Consumer Perception of Organic Food in Urumqi

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Summary

The market for organic products in Urumqi is at the beginning of its development. The objective of this paper is to gain knowledge about consumer's attitudes toward organic food in Urumqi which is the capital of Xinjiang Uygur Autonomous Region. The consumer's attitudes were collected by means of a face-to-face survey. Attitudes, purchasing frequency, supply satisfaction and beliefs about organic food were studied with a sample of 720 consumers. The data obtained from the survey were analyzed with univariate analysis, chi-square test, ANOVA and correlation analysis. About 44.9% of Urumqi consumers had never heard of organic food. Urumqi consumers who know organic food consider organically-grown products as very healthy, of good quality and tasty. Consumers are not very familiar with the supply of organic food in the market. One reason might be that there was very little advertisement about organic products. Some groups of consumers have more positive attitudes towards organic food, and they express an increased willingness to pay higher prices for these food. Therefore, marketing strategies for organic food should be targeted towards such groups. According to the research results, an important task for the producers will be to increase consumers' knowledge of what organic food is and how to differentiate it in the marketplace.

KEYWORDS: Urumqi, Consumer behavior, Organic food

1. Introduction

Xinjiang Uygur Autonomous Region is a big agriculture province in China, its unique oasis ecology environment and natural resources are suitable to organic agriculture. Organic agriculture is also good for Xinjiang's ecological environment and will keep it sustainable.[1]
Organic food include grain, vegetable, fruit, dairy product, livestock or poultry product, honey, aquatic product and condiment.[2]
In China, organic food is a new concept to most consumer, green food is used to name the healthy and environment protecting products. The most conspicuous difference between organic food and green food is that artificial composite such as pesticide, fertilizer and hormone are absolutely forbidden in the production and process of organic food, but they can be used limitedly in the production and process of green food.
If the consumer could increase their knowledge and acceptance of organic food, the consumption might become the impetus of organic food production.

2. Background

In China, consumers have become more concerned about the nutrition, health, and quality of food they eat as their income increase. The demand for organic food is bigger and bigger. However, food market is becoming a saturated market. In this saturated market environment, distribution channels, marketing activities, diversification strategies, and food quality are increasingly important.

However, there are little research on the consumer attitudes and preferences of organic food in China yet. There is little knowledge about whether the consumer in China know the organic food or not and what image consumer have on organic food.
The market for organic products in Urumqi which is the capital of Xinjiang is at the beginning of its development. To the best of our knowledge, there has been no research pertaining to consumer attitudes toward organic products in Xinjiang. Therefore, Marija Radman's research[3] was referred to do a survey in Urumqi.
This paper presents the results of a survey conducted with customers in six big supermarkets and two big agriculture products country fairs in Urumqi. The survey was done in November, 2005.

3. *Objectives*

There is no sufficient knowledge about organic consumers in Urumqi, Xinjiang, China. The objective of the paper is to gain knowledge about Urumqi consumers' perceptions of organic food. To that end, attitudes, purchasing frequency, supply place and beliefs about organic food were studied with a sample of 720 consumers. The results of this research could be used for the marketing planning of organic products, the identifying of the target segments, the proper information and sale channels and the promotion of organic food.

4. *Data and methodology*

The consumers' attitudes were collected by means of a face-to-face survey. Attitudes, purchasing frequency, supply satisfaction and beliefs about organic food were studied with a sample of 720 consumers. The data obtained from the survey were analyzed with univariate analysis, chi-square test, ANOVA and correlation analysis.

4.1 Survey

The survey was carried out in two kinds of places. The first is in six big super markets in Urumqi, the second is two big agriculture products country fairs where the agriculture products are sold mainly as a whole. They are Haojiaxiang supermarket on Qingnian road, Jiajiale supermarket, Qiyijiangyuan supermarket on Changjiang road, Carrefour supermarket, Wuika supermarket, Youhao department supermarket, Tianbaimingpin supermarket, Beiyuanchun and Qingnian road agriculture products country fairs in Urumqi.
Face-to-face survey was made in November 2005 with shoppers in the supermarkets and agriculture products country fairs in Urumqi. Goods in the fairs include various agriculture products and prepared food, such as: vegetables, fruit, fish, meat, eggs, nuts, wine, honey, etc.
The survey was performed with a random sampling of 720 fair customers of differing demographics, including age, sex, educational and social background. Only those customers that were willing to participate in the survey were interviewed. Thus, it is not possible to calculate a response rate based on how many people declined to respond. Interviews were conducted by the senior students of Economic and Management College of Xinjiang Agricultural University and they lasted about 5-8 minutes with each respondent.
No claims can be made that the sample group represents the general populations of Xinjiang or even Urumqi. However, the fact that the supermarket and fair customers are interested in green products, and possibly in organic food, suggests that the survey respondents provide an interesting study group for this issue.

