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ORGANIC AGRICULTURE AND ORGANIC FOOD CONSUMPTION IN KOSOVO

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Abstract:

Organic agriculture is an alternative farming method that emerged in the early 20th century, in response to rapidly evolvement of agricultural practices. There are a number of factors that affect the development of organic products, among which, the most important factor is the consumer. Market demand increases for organic products mainly from the number of consumers.

The aim of this study is to evaluate the awareness of consumers and their perceptions for organic products for the case of Kosovo, through the use of cross-sectional data for the year 2014 provided by the Ministry of Agriculture, Forestry and Rural Development. The results suggest that Kosovo's consumers trust organic products more than conventional ones, comparing them in terms of mode of production, freshness, safety and taste, but however, despite the increase in food costs as a result of increasing age, family income, increasing family members, kosovars are not very willing to pay more for organic food.

As part of the empirical analysis was conducted the OLS regression of variable Food Expenses over Family Incomes, Age, Education, Family Members and Children under the age of 14. It was suggested that families spend on average 306 Euros for food from their average incomes of 701 Euros. The results suggest that the variables of Age and Family Incomes are significant at 1% significance level while the variable of Family Members is significant at 5% level of significance. The variables of Education and number of Children under the age of 14 are found to not have an impact on food expenses. On the other hand, it is also evaluated that the Kosovar customers are willing to pay on average 19% higher price for organic products but this variable is found to be weakly correlated with family incomes.

Keywords: *Organic products, willingness, consumption, incomes, food, Kosovo.*
JEL Codes: *013; Q13, Q18*

1. Introduction

Agricultural land plays an important role across the world. As a result of increased supplies of food and other products, it contributes significantly to greenhouse gases, loss of biodiversity, agrochemical pollution and soil degradation. Many of those environmental impacts come from arable lands. The challenge of feeding a growing population, associated in the same time with the protection of the environment, has become a serious challenge to the future. Concerns about the unsustainability of conventional agriculture with high inputs of synthetic pesticides and mineral fertilizers, have promoted interest in other farming systems,

such as organic agriculture. Adopting organic agriculture systems is the best opportunity for meeting this grand challenge and ensuring future food and ecosystem security (Reganold & Wachter, 2016).

Organic agriculture is an alternative farming method that emerged in the early 20th century, in response to rapidly evolvement of agricultural practices. In addition, in 2016, the implementation of organic regulations through organic standards and controls has gained the trust of consumers and policy makers in 87 countries in Africa, America, Asia, Europe and Oceania (Arbenz, Gould & Stopes, 2016). Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for everyone involved (International Federation of Organic Agriculture Movements, 2008, (IFOAM)). Organic food is produced according to certain criteria which can differ slightly from one country to another. In general, in production are used materials and methods that improve the ecological balance of natural systems (Honkanen, Verplanken & Olsen, 2006). For example, organic food is produced without herbicides, pesticides, antibiotics, inorganic fertilizers, and growth hormones. While conventional agriculture uses synthetic pesticides and water-soluble synthetically purified fertilizers, organic farmers are restricted by regulations to using natural pesticides and fertilizers (IFOAM).

Consumer demand for organic products has led to an increase in the number of farmers adopting organic farming. The growing demand for organic products has also prompted international trade to develop. Countries that do not have internal demand but have a good environment for organic farming goods that cannot be produced in Europe are producing for the export market (Demiryürek, Stopes & Güzel, 2008). It is important that marketers are aware of the changing ethical beliefs of consumers since the future of organic farming would be depend from market demand, therefore a consumer-oriented approach is critical to understanding organic agriculture on its own right, but also in terms of changing dynamics of the market.

This paper offers a systematic review of the empirical research comparing organic goods with conventionally produced alternatives. The emphasis is on the evaluation of the awareness and perception of Kosovar customers for organic products by using a database provided by Ministry of Agriculture, Forestry and Rural Development (MAFRD). This database contains data from 300 surveys conducted in three main cities of Kosovo: in Prishtina (capital city), Prizren and Gjilan.

In addition to the analysis to be provided using the data from the surveys, in this paper is also going to be conducted a regressing analysis on the effect of family incomes, number of family members, children under 14 years old, age, years of education on food expenses. Lastly, is going also to be investigated the correlation between family incomes and the willingness of the customers to pay higher price for organic products. All of the results are going to be presented in the section four of this paper.

2. Study Context - Kosovo

Kosovo is a lower-middle country located in the Western Balkan Peninsula. Since the end of the war in 1999, it has experienced a modest economic growth whose main drivers are considered to be the government consumption and investments (MAFRD, 2013). But also the agriculture is considered very important for economic development of Kosovo.

