



**International Journal of Biology, Pharmacy  
and Allied Sciences (IJBPAS)**

*'A Bridge Between Laboratory and Reader'*

[www.jibpas.com](http://www.jibpas.com)

---

---

**ESTIMATING THE DEGREE OF TENDENCY TOWARDS PAYING FOR ORGANIC  
RED MEAT PRODUCT: (A CASE STUDY IN THE CITY OF MARVDASHT)**

**HAMID REZA SHIRZADI, REZA MOGHADASI (Ph.D.)**

Department of agricultural management, Marvdasht Branch, Islamic Azad University,

Marvdasht, Iran

**ABSTRACT**

In the recent years paying attention to the healthfulness of the food products and the consumers awareness of the advantages of organic farming as well as an increase in the bad effects of the current products on the consumers health have increased their willingness to buy an organic products. Since there is no certain market for organic product in Iran , The present study has determined the effective factors in the tendency to pay and the degree of the tendency to pay among the consumers of organic red meat product in the city of Marvdasht , using the conditional Valuation method . The data necessary for the present study was collected through using 308 dual questionnaires for the organic red meat product in winter, 1392. The results of the log it model for the organic red meat product indicated that the variables of income , age education , the approach , the approach toward the nutritional value of the products and getting familiar with organic products are among the effective factors on the consumers tendency to pay . The average degree of tendency towards paying for each kilogram of the organic red meat products was estimated to be 261984 Rials. Therefore, In order to establish and develop organic farming in the country and increase the production of these products. The essential planning should be implemented through informing the individuals. Establishing an appropriate market to buy and sell these products, establishing certain production standards, and giving supportive input.

**Keywords: Organic red meat, log it modeled, conditional valuation, tendency to pay,**

**Categorization Jel: Q56.Q15**

## INTRODUCTION

As the population especially in developed countries is increasing, lack of food has been a remarkable topic for many years (Sharma, 2002). Since the global population is increasing in 20 century, agricultural systems are relied more on inputs and foreign performance. Although crops is increasing a lot, but current approach based on new technological instruments couldn't provide food security. Also, in most of times cause ecological, technical, economic and social adverse outcomes in developed countries.

Overusing of fertilizers, pesticides and chemical pesticides are the impotent reason of environmental pollutions. Lack of proper use of chemicals because they remain stay in ground and polluted under and water. In recent years global concern is about the lateral results and effect of some new agricultural activities on human environmental life is increasing. Therefore, researchers are enticing to think deeply about agricultural activities. Different science study about possible agricultural way that can be possible substitute for humane health and environment. Thus organic agriculture is best substitute for current agricultural system to protect society in the world and proposed among developed countries (Eftekhari & Sareban, 1385).

Organic agriculture system is an ecological cycle that improves soil activity and considers less chemical input to improve health and qualities of products in a farm (Anonimus, 2008). Indeed, organic agriculture is a producing system that rejects artificial pesticides, pesticides and food additives. This system is based on different way, to keep soil fertility and strengthen food, control insects, herbs and other pesticides. The main feature of that is using nutrients such as keep soil fertility for long time, self-sufficient of soil with Azoth, provide nutrients for agriculture, comprehensive method of livestock management and control herbs and insect by different way such as variable agriculture such as natural enemies, ... (Nasr Esfhani 1385). Organic agriculture system is freeware available as possible as I can and try to decrease chemical (Ajoodi & Popzan, 1375). The complete differentiation is illustrated by international union of organic agriculture (MFAOI) that is organic agriculture consists of all developing agriculture organization environment, social and economic aspect of producing food and health (Eftekhari & Sareban 1385).

Studies show that in most of countries buying organic products is increasing

especially in west Europe and North America .As the retail market of organic is increasing from 17.5 billion dollars in 2000 to 32 billion dollars in 2005 (Yoosefi &Willer200. During 10 years organic food markets is increasing four times in USA .Also, in Germany during 2000 to 2003 organic product cultivation increased to 34%.The number of organic farmers were increased to 29% (Mirplanger ,2005). These statistics shows global interesting to organic products which is free of chemical remains .Although global publics know effects of irregular dangerous using of pesticides ,chemical pesticides ,but we have lots of health and environmental costs due to use of these substances in Iran agriculture ( Nasimi& Maleksaedi, 1389).Agricultural ministry statistics illustrated that there were not pesticides and fertilizers in more than 113000 Hectares of corps and in more than 125 Hectare of gardens (Bagherzade,1385). Some of the organic agriculture s goal are income, job especially for villages (Eftekhari, Sareban&Zahradi, 1379).