4.2 Questionnaire

The questionnaire consisted of 15 questions organized into several groups of questions, including: knowing the concept organic products, channel to get organic food information, knowledge about the difference between green food and organic food, knowledge about supply of organic products in the market, the kinds of ecologically-grown food respondents bought，willingness to pay extra price for these products.

Several attributes of organic food were asked. Attributes examined were subjective and included: healthiness, quality, taste, shelf-life, appearance, and price. These attributes were chosen according to the results of previous research studies.[3]

The final section of the questionnaire dealt with socioeconomic characteristics of the respondents. Among them were demographic characteristics such as sex, age, profession, education and income.

Eleven of the questions are single choice questions, the other four questions were multiple answer questions.

4.3 Data analyses

The data obtained from the survey were analyzed with univariate analysis in order to check distributions of frequencies and to detect possible errors occurred during the research and data entering.

Chi-square, ANOVA and correlation analysis were performed to examine the differences in buying behavior and attitudes among consumer groups. Statistical analyses were made using SPSS package, and EXCEL were used for drawing some graphs.

5. Results

5.1 Sample description

The sample consisted of 431 female and 289 male. The percentage of female is59.86, and the percentage of male is 40.14.

The average age of the respondents was 34.15 years. 37 percent of them were between 25 and 35, 31 percent were between 35 and 45, 18 percent were under 25 years old, and 14 percent were older than 45. (see Graph1)

When asked the occupation, 26.9 percent of respondents were self-employed, 22.6 percent were in enterprise, 15.7 of them work in institution, and 11.3 percent were retired, 10.3 percent of them were students, 6 percent work in government, and the others is 7.3 percent. (see Graph2)

41 percent of the respondents had higher education, 29 percent finished senior middle school, 20 percent had polytechnic school education, 8 percent completed junior middle school, the rest 2 percent belong to the other education level. (see Graph3)

The average monthly family income per capita of the vast majority of the respondents was between 800 and 1,100 RMB□. There are 22.6 percent of the respondents whose monthly family income per capita is lower than 800 RMB□, 21.9 percent is between 1100 and 1500 RMB□. 29 percent is higher than 1500 RMB□. (see Graph 4)

5.2 Questionnaire information

5.2.1 Level of the understanding of organic food

The first question asked respondents about organic products was whether the respondents have heard about organic food. About 55.1 percent (397 respondents) answered “yes” (YES group); the respondents who answered “no” (NO group) will skip to the latter questions, No group’s percentage is 44.9 .

Then the respondents who answered “yes” were asked about the channel through which they heard about the organic food. 56 percent of the YES group had heard about organic food from TV, 47 percent learned about organic food from magazines, 23 percent through internet, 16 percent get the information from supermarket, 10 percent had the knowledge from friends, and 5 percent get the organic food information from other channels. (see Graph 5)

When the respondents were asked if they have heard about green food, 94 percent of the respondents answered “yes”, but when asked in YES group if the organic food and green food are the same, the output is not satisfied as expected.(see Table 1)

Even though 64 percent of respondents know that organic food and green food are different, when asked further what are the differences, the answer is they do not know or they can’t tell the difference clearly. So it might be concluded that the consumer has an obscure recognition of organic food.

