The Willingness to Pay for Organic Milk by Consumers in Tehran

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ABSTRACT

This study determines the consumers' willingness to pay for organic milk in Tehran by using Contingent Valuation Method and Single Bounded Dichotomous Choice questionnaire. Logit regression model was used to evaluate the effect of explanatory variables on willingness to pay and the model parameters were estimated by using maximum likelihood approach. For this purpose, 450 questionnaires were completed in the city by respondents who had independent income in 2012. Shazam, SPSS, and Maple softwares were used to obtain the results. According to the results, variables such as income, family's illness history, age, educational level, distance to the shopping center, apprising respondents, organic milk quality, and the offered price had a significant effect on consumers' willingness to pay for organic milk. Overall, 80.3% of the respondents were willing to buy organic milk. The average of consumers' willingness to pay was estimated at 28,600 Rials per liter of organic milk. The results showed this product to be important for people; and this point can help producers, planners, and managers for further development of this product.

Keywords: Contingent valuation method, Logit model, Milk consumption, Single bounded dichotomous choice.

INTRODUCTION

Over the last decade or so, one of the fastest growing sectors of the food industry has been certified organic foods. These are foods guaranteed to have been produced and processed in a manner that avoids the use of synthetic fertilizers, pesticides, hormones, genetically modified organisms and irradiation, and which strives to enhance natural biological cycles and to meet the minimum animal welfare standards (Burch *et al.*, 2002). Consumer demand for organic food has increased especially as a result of the food scandals at the beginning of the new millennium (Zanoli *et al.,* 2004). In researches, calculations and official numeric of natural resources and environmental

issues are very disappointing. It is notable that Iran has the world's second place after Australia in terms of fertile land degradation, mainly due to indiscriminate use of chemical fertilizers and pesticides in agriculture (Kashani, 2001). Agriculture plays a major role in Iranian economy. Many Iranian farmers cultivate according to traditional techniques, which are comparable to organic agriculture, and minimum use of agrochemicals such as pesticides, herbicides, and chemical fertilizers is quite common among them. According to Ghorbani *et al*. (2007), in Iran, 113,659 ha of field crops and 125,802 ha of horticultural crops are cultivated without application of any agrochemicals.

Meat, eggs, and organic dairy products are produced from animals that are fed with organic food and these animals have access

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to outdoors. The animals must be kept in an environment that is consistent with the normal behavioral needs of animals. Ruminants must have access to pasture. Moreover, when organic animals are not sick, they are not given antibiotics, hormones and medicine. But, they can be vaccinated against the disease. The use of anti-parasite drugs is controlled strictly. Animal parasites and diseases should be primarily controlled by preventive measures such as rotational grazing, a balanced diet, stress reduction and stable health (Beig Mohammadi *et al.,* 2011).

Many studies have been done about organic products. Olesen *et al.* (2010) used a non-hypothetical choice experiment to elicit Norwegian consumers' Willingness To Pay (WTP) a price premium for organic and animal welfare-labeled salmon. The results in this paper indicated that consumers were willing to pay to improve animal welfare and reduce undesirable environmental effects of fish farming. It is also shown that the producers of alternatively labeled seafood products must consider the aesthetic properties of their products and that labeled products of inferior appearance are unlikely to achieve the necessary price premium. Finally, it is shown how real choice experiments can be used to elicit consumers' WTP for multiple product attributes including the color of the fish, improved fish welfare, and environmental improvements.

Van Loo *et al.* (2011) estimated consumers' WTP for organic chicken by using a choice experiment. Results indicated that consumers were willing to pay a premium of $1.193/lb (34.8%) for the general organic label and $3.545/lb (103.5%) for the USDA organic label. Also, WTP differed between demographic groups as well as between different types of consumers based on the purchase frequency of organic meat products. The WTP premium for a general/USDA organic label was lowest for the non-buyers (-29.6 and 26.2%), followed by the occasional buyers (35.7 and 97.3%). The habitual buyers were willing to spend a premium of 146.6% for