Organic agriculture needs lots of human activities, that can provide opportunities for their job and stopping migration(Eftekhari & Sareban, 1385).More than 80% Iranian farmers are small and they have about 40% of agricultural farm .Although these farmers have a great role in agricultural productions ,

but they don't have economic and social conditions. Therefore, organic agriculture with different ways provided conditions for them to have higher income by providing more qualified food for local societies. Agriculture is a potential motor, decreasing poverty and develop manpower, equally and keeping environment ( Mahmoodi, 2007).

Most of countries are going toward organic agriculture. But since there is not market for selling organic agriculture in Iran, farmers are not interested I organic agriculture and think that organic productions are risk. Therefore ,study on organic agriculture products as an review of its features and consuming performance may help in making potential market for organic agriculture .Thus the goal of this study is to determine consumers tendency toward pay for organic product and effective reason for paying more for that and finding effective problems and reasons in agricultural products and organic production. It should be noted that just a few research has been done to check tendency to pay for organic products and determining effective reason of that in the world. Therefore, the goals of this research are to find out the effective reason to pay for organic production in Marvdasht as a case study in Fars province and answer to these questions that: Do consumers want to pay more for organic

products than other products? Is there any significant relationship between consumer's economic, social features and their tendency toward buying organic food? Organic agriculture is not a new topic. Organic agriculture is a way to provide food, used since thousand years ago before pesticides and chemical pesticides are coming (in this century). During World War II, two chemical (DDT, Amonium nitrat) were discovered and used extensively as pesticides. In those days, farmers were relied on blood plant (hybrid) monoculture products, extensive irrigation and mechanization. But in industrial scale, agriculture is increased because of pesticides and critics on this kind of agriculture was increased. In 1924, a scientist named Dr. Rodelf Eshnir presented a theory of spiritual science and natural cognition. History idea a tea e of biodynamic agriculture which is used in most of countries. Also in that time, Dr. Hans Mooler in Sweden found movement based on correcting agriculture system based on Christian beliefs to keep and save families farm and ground. Later, he presented a new theory in relation to fertility and microbiology that developed organic and ecologic agriculture in central Europe.

At the end of 70 and 80 centuries, there was a formal relationship between organic producing farmers in England, France and

U.S.A. In 19 centuries, consumers need for organic production cause motivation to edit organic production standard. Mafi and Hoodari (1393) studied using contingent evaluative approach and evaluating tendencies to pay for organic dairy and protein a case study I milk, meat, eggs. HE result demonstrated that income and cancer survival in families had positive significant on the variable of paying for organic products.

Mozfar and his colleague (1391) studied the relationship between development of organic market increasing in Mazandaran province villages welfare a case study on organic cucumber. The result illustrated that consumers tendency toward buying organic cucumber was not more than 2276/504 Rials than normal ones. All the variables such as age, individual and family's income, and their use of that in a month have knowledge about organic production have significant effects. All the variables had a positive relationship to probable suggested pay for organic productions, except sex variable.

Haghjoo and colleagues (1390) studied consumers effective tendencies toward healthy food in Azarbaeejan sharghi. The result showed that 97% of consumers accepted to pay more for healthy productions while 84% of them accepted to cost these production 5 to 25% more. The result of this

model was demonstrated that variables such as individual income, family, tendency toward keeping environment, individual knowledge about healthy products and dangerous food risks have positive significant relationship to consumers tendencies toward paying for healthy food products. Women were more interested in paying more and special people I families consume more and willing pay more for healthy food.

Rajbi and colleagues (1390) studied relationship between individual's knowledge and their tendency toward buying and using organic products. Research demonstrated that people knowledge about organic products were medium. As they experienced or not experience in agriculture actives, they had different knowledge.

Ghorbani and fellower (1390) .found the effects of potential credit needs of farmers on tendency toward organic cucumber production in Khorasan Razavi province .It analyzed by regression .data was suggested to provide organic product market system , reward fulltime farmers, improving farmers payment to increase their financial power for investment , use fare observant and improve their role in green house productions and use insurance.