5.2.2 Buying frequency

Then the frequencies to buy organic food were asked in the group who claimed to know organic food. From the Table 2, we know that 12.6 percent of YES group “never” buy organic food, 67.8 percent “rarely” buy, only 18.1 percent of the respondent claimed to buy organic food “often”. (see Table 2)

5.2.3 Buying place

70 percent of the YES group think they can buy organic food in big supermarket, 23 percent of the YES group think they can purchase organic food in agricultural products country fair, 5 percent think organic food might be bought in morning market (buy from the farmers who produce the organic products directly), and 3 percent think organic food can be found in food market. (see Graph 6)

5.2.4 Kinds of buying food

It shows that 87.2 percent of yes group claimed they had bought organic food from text above. 71 percent of this group bought fruits and vegetables, 44 percent bought milk and dairy products, 33 percent bought meat, 32 percent bought grain and oil, 23 percent bought tea, 19 percent bought eggs and poultry, and the other 19 percent bought honey. (see Graph 7)

5.2.5Willingness to pay more money

When the YES group was asked the willingness to pay more money for organic food, 18 percent do not want to pay more, 40.3 percent are willing to pay more, 39 percent answered that it depends on the price. They might be willing to pay more money if the price of organic food is not very expensive. (see Table 3)

For the respondents who did not know organic food, the concept “organic food” was introduced by the interviewers, then they were asked the willingness to pay more money for organic food.

31.3 percent don’t want to pay more money for organic food in NO group, 36.5 percent choose depend on the price, 32.2 percent are willing to pay more money for organic food. (see Table 4)

5.2.6 Acceptance extent of paying an extra price

When the YES group were asked the acceptance extent of paying an extra price for organic food, 4.3 percent chose not to answer the question, which might mean the respondents who really do not want to pay more money is only 4.3 percent, 43.3 percent choose below 10%, 35.8 percent choose between 10% and 20%, 14.1 percent choose between 20% and 30%, the respondents who are willing to pay more than 50% extra price are 0.8 percent. (see Table 5)

When the NO group were asked the acceptance extent of paying an extra price for organic food, 1.9 percent chose not to answer the question, which might mean the respondents who really do not want to pay more money in NO group is only 1.9 percent, 52 percent choose below 10%, 34.1 percent choose between 10% and 20%, 9.6 percent choose between 20% and 30%, 1.9 percent choose between 30% and 50%, the respondents who are willing to pay more than 50% extra price are 0.6 percent. (see Table 6)

5.2.7 Image of organic food

Finally the question of what are the attributes of organic food are asked in YES group. 86.9 percent think that organic food is healthy, 50.9 percent think it has good quality, 30 percent believe it is tasty, 18.6 percent consider it has long shelf life, and 19 percent hold that it is expensive, 13.1 percent consider it has nice appearance.(see Graph 8)
The image of organic food is asked in NO group. 76.5 percent think that organic food is healthy, 44.6 percent think it has good quality, 25.7 percent believe it is tasty, 18.9 percent think the organic food has nice appearance,17.6 percent consider it has long shelf life, and 17.6 percent hold that it is expensive.(see Graph 9)

5.3 Comparison between YES group and NO group

There is little difference between YES group and NO group on the aspects of distribution of sex, age, occupation, education and income. The Pearson correlation coefficient is 0.886 (N 25) ,correlation is significant at the 0.01 level(2-tailed).
There is little difference between YES group and NO group on the aspect of willingness to pay more money for organic food. (F 15.548; df 1; N 706; sig 0.000) .
There is little difference between YES group and NO group on the aspect of willingness to pay an extra price for organic products (F 4.491; df 1; N 696; sig 0.034).

5.4 Correlation in the group

There is high correlation between buying frequency and family income. The Pearson correlation coefficient is 0.391 (N 391) ,correlation is significant at the 0.01 level(2-tailed).
There is high correlation between income and acceptance extent of paying an extra price for organic food. The Pearson correlation coefficient is 0.450 (N 380) in YES group and is 0.326(N 317) in NO group, correlation is significant at the 0.01 level(2-tailed).

5.5 Details of each question

5.5.1 Channel

Chi-square analysis showed that there were differences in consumer's getting information channels with respect to their sex($\chi 2$ 12.325; df 1; p 0.05). We found that men tend to use TV more often than women. More than 70 percent of male and 48 percent of female claimed to know organic products by TV. Further, our results suggested that old people(age over 45) get information from magazine and friends more than young people(age under 35), young people get information from net more than old people, retired people more often get information from friends, and seldom get information from net. Enterprise employees pay more attention to the supermarket's advertisements and promotions than the other groups.

5.5.2 Knowledge of the difference between organic food and green food

Our research deduce that older people get more knowledge about organic food and green food than younger people, the percentage to think green food and organic food are different is 93 in the "age over 45" group, 77 in the "age between 35 and 45" group, 62 in the "age between 25 and 35" group, 58 in the "age under 25" group.