general and 244.3% for USDA certified organic labeled chicken breast. Janssen and Hamm (2012) conducted a study on product labeling in the market for organic food to find out whether consumers prefer certain organic labeling schemes over others, and to give recommendations for market actors in the organic sector. By means of choice experiments and structured interviews with 2441 consumers of organic food in six European countries, consumer preferences and WTP for different organic logos were analyzed. The results of the random parameter Logit models showed that the WTP differed considerably between the tested logos and consumer perceptions of organic labeling schemes turned out to be of subjective nature and, in many cases, not based on objective knowledge. Bravo *et al.* (2012) studied the determinants of organic food consumption using data from the German National Nutrition. These authors stated that organic food industry was growing globally and the important thing to keep it is a complete understanding of consumer behavior. Results showed that altruistic motives are the major factors affecting consumers' attitude and purchasing behavior making socio-demographic variables appear less important. Malek-Saeidi *et al.* (2012) investigated agricultural professionals' attitudes towards organic agriculture, since they are key factors in increasing farmers' information. Findings of the study revealed that having a negative attitude towards conventional agriculture, general attitude towards the environment, perceived transitional difficulty, and moral norms were effective factors on professionals' positive attitude towards organic farming.

Considering human health, animal, plant, soil and planet earth in sustainable agricultural production, it is necessary to look at the production system carefully and accurately. Therefore, due to the globalization of this movement and the health of the planet and to produce food for the growing population of Iran, especially presence in international markets and

potential capacities in the agricultural sector, it is necessary to look specifically at the macro level to this issue. Also, due to high importance of organic and healthy products and problems that exist in the production and marketing of these products compared to the conventional ones, such as the absence of suitable and specific markets and problems in marketing and deficiency in consumers' information, measuring consumers' WTP is very important for planning production and consumption (Heidari and Ghaderi, 2010).

The present study had two objectives: (1) To estimate the willingness of the people in Tehran to pay for organic milk, and (2) To identify the factors affecting WTP for organic milk.

MATERIALS AND METHODS

Conceptual Framework

There are some economic methodologies to value non-market goods. One of them is Contingent Valuation Method (CVM). In this study, CVM was used to achieve the research objectives. Also, Logit regression model was used to measure consumers' WTP for organic milk in Tehran and model parameters were estimated by maximum likelihood. CVM tends to quantify the value consumers assign to products by facing a hypothetical purchasing situation in which they have to answer how much money they would be willing to pay for a given product, or if they would be willing to pay a certain price premium (Carmona and Calatrava, 2006). In other words, CVM is a popular means of valuing non-market/public goods where no market price exists e.g. environmental amenities, as well as 'hypothetical' goods i.e. goods for which a market price could exist but are currently not on sale. In this study, 450 questionnaires were evaluated using the Cochran method and pretest information. There are a number of ways to obtain the respondents' Willingness To Pay (WTP) for the

contingent valuation method, such as bidding games, payment cards, and open-ended questionnaires. However, the method chosen for this study was Single Bounded Dichotomous Choice questionnaire to estimate WTP for hypothetical goods (organic milk) at a range of prices (Bennett *et al.,* 2003). In the single-bounded survey, respondents are faced with one bid value to which they can respond with either a 'yes' to accept that they are willing to pay the proposed amount, or a 'no' which means they refuse to pay the proposed amount. Ten different sets of bid were calculated to estimate the maximum willingness to pay including: 4,500 (the lowest bid), 7,000, 10,000, 12,000, 13,000, 15,000, 17,000, 19,000, 22,000 and 36,000 (the highest bid) Rials. These bids were selected on the basis of results obtained from the pretest and the Boyle and Bishop method (Boyle *et al.,* 1993). For each price, 45 questionnaires were completed and respondents could answer yes or no. The questionnaires were completed randomly and with face–to-face interviews with individuals living in Tehran who had independent income in late summer and early autumn 2012. These people could decide independently on the payment amount and they had Full authority in this matter.

The questionnaire was divided into four sections. The first section consisted of questions regarding personal information about the respondent and respondent's socio-economic status such as, age, gender, income, education. The next section focused on respondent's knowledge about organic milk. The third section contained attitudinal questions to extract information about respondent's attitude about organic milk, as their attitude was evaluated by offering five options: very high, high, medium, low, and very low; and the fourth section sought information about respondent's willingness to pay for organic milk.

In this study, variables such as age, gender, family number, education, income, family's illness history, distance to the shopping center, informing people, organic

milk quality and offered price were used to estimate Logit model. Family's illness history referred to presence of at least a sick person in the respondents' family. Also, "informing people" means giving information to people about organic milk, and "organic milk quality" was about nutrients, taste, and smell of organic milk. "Offered price" referred to the price that was offered to respondents (Table1).