Mafi and Saleh (1388) studied tendency toward organic products, cucumber and

vegetables in Gillan and Tehran. The result demonstrated that the average tendency of each person for one kilogram of organic cucumber was about 12200 Rials and for organic vegetables was about 17238 Rials for each kilogram. Also, variables such as cancers survival had appositive significant effect on the tendency toward organic cucumbers.

Artesnes (2011) studied the effects of individual variable on using organic products. According to this study , individual knowledge about physical properties and organic products are the most important ad had positive effect on using organic products and inappropriate contact to to organic products had a negative effect on using organic products. Lack of knowledge about organic products features was the main reason of not buying these products by American people.

Alizade and followers (2008) in a gauging study, investigated the relationship between consumers knowledge, preference and needs for organic vegetables in quantitative method. In this study about 470 people answered questionnaires illustrated 50% of people had the least knowledge about organic products and their tendency toward organic products were evaluated.

Aria and followers (2007) evaluated consumers pay for organic products by Propit model. The result showed that age, income, sex and geographical features were effective variables in consumers' tendency toward paying for organic products.

But and His followers research result declared consumers tendency toward paying more for organic products, and also products which are not completely organic, too. Preference to pay more was related to consumer's knowledge about organic products features. Another research was done by Ekiungoor and his colleague (2007) in Turkey. It declared urban people with high education and income had more knowledge about nutrition values and knew that organic products were less dangerous than other products for human health. This declared potential for organic products in Turkey s cities. Ghorbani and his colleague in a study field investigated the consumers preference to use organic products in Mashhad. The population were about 180 people and the result was demonstrated 80 % of them didn't have enough information about organic products .But 173 of them were willing to use that products .Roodrigers and his followers (2007) studied the " Consumers Tendency to Pay fr Organic Products in Bonus Ares in Argentina". The method was contingent

valuation and binary logistic regression .results of the study declared consumers were willing to pay 6 to 20% more for healthy productions.

Darabi and his followers (2006) studied consumers tendency toward paying for local production like healthy milk , fruit and vegetables . The method was contingent valuation and Logic model. the result illustrated consumers tendency to pay 1.5 to 0.30 Dollars more for this products than other products .Being more natural, freshness and local prodigious were factors of this tendency. Beth and followers (2006) in another study in U.S.A implied consumers awareness of national organic standard procedures would improve extra pay for these products .Also, it was concluded that old and high income consumers were willing to pay more for organic products. On the other hand,women and married people are willing to pay more for these organic products .This seemed significant .

Calman and followers founded the main reason of popularity of organic products in consumers views in Brazil was the better quality of organic products (23%).Also, Sang and Hiv (2004) studied the valuation of meat production in Korea with their tendency to pay .In this study, their tendency to pay for 600 gram of organic meat was7.0198.

Another study was done by Corsi and Nouli (2003) in Italy and calculated the maximum cost of organic meat that consumers were willing to pay. The result declared consumers tendency toward this product is great .Thus organic meat may have considerable share in Market.

Wang and San (2003) found out the effective factors in consumers tendency toward pay for organic product by contingent valuation method and Logic model. Result illustrated married , age , income were factors that had apposite and significant relationship with people tendency to pay . Education and number of people in a family had negative relationship with their tendency to pay.

Kernfield and Magonoson (2003) studied the effect of tendency toward paying for products which were free of pesticides in Canada. Their method was contingent valuation methods and analyzing Propit Model. The result demonstrated 65% consumers were willing to buy this products 1 to 10% more expensive and 5% of them bought this product more expensive than 20% . Variables such as health, environmental concerns, support organic farms, age of responders had a significant and positive relationship with their tendency toward extra paying.

Lorid and his colleague studied the consumers tendency toward organic labeled apples in

Portland in USA .their method was contingent valuation and Logit model .result illustrated women with children and people interested in environment and healthy food , had tendency toward extra pay for these products. Kowan and his colleague (2000) studied Irish consumers tendency toward healthy beef .The method was contingent valuation and Logit model .About 64% consumers ha tendency toward extra pay for healthy beef then other kinds of that meat. Results showed consumers background knowledge , taste , health reason ,guaranteed label , age were factors that had positive significant relationship o these tendencies.