5.5.3 The frequency to buy organic food

We find that organic food buying frequency is related to occupation, education and income. The rate claimed "often buy" is 75% in "government employee" group, 27% in "enterprise employee" group which is the second high, and 0% in retired group. The group who had higher education "often buy" rate is 21%, other groups are 13% to16%. Family monthly income per capita over 2000RMB□ group "often buy" rate is 41%, between 1500 and 2000 RMB□group is 30%, between 1100 and 1500 RMB□group is 21%, between 800 and 1100 RMB□group is 10%, under 800 RMB□ groups is 0%. Higher education, higher income, higher buyng frequency.

5.5.4 Buying place

Young people more often buy organic food in big supermarket; old people more often buy organic food in food market and agricultural products country fair. The rates which "buy organic food in big supermarket" is 81% in "age under 25" group, 71% in "age between 25 and 35" group, 75% in "age between 35 and 45" group, 27% in "age over 45" group. Government employees and those self-employed more often buy organic food in big supermarket; retired people often buy organic food in agricultural products country fair. High income groups more often buy organic food in big supermarket than low income groups

Some respondents in YES group claimed to buy organic fruit and vegetables in morning markets. However, there are almost no products in morning markets in Urumqi with organic labels. It could be assumed that consumers made their own assessment that purchased products were organically grown. It might deduce that those consumers think that agriculture products purchased directly from farmers are organic products. Therefore, we could conclude that Urumqi's consumers are not well informed about organic production.

5.5.5 Kinds of organic food to buy

The rate to buy fruits and vegetables is higher in "age over 45" group than in other groups, the rate to buy other kinds of organic food is higher in "age between 35 and 45" group than in other groups. If the income is higher, the rate to buy all kinds of organic food is higher, the difference is larger especially in fruits and vegetables and milk.

5.5.6 Willingness to pay more money

The rate for willing to pay more money is lower in "age over 45" group than in "age under 45" group, is higher in "high education" group than in other groups, is highest in government employees and is lowest in retired people group. The rate for willing to pay more money is increasing when changed from lower income group to higher income group.

5.5.7 The acceptance to pay extra price

If the extra price is under 20%, male's acceptance rate is higher than female's. If the extra price is over 20%, female's acceptance rate is higher than male's. If the extra price is under 30%, "age under 45" group's acceptance rate is higher than "age over 45" group's. If the extra price is over 30%, "age over 45" group's acceptance rate is higher than "age under 45" group's. Government employees and student more likely to accept 10-20% extra price. Retired people and self-employed people likely to accept below 10% extra price. "High education" group's acceptance to pay more extra price is higher than the other groups. If the income is higher, the acceptance rate to pay more extra price is higher.

5.5.8 Image

There is little difference among all groups on the image of organic food.

5.6 On-the-spot observation

The interviewers observed the survey places very carefully. They found there are organic food for selling in big supermarkets. The organic food lay along with ordinary food without special shelf, and the kinds of organic food is very few. The main organic products are organic honey and organic tea, and there is no highlight to indicate its identification except the organic mark on itself. There is little advertising in supermarket for organic food. In the fruits and vegetables selling area, there is no labeled organic food.

6. Final remarks

6.1 Conclusions

Urumqi's consumers are not well informed about organic food, almost half of them even have never heard of "organic food", those who had heard of organic food could not tell clearly what organic food is. They confused organic food with green food. Consumers are not very familiar with the supply of ecologically-grown products in the market. Some consumers are "not satisfied" with the supply of organic products. They are willing to buy organic food, but they don't know where to buy.

Urumqi's consumers consider organically grown products as very healthy, of good quality and tasty. However, these products are perceived as rather expensive and of questionable appearance.

About 18 percent of respondents claimed to buy organic food "often", and another 69 per cent viewed their purchase of such products as "rare". Most consumers will pay more money for organic food, 82% consumer can accept less than 20% extra price.

Organic Fruits and vegetables are bought by 71 percent of comsumer, but most of them have no label. Consumers were very willing to buy organic food. However, the purchasing place showed that many respondents were not informed ahout organic food and organic production.