Cochrane relationship to determine the number of samples is in Equation (1):

$$n = \frac{N, p, q, t^2}{N.B^2 + p, q, t^2} \qquad (1)$$

Where, n is number of samples, p is probability of reply, q is probability of not responding, B is potential efficiency, N is member of society, and t-statistic for a sample number of more than 120 individuals is 1.96.

The Econometric Model

We analyzed the data by estimating a Logit regression model. With the assumption that consumer utility is a function of income and other features of the socio–economic characteristics, utility function can be written as Equation (2):

$$u = u(h, y; s) \qquad (2)$$

Where, when a consumer is willing to buy milk, h is equal to one and otherwise it will be zero. On the other hand, y and s, respectively, show income and vector of socio-economic characteristics (Hanemann, 1984). The contingent valuation method is based on the important assumption that the consumer is aware of his utility function but the economists don't have enough information about consumers' utility function. Thus, economists' point of view is the utility function as Equation (3):

$$u = u(h, y; s) = v(h, y; s) + \varepsilon_h \qquad (3)$$

On this basis, the consumer's utility function is a random variable with mean $v(0)$ that also shows the indirect utility and ε_h shows random disturbance with zero mean and constant variance. If a dollar is offered to the consumer that he pays to buy organic milk, if the consumer is willing to pay this fee, we can write (Park and Loomis, 1996):

$$v(1, y - A; s) + \varepsilon_1 > v(0, y; s) + \varepsilon_0 \qquad (4)$$

Hence, the probability of consumers' WTP and improbability of consumers' WTP can be expressed as relations (5) and (6):

Table 1. Explanatory variables definitions.

Variable	Code	Description	Mean±SD
Age	-	Continuous variable	29.5415 ± 7.6747
Gender	1 0	Dummy variable which takes the value 1 if the respondent is man and 0, otherwise	0.5698 ± 0.4956
Family number	-	Discrete variable	4.2955 ± 1.6816
Education (Scale 0 to 19)	0 19	Illiterate PHD	15.122 ± 2.880
Family's illness history	1 0	Dummy variable which takes the value 1 if there is at least one patient in respondent family, and 0, otherwise	0.5644 ± 0.4963
Income	-	Continuous variable	8.8592± 6.5371
Distance to the shopping center	-	Continuous variable	0.5135 ± 0.3968
Informing people (Scale 1 to 5)	1 5	Informing people not important Informing people all important	4.1644 ± 0.9389
Organic milk quality (Scale 1 to 5)	1 5	Organic milk quality not important Organic milk quality all important	4.3977 ± 0.9341
Offered price	-	Discrete variable (4500, 7000, 10000, 12000, 13000, 15000, 17000, 19000, 22000 and 36000 Rials)	15550 ± 8490.152

$P_1 = P_r\{\text{Willingness to Pay}\}$ (5)
$= P_r\{ \; v \; (1 \; , \; y - A \; ; \; s) + \varepsilon_1 > v \; (\; 0, \; y \; ; \; s \;) + \varepsilon_0 \; \}$

$P_0 = 1 - P_1$ (6)

If η is equal to ($\varepsilon_0 - \varepsilon_1$) and $F_\eta(.)$ is equal to cumulative distribution function, the probability of consumers' WTP will be as Equation (7):

$P_1 = F_\eta(\Delta v)$ (7)

Where, Δv shows indirect utilities difference and its value is as follows:

$\Delta v = v \; (0, y; s) + \varepsilon_0 - v \; (1, y - A ; s) - \varepsilon_1$ (8)

$\Delta v = v \; (0, y; s) - v \; (1, y - A; s) - \varepsilon_1 + (\varepsilon_0 - \varepsilon_1)$ (9)

$\Delta v = v \; (0, y; s) - v \; (1, y - A; s) + \eta$ (10)

supposing that being the logistic distribution and using a Logit model for $F_\eta(.)$, we can write:

$$P_1 = F_\eta(\Delta v) = \frac{1}{1 + \exp(-\Delta v)}$$ (11)

This function can be estimated by using maximum likelihood method. One of the important issues in econometrics models is choice of functional form for the model. The literature review shows that, in general, function forms used in contingent valuation methods are linear or logarithmic (Guo *et al.*, 2001). In this study, the linear function was estimated for the indirect utility function, as follows:

$v \; (h, y - A; s) = \alpha_h + \beta_y + \varepsilon_h$

$\alpha, \; \beta > 0 , \; h = 0, 1$ (12)

Indirect utility differences is written as relations (13) to (15):

$V \; (1, y-A; s) = \alpha_1 + \beta \; (y-A) + \varepsilon_1$ (13)
$v \; (0, y; s) = \alpha_0 + \beta y + \varepsilon_0$ (14)
$\Delta v = v \; (0, y; s) + \varepsilon_0 - v(1, y-A; s) - \varepsilon_1 =$
$(\alpha_0 - \alpha_1) + \beta A + \eta$ (15)

When the utility has a linear form, the probability of WTP is a function of the offered price. If the indirect utility function has a logarithmic form, indirect utilities difference and probability of WTP will be a function of the offered price-income ratio.