Bokalti and Nardela (2000) studied consumers tendencies toward fruit ad vegetables free of pesticides in three department stores in north Italy .Their method was contingent valuation and Logit model to estimate order. It demonstrated consumers tendency to pay is positively and significantly related to their attention to healthy food and their income .Also , it was negatively and significantly related to their education. On the other hand,lack of knowledge about this healthy food features , lack of correct standard , misunderstanding of these products just as children and ill food and limited contribution of these products in supermarkets

were the main reason of consumers negative reaction to these products .

Gill and followers (2000) studied consumers tendency toward paying for organic products .Result illustrated consumers tendency toward paying more for organic products . The main reason of this tendency was paying attention to healthy environment and healthy food.

Juwinda Sami (1999) evaluated consumers tendency toward organic production by using contingent valuation method approach in Italy .He founded that high price of organic products might be an obstacle for consumers using them irregularly . It meant there was negative relationship between pay and organic productions price.

Schiferstone (1998) researched about interest for buying these products. The result of that demonstrated consumers needs for these organic products were due to healthy of these products. But the environmental consideration had less focused than healthy food.

Anderhill and Figura (1996) studied different effects on consumers tendencies toward uncommon products ( healthy , organic , local ones) in Ireland . Their method was contingent valuation and Logit model .It demonstrated that healthy people were willing to pay 19% more for this uncommon products. Also, factors such as biological label, supporting continuous development ,

referring to sustainable management in producing packages had positive and significant relationship to consumers tendency toward pay for these products .

### Methods

Contingent (Conditional) valuation technique uses for evaluating goods profit and environmental service and such as these, which can't evaluate in s significant market ( Amirnezhad ,1385).

This method is considered by interviewing, imaginative market to determine environmental goals price(K horshiddoost , 1387)

It goal is getting exact estimating of profits which is in the multiplicity of non production level or some goals price and public and nonmarket service. Contingent valuation was suggested first by Krissy and Antrab (1974).Leedaven experimentally used it in 1974 ( Amirnazhad ,1385).

This method is currently usable for two important goals, value and select value. This method determine person tendency to pay with different instruments .In other words, contingent valuation method tries to evaluate individual in increasing or decreasing goods quality in an imaginative market ( Khorshiddoost , 1387).

The goal of that was to bring exact profit estimation that made by nonproduction level

or some goods price and public service and nonmarket. Determining this model for measuring tendency toward assumed cost for an individual accept or reject of suggested cost, that is according to maximizing self-utility in the following conditions (Amirnezhad and colleagues, 1385).

One of the prerequisite of each study in contingent valuation is selecting appropriate instrument. Gathering data and interview are more preferable than other methods (Karson & Michel, 1989). In this research two part questionnaire was used to evaluate people tendency toward using organic products. Two part technique was first used by Karson and Stenberg (1990). This method is relied on high suggested, that is twice or more than the first suggestion (Vecta, 2003).

One of the common questionnaire which was used here to evaluate consumer, is contingent evaluation. In this method, the responders are asked to talk about the price of special good (here is organic products). In this way, a list of questionnaire consisted of different qualities of goods were given to interviewer. In other word different quality of goods were considered.

In contingent evaluation, people may be asked about their goods. These extra questions will get the research about people opinion, their behavioral pattern, accuracy suggested pay.

One of the profit of contingent evaluation method is searching in an extended research, especially in places with incomplete information (Khoshnevis, 1382). Therefore in this study, contingent valuation method is used instead of other method.

In this study, tendency toward paying for organic products was investigated in CVM by four part inventory questionnaire. The first part of the questionnaire. The first part of the questionnaire about social and economical conditions of responders. The second part asked about environmental valuation responders opinions. A paper was attached to the questionnaire and proposed if different kind of plant, animals. The third part, responder knowledge about these information in the paper was asked. The fourth part was questions about people tendency toward paying for organic products.

In this part, these suggestions were proposed .250000 Rial (first suggestion), 220000 Rial (middle) and 280000 Rial (high suggestion). These prices were proposed according to pre-test with use of open questionnaire to describe the highest suggestion for paying for organic products. The pre-test was Marvedasht. WTP were proposed in a way that in the first step, middle suggestion was asked. Then, negative response of responders suggested lower price

and positive responses suggested high price. Finally, person was asked to say how much he wanted to pay for organic products. In this part responders could answer positively or negatively or none of them. Answers were recoded. Dependent variable for organic product valuation was probable acceptance of the suggested price for use of it. This variable was got by answering to this question "Does an individual agree to pay for organic products? Or not?" a person would accept to pay for organic product when his utility as we used that good and paying tax is more than the time he doesn't use that (Lumis & Park, 1996).