Therefore, the education of consumers must become one of the first objectives for organic producers. An important task will be to increase consumers' knowledge of what an organic product is and how to differentiate it in the marketplace. Educational activities such as organized presentations on organic production and food should be held at agriculture products fairs and open markets where the mojority of the customers lack such knowledge.

Consumers are not very familiar with the supply of organic products in the market. Hence, promotional activities on organic products are of great importance to Urumqi's consumers. Visible displays in the selling place as well as promotion through media should be used more often.

The research results showed that some groups of consumers have more positive attitudes toward organic food, and they exhibit an increased willingness to pay higher prices for these products. For that reason, marketing strategies for organic products should be targeted towards those segments of consumers.

6.2 Limitation

One limitation of this study is that the sample choose place were restricted to big supermarkets and big agriculture products country fairs.The consumers who often do their shopping in morning markets and food markets or small supermarkets are neglected. Therefore, additional studies will be necessary to get information about these consumer groups for planning further marketing activities.

7. References

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Tables

Table 1 Do you think that organic food and green food are the same? (5.2.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	same	65	16.4	16.5	16.5
	different	252	63.5	64.1	80.7
	not know	76	19.1	19.3	100
	Total	393	99	100	
Missing	0	4	1		
Total		397	100		

Table 2 How often do you buy organic food? (5.2.2)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	never	50	13	13	13
	rarely	269	68	69	82
	often	72	18	18	100
	Total	391	99	100	
Missing	0	6	2		
Total		397	100		

Table 3 Are you willing to pay more money for organic food(YES group) (5.2.5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	69	17.4	18	18
	depend on the price	155	39	40.4	58.3
	yes	160	40.3	41.7	100
	Total	384	96.7	100	
Missing	0	13	3.3		
Total		397	100		

Table 4 Are you willing to pay more money for organic food?(NO group) (5.2.5)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	101	31.3	31.3	31.3
	depend on the price	118	36.5	36.5	67.8
	yes	104	32.2	32.2	100
	Total	323	100	100	

Table 5 Willingness to pay an extra price for organic products(YES group) (5.2.6)

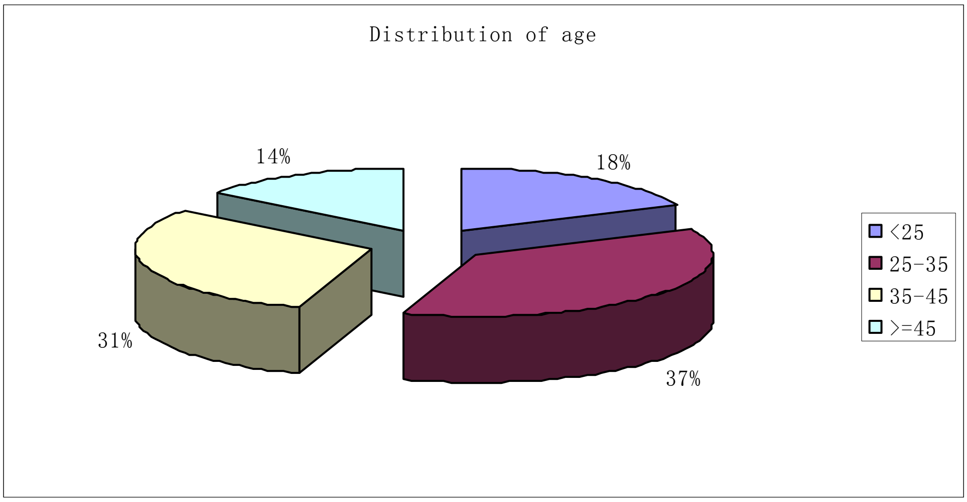
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<10%	172	43.3	45.3	45.3
	10%-20%	142	35.8	37.4	82.6
	20%-30%	56	14.1	14.7	97.4
	30%-50%	7	1.8	1.8	99.2
	>50%	3	0.8	0.8	100
	Total	380	95.7	100	
Missing	0	17	4.3		
Total		397	100		

Table 6 Willingness to pay an extra price for organic products(NO group) (5.2.6)

