16	22	22	37	56	55	63	76

Data source: Organic Agriculture Information Center

Because Taiwanese paid more attention to the recreation, the organic tea farm also provides consumers visit of organism. In addition, it not only can promote the advantages of organic tea but also increase the income of organic tea farm. There are two kinds of organic tea farm. One is the city side-organic tea farm, usually adopted to corporate with other travel agents to design the touring route farm or feed up some corporate relationships with school and community college to hold a 2 hours of organic course. Another is near the countryside-organic tea plant, it provide two days visit and special local meal. In addition, both of city side and countryside are to provide the professional tour guide for explaining the production of organic tea for consumers and to arrange the experiences of making organic tea process then, test the flash organic tea sample so as to establish the concept of organic tea for consumers.

However, the organic tea development was emphasized on the technology in the beginning, so it did not build a based information of sale and production. It causes the information opacification and asymmetry on production and sale of organic tea, which means the producer did not know where the market is and channel supplier or consumers don't know where the real organic producers are.

In addition, when the seller will full information would take it as superiority to sale the low quality product to another who is short of information to obtain high profits. However, the consumers difficult to realize the quality of product, they will consider the lower price to buy

the organic tea and it leads price reduction in the market. When market price is cutting down, because the production cost of high quality organic tea is higher than those cost of low quality organic tea, but consumer would rather pay the low price to buy the organic tea, thus high quality products are withdrawed from the market.

The organic tea industry is still on developing stage in Taiwan. The organic agricultural standard is only the administration stipulation; it cannot punish illegal businessmen directly. Thus, some of unworthy businessmen selling fake organic tea is always happened and reduces consumer confidences on organic tea.

Empirical method

The characteristics of the consumers describe as follow. The sample size is 387 but the percentage that consumers had bought organic tea is 13.7%. The percentages of the male and female consumers are 29.72% and 70.03%. Otherwise, the percentages of the male and female consumers that had bought organic tea are 4.65% and 9.04%. For the marriage status, the percentages of the married and unmarried are 57.36% and 41.09%. In the consumers who had bought organic tea, the percentages of married and unmarried are 9.56% and 3.88%. In the age status, the consumers had bought organic tea is most group in age 41 to 50 is 4.39%. In addition, in the income status is most grouping in 50 grand to 60 grand is 4.39%. Moreover, they mostly are demobilized soldier, public employment and teacher that the percentage in the total is 5.43%.

The paper would use SPSS statistic computer package to analyze the segments of customers via AIO scale to identify the factors affecting the perception of risk. As the results of segments of customers, KMO (Kaiser-Meyer-Olkin) is 0.892, if the KMO value is increasing, then the common factors would be more, which would be better to analyze via using factor analysis. Based on the sampled data, KMO>0.8 is good. Bartlett test is used to see if the coefficient of correlation is fitted. χ^2 value is 3728.737, and the P value is 0.000. The covariance is existed from the value.

The Principle Component Method is the analysis tool used by this paper. In addition, Orthogonal Rotation is used by Varimax to calculate factor weight to get the Eigen-values been greater than 1. Thus, the results of covariance are divided into 5 factors. Each factor is named as follows.

1. Factor 1
It contains some factors, which are I usually require high quality product, attitude from service, convenient of shopping place, willing to pay more price to get high quality product, atmosphere of store, and pay attention to the recreation. From the previous reasons, the factor 1 is named as "High Quality Oriented".
2. Factor 2
It contains some factors that I like joint some club, I have habits, emphasize on health care, and like social activities. As this reason, the factor 2 is named as "Social Recreation Oriented".

3. Factor 3

It contains some factors which are ask someone's'

4. Factor 4

This factor contains the variables of getting information in newspaper, like pay attention to the information of new products, and like pay cash. As those reasons, the factor 4 would be named as "Information Seeker Oriented

5. Factor 5

This factor contains the variables of I think organic food is trend of future, brand is protection, and healthy food is very important to the daily meal. Because there are two of health variable, thus the factor 5 would name "Healthy Oriented

Empirical results

The follows is use five factors to describe the multivariate covariance analysis and use the variable of perception of risk to discuss the differences between consumers segmentation and consumers' perception of risk.