$v \; (1, y - A; s) = \alpha_1 + \beta Ln(y - A) + \varepsilon_1$ (16)

$v \; (0, y; s) = \alpha_0 + \beta Ln \; y + \varepsilon_0$ (17)

$\Delta v = v \; (0, y; s) + \varepsilon_0 - v \; (1, y - A; s) - \varepsilon_1 =$
$(\alpha_0 - \alpha_1) - \beta Ln \left(1 - \dfrac{A}{y}\right) + \eta$ (18)

The maximum WTP is the amount that an individual's utility is the same if he is willing to pay or is not willing to pay.

$U \; (1, y-A; s) = u \; (0, y; s)$ (19)
$v \; (1, y - A; s) + \varepsilon_1 = v \; (0, y; s) + \varepsilon_0 \quad \Delta v = 0$

If the utility function is linear, equation (15) will be as follows, because the average η is zero:

$\Delta v = v \; (0, y; s) - v(1, y-A; s)$ (20)
$\Delta v = (\alpha_0 - \alpha_1) + \beta A$

If $\Delta v = 0$, consumers' WTP is according to

Equation (21): $Max \; A = -\dfrac{(\alpha_0 - \alpha_0)}{\beta}$ (21)

On the other hand, if the utility function is logarithmic, maximum WTP equals $y\left[1 - e^{\frac{(\alpha_0 - \alpha_1)}{\beta}}\right]$.

Factors affecting WTP for organic milk and WTP were determined by using the above relations. The Shazam, SPSS, and Maple softwares were used to obtain the results.

RESULTS AND DISCUSSION

Descriptive Results

After extracting the necessary data from 450 questionnaires, socio-economic characteristics are reported in Table 2. Before proceeding to the results, general information should be obtained from the sample. Due to the differences in the scales of main variables, standard deviation cannot be used to determine the change of variables, because it is used only for variables with the same scales. Therefore, the distribution coefficient (standard deviation divided by the mean) was calculated. The results showed that the maximum distribution coefficient was related to income variable. therefore this variable has more changes than other variables.

Table 2. Statistical results about the social – economic characteristics of respondents.

Variable definition	Mean	Standard error	Min	Max	Distribution coefficient
Age (Years)	29.54	7.67	18	64	0.2
Family number (Person)	4.29	1.68	1	7	0.4
Monthly income (Million Rials)	8.86	6.53	1	45	0.7

According to Table 2, the average age of consumers was 29.54 years, which shows that most respondents in this study were young. The average income of respondents was 8.86 Million Rials and the average family size was 4.29 people. Results show that 43% of respondents were male and 57% were female in Tehran. According to the results, the maximum distribution coefficient was related to the monthly income, reflecting more fluctuation in this variable (Table 2).

Table 3 shows the average household consumption of conventional milk was 1.6 liter in each purchase in Tehran, with the average of conventional milk price as 17,000 Rials. Also, the average of distance from shopping centers was 0.5 km, indicating that most of the respondents had access to conventional milk. According to the results of Table 3, maximum distribution coefficient was related to the amount of milk consumption. In this study, only 18.9% of the samples surveyed were aware of organic milk and 80.3% of the sampled consumers in Tehran were prepared to buy organic milk. This shows that people who are not aware of organic products also buy organic milk.

Inferential Results

Logit regression model can be used to investigate the factors affecting the WTP. In

this method, responses to the question "tend to use higher-priced organic milk" was a dependent variable and other variables such as "offered price" and the social-economic characteristics were independent variables. The model parameters were estimated by using maximum likelihood approach. Logit regression model estimation results are presented in Table 4.