This study was a case study on organic product. Sample was gathered randomly from town. The result was got by Logit model. This research studied on tendency toward organic products paying. Variables were age, education, non organic meat usage in a week, income, suggested price, organic knowledge, attitude toward food nutrition and attitude toward access to products. In economical theories, consumers welfare were evaluated by compensation change, which is tendency toward paying for goods and calculated by inventory binary choice in differential pattern of utility. Differential pattern of utility, an individual utility function (U) valued by an individual characteristic, income, envi-

mental products quality. A person will buy organic products when his utility by paying for that product is

$$U(1, Income - Bid; S) + \varepsilon_1 \geq U(0, Income; S) + \varepsilon_0$$

In this formula U is an indirect utility an individual will receive. Income is monthly income and Bid is the price a person pays for organic products. S is economical and social characteristic of people.  $\varepsilon_0, \varepsilon_1$  are random variables with mean of zero which are equality and independent contributing.

In indirect utility function U(') zero is or when a person doesn't pay for organic product and doesn't use that product and number 1 is vice-versa. Therefore, the difference of utility ( $\Delta U$ ) will be a function of Bid, S, income and will be demonstrated like this:

$$\Delta U = (1, Income - Bid; S) - U(0, Income; S) + (\varepsilon_1 - \varepsilon_0)$$

If  $\Delta U > 0$ , responders say "yes" and pay for organic products. And this question asked "Do you accept to pay suggested price for one kilogram of this organic product?" the answer will be "yes" or "no". Evaluating regression function with dependent variables is done by Logit and Probit model. The result of these patterns to different

(Green,2002).Probable contribution of Logit model is that:

$$P_i(Y = 1) = \frac{1}{1 + \exp(-\beta X)}$$

In here ,p(y=1) is probable accepted suggestion X= explaining variables β = is parameter pattern. In Logit model probable (a person accept one suggestion ) is demonstrated in formula:

$$P_i = F_\eta(\Delta U) = \frac{1}{1 + \exp(-\Delta U)} = \frac{1}{1 + \exp\{-(\alpha - \beta.Bid + \gamma.Income + \theta.S)\}}$$

In that  $F_\eta(\Delta U)$  is cumulative distribution function with standard Logistic difference and  $\gamma, \theta, \beta$  are coefficient estimate and expected that  $\gamma > 0, \beta \leq 0, \theta > 0$  (Joj,1999).

$$E(WTP) = \int_0^{[inf\ ifinity]} AF_\eta(\Delta U)dA = \int_0^{inf\ ifinity} \left( \frac{1}{1 + \exp\{-(\alpha^* + \beta.Bid)\}} \right) dBid$$

E(WTP) is the amount that people in a society expected to pay and  $\alpha^*$  described as intercept adjusted .ne of e main reason in Logit model ,predicting th effect of changes i n explanatory on probable accepting of suggested price by a person and to evaluate effects of change in each of in dependent variables ( $X_{ik}$ ) on probable to suggested price ,we should details of the derivative of

the fourth formula to get the final effect of variables (Jo 1988).

$$\frac{\partial P_i}{\partial X_{ik}} = \frac{e^{\Delta U}}{(1+e^{\Delta U})^2} \beta_k \quad (6)$$

Finally the explanatory variable elasticity K estimated in the seventh formula (Joj and hiscolliques1998).

$$\epsilon_i = \left[ \frac{e^{\Delta U}}{(1 + e^{\Delta U})^2} \right] \frac{X_{ik}}{P_i}$$

For the reason binary questionnaire and Logit model with maximum correctness was used. The result extraction as b y Microsoft Software .

**Model3-2**

The regression model which was used her was this :

$$(8)$$

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + \beta_8 x_8 u$$

Y is a dependent variable and demonstrates tendency to use organic .If person wanted to pay for this product , then Y is one and if he doesn't want to pay ,then Y is zero.

X=age

X2=suggested price

X3= education

X4=use of none organic mea t

X5= income

X6=organic knowledge

X7=attitude

Result

Social and economical characteristic of responders ,after analyzing the filled out questionnaire (308 questionnaire )showed economical valuation of organic products ,and economical and social characteristic of responders .Theses information were consisted of mean ,medium ,SD, minimum and maximum of economical –social responders variables ,that is illustrated in table 1.