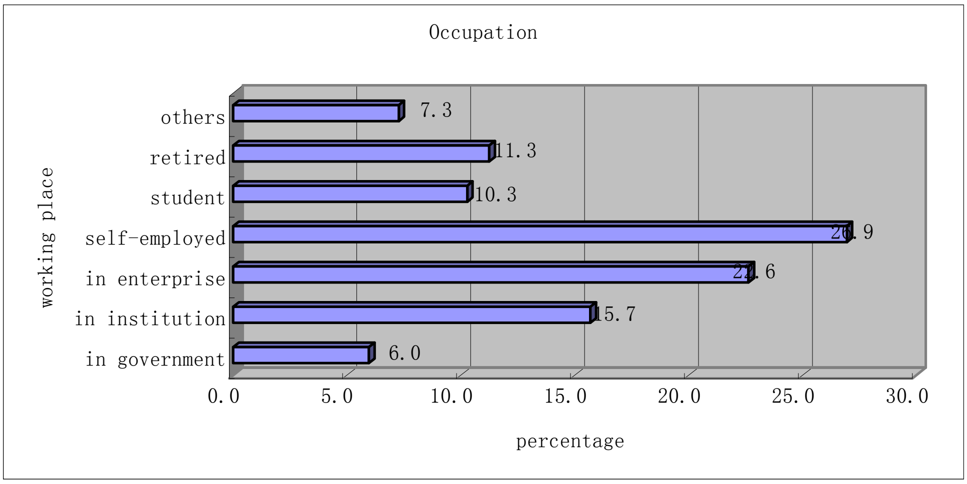
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<10%	168	52	53	53
	10%-20%	110	34.1	34.7	87.7
	20%-30%	31	9.6	9.8	97.5
	30%-50%	6	1.9	1.9	99.4
	>50%	2	0.6	0.6	100
	Total	317	98.1	100	
Missing	0	6	1.9		
Total		323	100		

Graphs and Diagrams

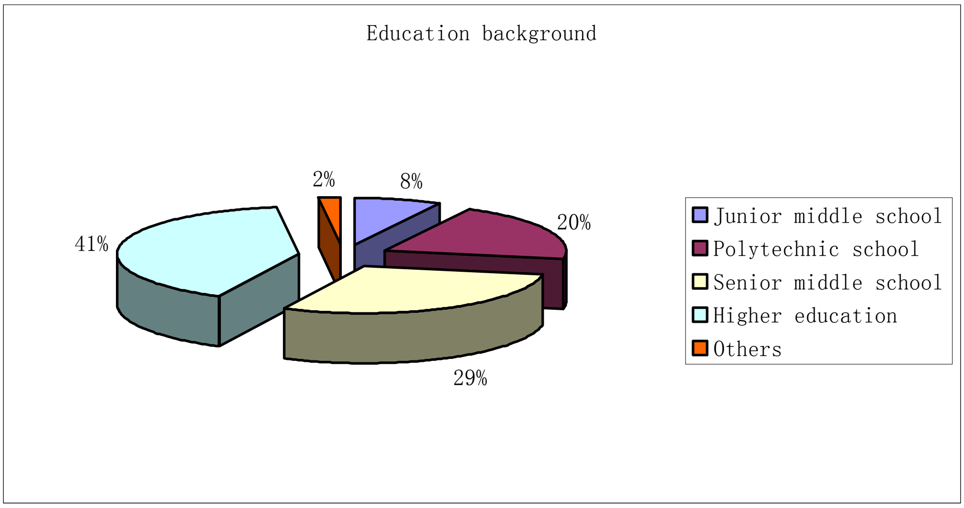
Graph 1 (5.1)



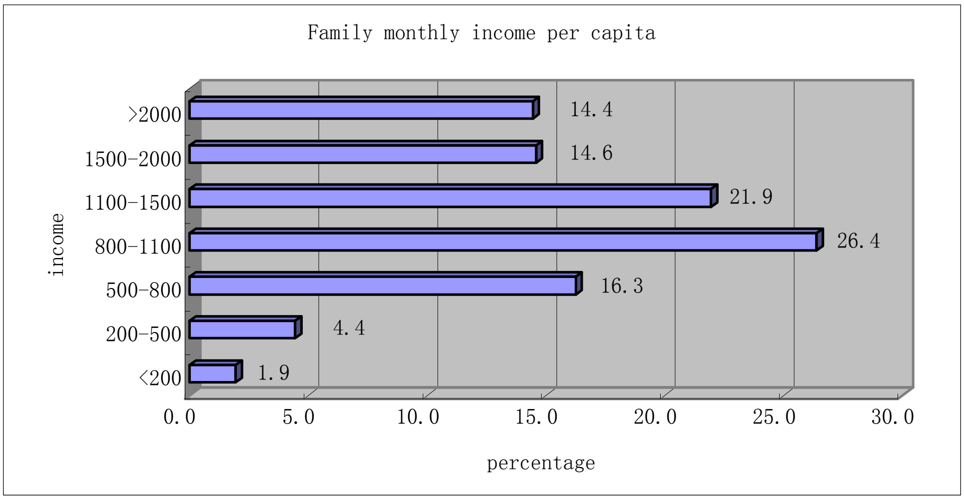
Graph 2 (5.1)