According to Table 4, variables such as age, income, organic milk quality and offered price are significant at 1% level and variables such as family's illness history and distance to the shopping center are significant at 10% level. Also, informing people and education variables are significant at the 5% level, while gender and family size are not significant. Estimated coefficient for the offered price variable is negative and it shows if the proposed price increases for organic milk, the probability of yes response decreases in tendency for payment. Elasticity for offered price variable is -0.18. In interpreting the offered price variable elasticity, it can be expressed that, on average, when other variables are constant, one percent increase in offered price variable reduces the chance of buying organic milk by 0.18 percent. In other words, if the offered price variable increases one percentage and other factors are constant; the probability of buying organic milk will reduce 0.18 percent. Also, the

Table 3. Results of statistical analysis of the conventional milk consumption by respondents.

Variable definition	Mean	Standard error	Min	Max	Distribution coefficient
The amount of conventional milk consumption (Liter)	1.6	0.95	0	6	0.6
The price of conventional milk(Thousand Rials)	17	4.1	4	33	0.3
Distance to the shopping center (Km)	0.5	0.51	0.001	3	1.2

Table 4. Estimation results of the demand function for organic milk product.[a]

Variables name	Coefficient	T-statistic	Elasticity in mean	Marginal effect
Age	-0.18755	-8.1319***	-0.46034	-0.013508
Gender	0.28780	0.79977	0.012792	0.020729
Family number	-0.030863	-0.11441	-0.010358	-0.0022230
Education	0.32474	2.2237**	0.084123	0.023390
Family's illness history	0.90976	1.7312*	0.018639	0.065527
Income	0.14808×10^{-6}	3.5319***	0.10250	0.10666×10^{-7}
Distance to the shopping center	-0.41984	-1.6510*	-0.049422	-0.030240
Informing people	0.43091	3.0091**	0.14021	0.310370
Organic milk quality	0.49886	3.2970***	0.17141	0.359310
Offered price	-0.14980×10^{-2}	-7.2906***	-0.18199	-0.10789×10^{-3}
Intercept	4.6751	3.1780***	0.36527	-

[a] Log-likelihood function= -119.7, Likelihood Ratio Statistic (LR Statistic)= 202.520, Probability (LR Statistic)= 0.000, Mcfadden *R*-square= 0.45827, Maddala *R*-square =0.36240, Percentage of right predictions= 0.88667

marginal effect for this variable is -0.10789×10^{-3}, indicating that when the offered price variable increases one Rial and other factors are constant, probability of buying organic milk will decrease by -0.10789×10^{-3} percent. Given that, this variable is substitute price variable in the demand function. It was observed that the relevant parameter is in accordance with theoretical expectations in the estimated function.

Sign of the estimated coefficient for income variable is positive, which indicates the probability of positive response increases with increase in income. If income increases one percentage of the mean value and other factors remain constant, probability of buying organic milk will increase by 0.1 percent. This result is similar to those of studies such as Loureiro *et al.* (2002), Gracia and Magisteris (2008), and Yahaya (2011). In this study, income variable had a positive effect. Marginal effect for income variable is 0.10666×10^{-7}, which means that when other factors remain constant, with income increase of one Rials, probability of buying organic milk will increase by 0.10666×10^{-7} percent. Also, the variables including education, background of the disease, informing people, and organic milk quality had a significant positive effect on probability of buying organic milk.

Estimated coefficient for the age variable was statistically significant at the one percent level. The negative sign of this variable shows that the probability of a positive response in the elderly people is less than young people.

Also, the distance variable was significant at 10% level, with a negative sign that shows that with increase in the distance to the organic milk shopping centers, the probability of a positive response on WTP will decline. The coefficient of education variable was significant with a positive sign at 5% level. The positive sign indicates that the higher education level increases the probability of a positive response to WTP. Also, family's illness history, informing people, and organic milk quality variables were significant with a positive sign. Results showed that maximum elasticity was related to the age variable. Therefore, we can say that age variable is the most effective variable on consumers' WTP.

McFadden *R*-square was estimated at 0.45827, indicating that explanatory variables could well explain changes in the dependent variable. The results reveal that almost ٨٩% of respondents were correctly allocated to predicted WTP either" yes "or "no "in the model, indicating a relatively good fit to the data . According to the probability of this statistic, significant

general pattern is confirmed and we can conclude that the explanatory variables in the model were able to describe the dependent variable well. In other words, not all the variables are assumed to be zero at a time. Also, multicollinearity test was performed according to the analysis of variance method and the results indicated no multicollinearity among the variables. Average expected value of WTP, which shows the calculated value of one liter of organic milk after using maximum likelihood estimation, by numerical integration of (certain) range from zero to infinity:

$$WTP = \int_0^\infty \left(\frac{1}{1+\exp+\{-(4.6827-0.00015\,Bid)\}} \right) dBid = 28600$$
(22)