AS it illustrated in table-1, average age was 39. The youngest was 21 and the eldest was 70 years old. The responders average education was 13.90 .That was the least illiterate and the most literate person was PHD. Their average income was 8580000 Rials. The lowest income was 400000 while the highest was 1000000 Rials. The average use of red meat in family in a month was 3.5 kilogram The fewest was 2kilogram while the most was 4kilogram in a moth. Job variable Responders job contribution was according to the number and was in table -2

According to this table (5-3) about 29.2% (90 people) were employers, 4.8% were

teachers(15 people),22 % we worker s (68 people) 15.2% were business man(47 people) 11.4% were farmers(35people) ,11.4 % were retired (35 people), 5.5% were house workers (17 people) and less than 1% was in other work(1 person).

Investigating the important effect of increasing organic product needs, is a part of this study and related to investigating the important effects of increasing organic products needs in consumers opinion .Thus five scale was selected from : 1-very low ,2- low ,3- average, 4- high, 5-toohigh .Data analyzing was reported in table-3.responders were selecting qualified production .responders believed that improving products qualities is the most effective factor r in increasing needs. The second choice they selected more ,was focusing on individual families food and inexpensive products .The less important factor in their opinion was friend and relative recommending for that organic food.

maximum	minimum	SD	mean	variables
70	19	9/57	39	Response age
1	0	0/45	0/81	sex(male =1,female =0)
8	2	0/93	3/54	Size of responders family
23	0	4/08	14/10	responders education
1000	400	2470	8580	Responders income (per month)
9	2	2/2	3/5	Family's cucumber usage in month (kg/month)

Reference: research data

Total	Other	House workers	Retired	Farmers	Businessman	Worker	Degree	Employer	job
308	1	17	35	35	47	68	15	90	Numbers
100	0/3	5/5	11/4	11/4	15/2	22	4/8	29/2	percent

Reference: research data

Table -3: investigating different effects in increasing organic needs in consumers opinion

Score	Very much	many	Medium	Few	Very few	Conditions
1312	124	144	36	4	0	Make special market for organic productions
1322	138	134	32	0	0	Doctors recommendations for health
1362	152	134	22	0	0	Pay attention to individual and families food
1176	66	138	88	16	0	Relatives and friends recommendation to use this products
1220	116	76	104	12	0	Media advertisement
1358	168	112	18	6	4	Being cheap
1440	214	88	6	0	0	Quality
1276	124	116	64	0	4	Appropriate package
1264	92	160	52	4	0	Usage

Reference ;research data

Responders scored products qualities .they believed improving quality was the most effective factor in increasing needs. Paying attention to individual and families food and being cheap were the second and third factor that focused on their opinion .The least important factor was friends and relatives recommendations for that products.

### Increase of organic products in consumer's opinion

Increasing organic product's needs, related to increasing that production, too. Therefore this part studied the effective factors in increasing organic products. The result was demonstrated in table -4. In consumer's opinion the most effective factor in increasing organic products was supporting farmers. Iso, they scored checking organic products market

and made a special standard for these products. Deleting agricultural subsidies would have the least effect in increasing organic products ,in consumers opinions.

In contingent valuation determining valuation and tendency to pay was estimated by double questionnaire In this questionnaire suggested price as proposed and people were asked to declare their answers by 'yes' or 'no' .in this part low ,middle and high suggested price were declared .in this study tendency toward pay more for organic products than other products were asked as this. At first medium suggestion a proposed i.e. 250000Rial .if responders accepted that the higher price as asked and if the responder rejected that medium price ,the lower price was asked. the result was in table -5.

Table 4: Effective factors in increasing organic products in consumer's opinion

Score	Very much	many	Medium	Few	very few	Condition
1386	190	82	36	0	0	Supporting farmers due to organic production
1094	70	96	92	34	16	Stop subsidies on pesticides
1314	116	162	26	4	0	Pay attention to organic production market
1314	128	138	40	0	2	Make special standard for organic products market

Reference: research data

Table -5: Responders tendency toward paying

ریال 280000 price	ریال 220000 price	ریال 250000 Price	Suggested price Accepting	
105	90	209	Numbers	accepting suggested price
34	29/3	67/8	Percent	
104	9	99	Number	Not accepting suggested price
33/8	2/9	32/2	Percent	
209	99	308	Number	Total
67/8	32/2	100	percent	

Reference: research data

As it showed 67.8% of responders agreed on paying the for suggestion for organic red meat ,while 32.25 of them rejected that. Also ,2.9% of responders didn't accept the second lower price either. The first group who accepted high price (250000Rials) were in high suggested group and third suggested price was proposed for them.33.8% of them didn't accept while 34% of them accept the suggestion .