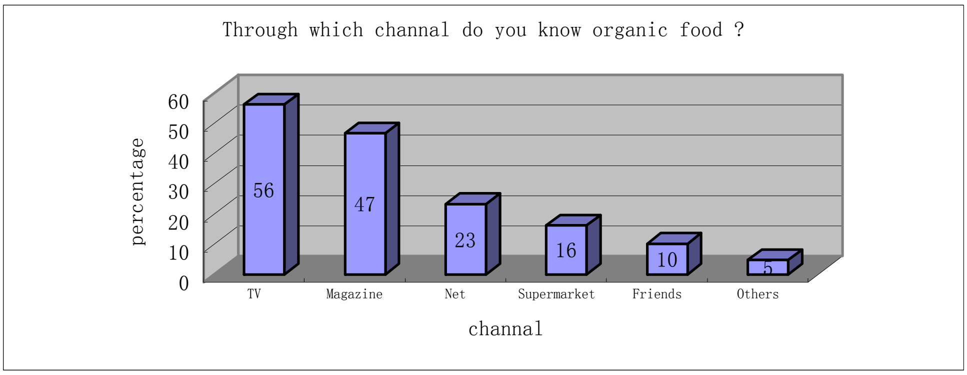
Graph 3 (5.1)



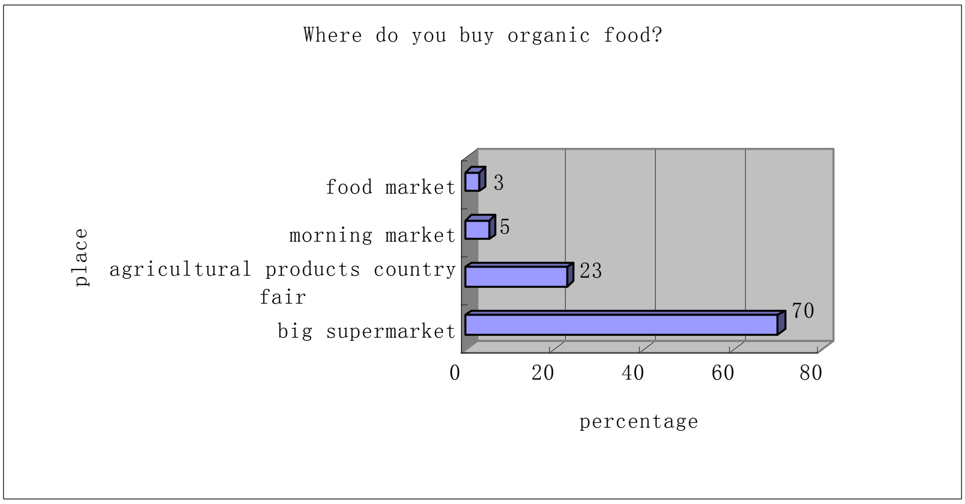
Graph 4 (5.1)