This paper would use the K-Means Cluster to group the different samples. The second step is to input the group numbers and then do the K-Means of the non-hierarchical analysis to get different groups.

In the four groups, Table 2, the group 2 has167 people, which contain the sample numbers the most, 43.04% in total samples, the second group is the group 1, 26.03% in total, and the fewest sample numbers is the group 3, 10.57% in total.

Table 2. Results of the Market Segmentation by Sample Size

Groups	Group1	Group2	Group3	Group4	Total
Sample Size	101	167	41	79	388
Percentage	26.03	43.04	10.57	20.36	100

Table 3. Individual Test and Scheffe's Post-Comparison

Average	Financial Oriented	Physical Oriented	Performance Oriented	Financial Oriented
Group 1	4.3861	4.2277	4.000	4.3861
Group 2	4.1988	4.2096	3.9581	4.1988
Group 3	3.4146	3.4146	3.5854	3.4146
Group 4	4.2025	4.1899	3.9494	4.2025
F Value	13.745*	10.661[*]	10.915[*]	13.745*
Scheffe's Post-comparison	1>4	1>2	1>2	1>4
	4>2	2>4	2>4	4>2
	2>3	4>3	4>3	2>3
	1>4>2>3	1>2>4>3	1>2>4>3	1>4>2>3

The Results of Market Segmentation

To name the different segmentations, this paper not only used the highest average in factors but also applied Scheffe

Segmentation 1

The segmentation 1 is to focus on the Healthy Oriented, which is the highest factor in this segment. Therefore, the consumer in segmentation 1 is advocated on conception of nature, pure, and healthy. Then, the segmentation 1 viewing from the perception of risk is to focus on financial risk that means the consumers are feared to spend a lot of price but to get low quality or black-heart

Segmentation 2

The segmentation 2 is to focus on the Careful Purchase Oriented, which is the highest factor in this segment. Therefore, the consumers in segmentation 2 are emphasized on the safety, quality, and information. Then, the segmentation 2 viewing from the perception of risk is to focus on physical risk, that means the consumers are concerning about the healthy issue when they bought the organic tea which is low quality or black-heart

Segmentation 3

The segmentation 3 is to focus on the Careful Purchase Oriented are same as segmentation 2 been emphasized on the safety, quality, and information. Then, the segmentation 2 viewing from the perception of risk is to focus on performance risk, that means the consumers are concerning about the quality of organic tea.

Segmentation 4

The segmentation 4 is to focus on the High Quality Oriented, which is the highest factor in this segment. Therefore, the consumers in segmentation 4 are emphasized on any kinds of quality such as service, product, and atmosphere. Then, the segmentation 4 viewing from the perception of risk is to focus on financial risk, that means the consumers are feared to spend a lot of money but to get low quality or black-heart

Conclusions

The phenomena of pure nature, healthy food, and no burden are becoming a conception of lifestyle to the Taiwanese. Thus, many of Taiwanese are changed their dietary habit into organic way. In addition, tea is the daily drink to the Taiwanese so as to drink the organic tea been popular in Taiwan recently.

However, the malicious

According to the empirical results, this paper found the consumersí perception of risk is focused on three of segmentations that including financial risk, physical risk, and performance of risk. From the results of segmentation, the organic tea industry or seller could use 4Ps of marketing which are product, place, promotion, and price. Moreover, the information of organic teaís production and sale are also important.

Because most of organic tea farm adopt the strategy of consumer experience that through the visiting organic tea farm to realize the information of production process, but it is still not enough. Nowadays, people get information usually on TV so the organic tea seller could use some TV to show that talking about healthy issue to promote the organic tea and teach the information of the organic tea to the consumers.

In addition, most of organic tea in Taiwan are sold in the organic tea farms. Because most of consumers are used to shopping in the supermarkets or department stores, the organic tea sellers could extend it sale channel to the retail stores. Moreover, the organic tea sellers could build a strong brand of its organic tea; it not only can reduce the risk concern of the consumer but also establish a strong image to the consumer.

The organic tea sellers also could build a construction of organic tea that includes the production and pack product to the sale process, each of organic tea has it own description such as it own traceability. The traceability system of organic tea could reduce the consumer worry or concern to buy the organic tea.

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