### Economical evaluation pattern

Logit model was used to demonstrate the effect of dependent variables use in dependent variables (tendency toward use).The result of Logit model was in table -6.

In the first right column, variables were defined .estimated parameter, SD, significant level and the final effect of independent variables on dependent variables were in other column. A good criteria in table (12-4) was correct collecting criteria of accepting or rejecting suggested price for economical value of that products .the correct prediction in estimate pattern was 80%, therefore, estimated pattern could be in according to described variables. In others, 0% of responders predictable answers to 'yes' or 'no' was completely appropriate .

Table -6: effective factors on tendency toward pay (Logit model)

Final effect	Statistic valuet	SD	Obtained variables	variables
0/017	5/693	0/094	0/535***	age
-0/044	2/737	0/486	-1/331**	pay
0/047	2/848	0/499	1/423**	education
-0/011	-1/290	0/266	-0/343	Using one kilogram nonorganic meat
0/000004	3/398	0/00012	0/00014*	Income
0/08	3/167	0/823	2/609*	Familiar with organic
0/06	3/739	0/508	1/900***	Attitude toward organic nutrients
-	4/419	3/892	17/199***	constant
Maximized value of the log-likelihood function = -33/ ;0721Pesaran-Timmermann test statistic = 16/0019(0/000)				
Pseudo-R-Squared = 0/82				

Reference: research data

Estimated coefficient estimated is 1% level was significant with positive sign for probable accepting of suggested price for that organic products. indeed, as the age was increased, their tendency toward using organic products a increasing, too. because old person were dealing more with sickness and its problems and willing toward organic and natural products. But younger people weren't care for their health and didn't use organic products. focused on the final effect of 1% increased in people age cause .017% increase in people accepting suggested price.

Increased price with negative sign 1% level was significant on probable accepting of suggested price for organic products. the negative sign showed that increasing organic products would decrease probable accepting of price. in other word, if income variable was increased 1% probable suggested price would decrease .04%.

Education variable 5% level, has a positive reaction to probable suggested price accepting. Educated people more familiar with chemical effect on human health and know organic products usage. they pay more attention to organic product. The final effect of this variable as increasing .047% by 1% increasing in education age.

Income variable in 10% level demonstrated positive effects on probable accepting of

suggested price for organic products. positive sign of that showed if a person income increased, probable accepting of suggested price would be increased, too. In other words, according to factor final effect, if income was increased to 1%, the probable accepting of suggested price would be increase .000004 Rials.

Knowing organic products in 10% level had a positive relationship to probable accepting of organic products price. It showed the importance of increasing awareness and knowledge toward these products and advertisements. Also, according to obtained final effect for this variable with 1% level increasing in educational stage, their tendency toward pay would be increased to .08%.

Attitude toward these products contribution's in 1% level have a positive effect on probable accepting suggested price. It meant that these products nutrition are effective on consuming behavioral change and development and improving. And improving production and consuming these products. Also, according to obtained final

Effect variables, if this variable 1% increases people tendency toward pay will be increased to .06%.

the correct prediction of this model due to the correct prediction is acceptable rate of

dependent variable in according to the declared variables .

Average expected tendency to pay (WTP) of one kilogram of organic red meat .after

$$E(WTP) = \int_0^{Max} AF_{\eta}(\Delta U)dA = \int_0^{Max} \left( \frac{1}{1 + \exp\{-(\alpha^* + \beta A)\}} \right) dA$$

$$= \int_0^{300000} \left( \frac{1}{1 + \exp\{-(\alpha^* + 0.00012A)\}} \right) dB = 261984 / 0$$

Therefore ,average tendency toward one kilogram organic red meat was 211984 Rials .result showed that people were willing to buy organic products more expensive than none organic products .thus , this tendency to pay may compensate productions cost of each kilogram of organic productions .

## RESULT AND CONCLUSION

Although Iran is a developing country with average income, but people would pay more for organic products than other products. It shows that societies attention toward health and utility.