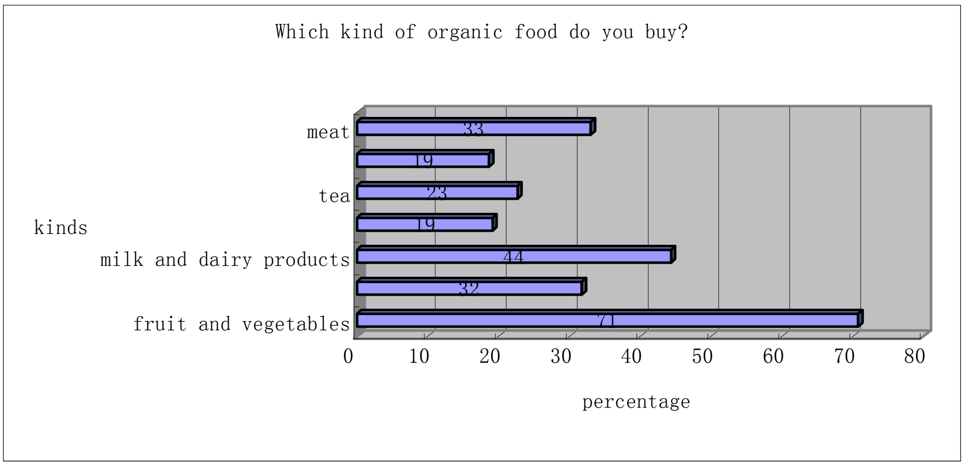
Graph 5 (5.2.1)



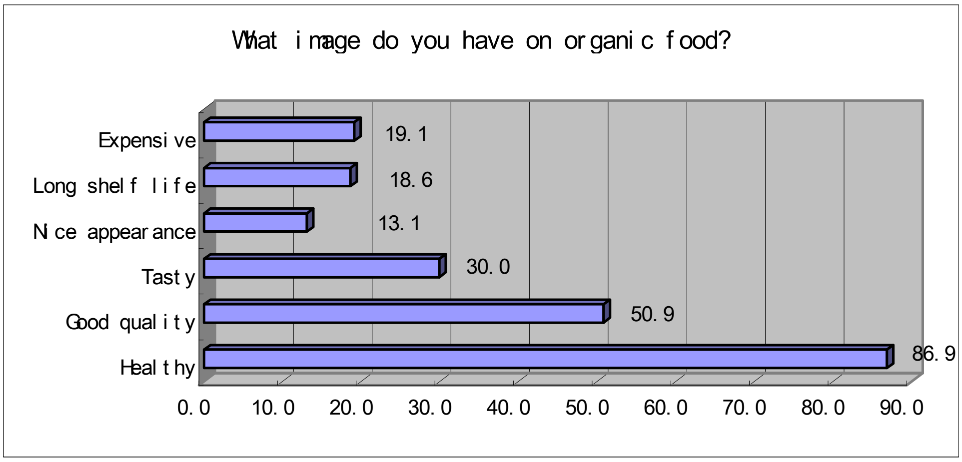
Graph 6 (5.2.3)



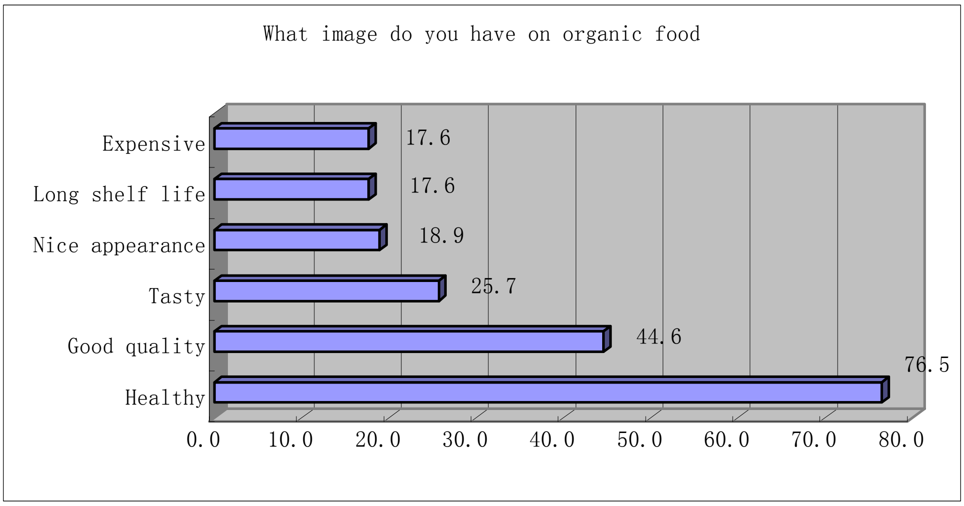
Graph 7 (5.2.4)



Graph 8 (YES group) (5.2.7)



Graph 9 (NO group) (5.2.7)



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