Thus, the average consumers' WTP for one liter of organic milk was estimated at 28,600 Rials. In other words, people are willing to pay 90.6% higher price for organic milk than conventional milk. The results indicate that consumers are willing to buy organic products at a price higher than the price of non-organic products. The results of the consumers' willingness to pay for organic milk is about similar to the results of studies such as Gil and Soler (2006), Marvin *et al.* (2007), Rodríguez *et al.* (2008), Olesen *et al.* (2010), Zander and Hamm (2010), Napolitano *et al.* (2010), Van Doorn and Verhoef (2011), and Van Loo *et al.* (2011). In this study, people were willing to pay higher prices for organic products.

CONCLUSIONS

Although Iran is a developing country with low to moderate income levels, people are willing to pay a higher price for organic milk than the non-organic milk. According to the results, 80.3% of people in this study were prepared to buy organic milk, while only 27.1% were willing to pay higher price for organic milk. This case shows the importance of the public health issues. Due to the negative impact of the offered price variable on consumers' Willingness To Pay (WTP) and

system of production costs, it is suggested that the government provide low-cost loans and green subsidies to reduce production costs; this will help consumers to obtain these products at moderate prices. Based on these results, one of the most important factors that influence the WTP is the consumers' income. We can say, if distribution of income is fair and difference between income deciles is less, more people will be willing to pay to buy organic milk. In this regard, it is suggested that the government use appropriate policies to move toward equitable distribution of income. In this study, it was revealed that consumers' education is one of the factors that influence consumers' WTP in consumption of organic milk. Government with extension classes and public educational facilities can raise the knowledge of society, and this can increase the willingness to pay for buying organic milk. Since one of the effective factors on consumers' WTP is improving the quality of organic milk, it is suggested that budget and funding be allocated to improve the quality of organic milk. This can bring it to international standards, therefore, consumers' satisfaction will be increased. According to the results, distance from organic milk shopping centers has negative impact on the consumers' WTP. Due to the long distances in Tehran and for the welfare of consumers, it is recommended that organic milk shopping centers should be built in different parts of the city, so that consumers can easily have access to this product. Also, the significance of the variable of the family's illness history can be analyzed as meaning higher probability of "yes" response for respondents who had at least one sick person in their family. As regards the lower WTP in the case of respondents who have a family background of certain diseases, it is recommended that public health plans be implemented by the relevant organizations to inform people about risks of consuming foods containing harmful chemical elements/compounds and further explanation of the importance of proper nutrition and use of safe and good quality foods in the physical and mental health. This can promote health status in the community.

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تمایل به پرداخت مصرف‌کنندگان برای شیر ارگانیک در شهر تهران

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چکیده

این مطالعه میزان تمایل به پرداخت افراد جامعه برای مصرف شیر ارگانیک را در شهر تهران با استفاده از روش ارزشگذاری مشروط و پرسشنامه انتخاب دوگانه تک بعدی تعیین می‌کند. برای بررسی تاثیر متغیرهای توضیحی بر تمایل به پرداخت از مدل لوجیت استفاده شد و پارامترهای این مدل بر اساس روش حداکثر راستنمایی برآورد شده‌اند. به این منظور ۴۵۰ پرسشنامه در سطح شهر تهران توسط ۴۵۰ پاسخ‌گو در سال ۱۳۹۱ تکمیل شد. نتایج با استفاده از نرم افزار های spss،shazam، Maple مورد تجزیه و تحلیل قرار گرفتند. مطابق با نتایج، متغیرهای درآمد، سابقه ابتلا به بیماری در خانوارها، سن، سطح تحصیلات، فاصله تا مراکز خرید، اطلاع رسانی به افراد، کیفیت شیر ارگانیک و قیمت پیشنهادی اثر معناداری بر تمایل به پرداخت افراد برای شیر ارگانیک داشت، همچنین ۸۰/۳ ٪ از پاسخ‌گویان تمایل داشتند شیر ارگانیک را خریداری کنند. میانگین تمایل به پرداخت افراد برای مصرف یک لیتر شیر ارگانیک ۲۸۶۰۰ ریال برآورد گردید. نتایج نشان داد که این محصول از اهمیت بالایی نزد مردم برخوردار است و این نکته می‌تواند تولیدکنندگان، برنامه ریزان و مدیران را در توسعه هرچه بیشتر این محصول یاری دهد.