Agriculture activities have traditionally been part of the daily life of many people living in the rural areas where more than half of the population lives (MAFRD, 2013). For the case of Kosovo in particular, agriculture is considered as one of the most important sectors for the

economic development. There are 1.1 million hectares of land from which 53% is agricultural land and 41% is forest land (Ramadani, 2012). Agriculture contributes highly in GDP and provides employment for more than 2.25% percent of total employment, as of 2016. If informal employment is considered, it is estimated that agriculture provides nearly 25 % of total employment. Results of 2011 from the Population, Households and Housing Census in Kosovo, shows the employment rate in agriculture is 4.4% while the number of rural population is 1,078,239 or 61.97% (KAS, 2011).

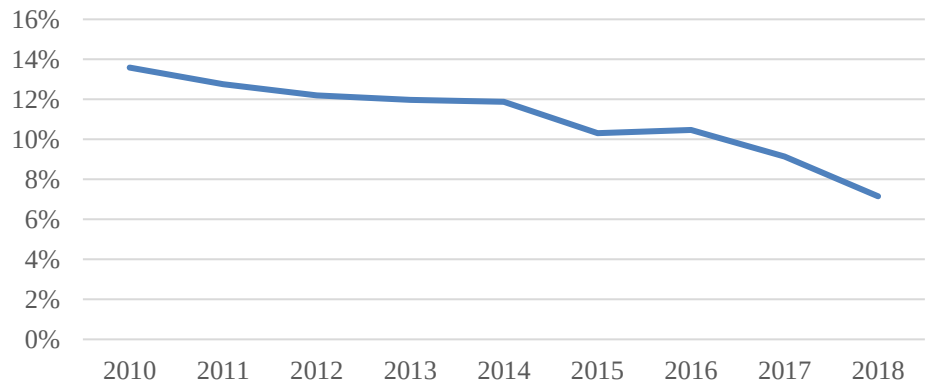
Before the transition, in 1980's, agriculture accounted up to 25% of GDP. In 1995 the agriculture contribution to GDP was about $213 million, or about 30%, according to the Ministry of Agriculture, Forestry and Rural Development (MAFRD, 2015). However, during and after the war the participation of agriculture into the GDP declined precipitously from 14.8% in 2008 to 7.2% in 2018 (KAS, 2020).

Table 1. GDP and Agriculture, Forestry and Fishing in Current Prices (in € thousand) for 2010-2018

	2010	2011	2012	2013	2014	2015	2016	2017	2018
GDP	4,401	4,814	5,058	5,326	5,567	5,807	6,070	6,413	6,725
Agriculture, Forestry and Fishing	598	614	617	638	661	599	635	586	481
%	13.6%	12.8%	12.2%	12.0%	11.9%	10.3%	10.5%	9.1%	7.2%

Source: KAS, National and government accounts 2010-2018.

Even though, the contribution of agricultural sector to GDP for the case of Kosovo over the years has declined, it is still considered as one of the sectors that contributes mostly to economic development, poverty reduction and food safety (MAFRD, 2017).



Source: KAS, National and government accounts 2008-2016

Figure 1. Contribution of Agriculture to GDP for Kosovo, 2010-2018 (in %)

One of the reasons for this significant decrease is the development of other sectors of the economy, especially services. However, it should be noted that agriculture is still one of the main contributors to the GDP compared to other sectors such as manufacturing (11.3%), construction (8.7%), whole sale and retail (13%), real estate activities (7.4%), public administration and defence (7.8%), as of 2018 (KAS, GDP by economic activities in current prices, 2020).

From the aspect of the share of an economic activity in the GDP in current prices in 2018, Agriculture, forestry and fishing accounted for 7.2 %, which compared to 2017 decreased for 1.99pp. Even though, in Kosovo there is a decrease of Agriculture in GDP, compared to other neighbouring countries and also to EU-27 (average share is 1.7% in 2014, World Bank, 2018), this share of agriculture to Kosovo's GDP is considered high, implying that agriculture is an important sector for the economy of Kosovo. In addition, agricultural sector provides opportunities for employment and is one of the sectors that generates incomes for the people that live in the rural areas (Miftari, Hoxha, and Gjokaj)

However, agriculture production is largely not intensive due to the small sizes of the farms and also due to the lack of technical expertise, outdated farming practices, inadequate use of inputs, lack of credit and inefficient farm management practices – as a result most farmers are subsistence or semi-subsistence farmers (MAFRD,2013). Low share of agrifood products are exported, nevertheless, agrifood products share of total experts is significant – it accounts for 16% of total export value and as such continues to be an important creator of national wealth – 80% of export target are Western Balkan countries (Bunjaku, 2012).