The method was contingent valuation .data were gathered by 150 binary questionnaire .suggested price for organic products were 250000 , 220000 and 280000 Rials .tendency toward society's paying and determining effective factor on this tendency was estimated by Logit model. Average tendency toward paying one kilogram red meat was 261984 Rials .The result demonstrated that

estimating Logit model parameter with maximum likelihood with integrating a certain number of returns zero to infinity will be calculated as follow

education had a significant effect on choosing organic red meat by people. It showed increasing in people education, knowledge, awareness to security, taste, health of food .Also, Misra (1991) Ekioogur (2007) ,declared this positive and significant relationship between age and probable tendency toward organic red meat. Means old people are willing to pay more than younger for organic productions.Arias (2007) studied was the same, too. There is a significant and positive relationship between people income and their probable tendency to pay for organic red meat. Bet accepted that .Attitude toward food nutrition has a significant and positive relationship to tendency toward pay for organic products .Koochrki(1392) accepted this result , too. Therefore, more attention to food nutrition cause probable tendency toward pay for organic products. Being familiar with organic products has a significant and positive relationship with

people tendency toward pay for that .Ekiungoo(2007) and Mafi ,Saleh(1388) accepted that .

Also, descriptive analysis showed:

Farmers knowledge about different steps of organic agriculture and organic products.

Consumers said making organic market, doctor recommendation, paying attention to individual and family's food, recommending friends and relatives to use these products , advertisement ,being cheap quality ,appropriate package ,using this products before were the factor that increase needs for these products.

Consumers said farmers support to produce organic products, stop chemical subsidies of institutions, investigate organic products market, make special standard for marketing agricultural products were useful factors in increasing organic products.

### **Suggestion**

1-the result demonstrated the importance of increasing consumers awareness toward this products nutrition and using healthy food .therefore developing ,training and extending farmers and consumers with the aim of awareness of organic products ,is necessary .Indeed media role in culture and introducing features of this product, is determining .

2- the result showed that education has a significant effects on Yazd people to choose

organic products . It showed that increasing education will increase their awareness, knowledge and paying more attention to security ,taste and health of food. Thus , it suggested that set up workshop and increasing organic agriculture and activate organic agricultures And organic products community and increase people s awareness to develop and increase organic products and organic agriculture for all people in the society.

3-as there is a significant and positive relationship between people income and their tendency toward pay for organic red meat .therefore adopt any policy to increase people income cause increase in the use of organic products in that studied society .

4- the result showed that older people pay more attention to their health are willing to pay for organic products .younger 's taste should change to organic products .then they will be healthier.

5- there is a significant relationship between familiar with organic production and people tendency to pay for organic red meat . therefore ,organic products advertisement in school and seminar and with media should be focused on improving people awareness about these products .As the result showed most of people accepted to pay more for organic products .this statistics illustrated the

best suitable condition for production and offer organic agricultural products in Yazd province. Thus , its suggested that a suitable condition for these production are prepared to improve people health . on other hand , institution dedicated support such as cheap loan , subsidizing green ,organic production insurance can motivate farmers .

## REFERENCES

- [1] Eftekhari.E, Sareban 1385. The role of organic agriculture in food security. *Jihad* (271)
- [2] Haghjoo , M. , Hayati , B ,Mohammad , R. , Pishbahar, A and Dashty , Gh. 1390. Effective factor of potential consumers to pay increased rates for healthy food products :A Case Study of Jihad organization in East Azarbaijan Province , College of Agricultural Knowledge sustainable production , Volume 21, Number 3.
- [3] Rajabi, M. , Puratashy , M. Vaghmy , h. 1390.Assessment of Knowledge tropism toward the purchase and consumption of organic products, the first National Congress on Science and Technology of modern agriculture.
- [4] Farhoudi , R. 1379. weed control methods , field journal , published Issue 0.72
- [5] Ghorbani, M. Liyaghati , H . And Nemati , F . 1390. Factors potentially effective demand for agricultural credit in favor of organic

greenhouse cucumbers Khorasan Razavi province. *Environmental science*, eighth year ( 3 ) : 46-35

- [6] Mafi, H. And Saleh, A. 1388. A Case Study of willingness to pay for organic products (vegetables, cucumbers, Gilan Province and Tehran ). *Journal of Agricultural Economics and Development* .4(5): 60-69.