In general, Kosovo has competitive potential in the horticulture sector, i.e., the production of fruits and vegetables, as well as in the livestock sub-sector (World Bank, 2012). Domestic demand for horticulture and livestock products is expected to grow as purchasing power increases. Over the last decade, the demand for high-value horticulture products has surged more than any other food category (World Bank, 2007).

While other potential sources of economic growth are being explored, Kosovo needs to strengthen the agricultural sector in the short term. Sustainable agricultural growth could minimize dependence on imported food products and help control environmental pollution. The comparative advantage of Kosovo's agricultural sector is likely to be in specialized crops, including organic production.

Given the small farm size, Kosovo's comparative advantage is likely to lie in fruit, vegetables, meat, dairy, and poultry production. In particular, the decline in fruit and vegetables production in recent years needs to be reversed.

3. Literature Review

Growing interest in organic farming has prompted multiple studies comparing various aspects of organic and conventional food. Organic agriculture has a contentious history. Some authors support it as the best food, produced in a more natural way, without the use of synthetic pesticides and fertilizers, while others see as inefficient in terms of production after organic production systems are often associated with lower yields and higher costs (Trewavas 2001; Emsley 2001; Willer & Lernoud, 2015; Oughton & Ritson, 2007).

Most research on organic food has identified factors that promote or constrain the consumption of organic food, taking into consideration food quality, food safety, health, (Magnusson et al., 2003; Shreck, Getz & Feenstra, 2006; Liang, 2016)

Health concerns are often found to be the most important motivating factor for buying organic foods (Magnusson et al., 2003). Health benefits associated with fewer additives and chemicals in food, that results on healthy eating, what helps to avoid health problems. So that is why food organic should be recommended to everyone, but particularly to young children, pregnant women, breast-feeding mothers, elderly and chronically ill people. Studies by official food monitoring agencies and laboratories in Germany found that organic fruits and vegetables contained very small levels of pesticides, around 0.002 ppm, while conventional fruits and vegetables produced about 0.4 to 0.5 ppm (Chemisches, Landes- & Staatsliche Veterinäruntersuchungsamt, 2004; Stolz et al., 2005). Nevertheless, statements should be made with caution about low levels of pesticide in organic foods after we live in a polluted

environment and organic farmers and processors cannot promise that their products are residue- completely free (Oughton & Ritson, 2007).

Consumer sacrifice to pay more for organic products compared to conventional is related to the quality that distinguishes these two types of products. The quality concept according to (Oughton & Ritson, 2007), is based on effective process management of growth and differentiation (including ripening). Considering this, organic producers should pay attention to these processes in order to benefit products with good taste and qualitative which can be better for human health. According to research of (Corsi & Novelli, 2002), those consumers who already knew organic products are willing to pay 8,765 ITL/kg (€ 4.53) more than the others more than the others who not tasted organic food. When we talk about qualitative organic products consumers add importance not only to the methods of organic production but also to the freshness, flavor, maturity, taste, color among others.

Consumer insecurity in their purchases has been more pronounced with the lack of food labels, so product labeling is very important. Consumers cannot distinguish organic products from conventional ones if the products lack labels, as they offer information about the production and its ecological impact. According to the findings of many studies labels are a very effective tool to link consumers to ecological goods. Consumer confidence is greater if labels are used on products, in these cases they gained confidence in the nutritional values of organic food creating a positive attitude (Liang, 2016). Product labeling facilitated consumer decision-making, at the same time increased their willingness to pay more for certain products and all this as a result of increased security (Drexler et al, 2018).

Among other things, education and income also affect the demand of consumers about organic products. Consumers with lower income and lower educational background are less likely to hear about organic agriculture. According to (Roitner-Schobesberger et al, 2008) Most 'organic buyers' (58%) tend to have an academic degree, whereas 46% of 'non-buyers' and 33% of 'never heard' belong to consumers who have completed Bachelor degree or higher education. Regarding income, 58% of 'organic buyers' have a monthly family income of over 30,000, compared to 45% of the 'non-buyers' and 38% of the 'never heard'. This shows there is a strong relationship between the level of education, income, knowledge and demand.

Despite the fact that consumer demand can be influenced by various factors, according to (Siderer et al., 2005) organic farming is likely to receive a major boost, as a large proportion of consumers have lost trust in food derived from conventional production.

4. Statistical Analysis

In order to investigate the awareness and perception of Kosovar costumers for organic products, there is going to be used the data from a Structured Consumer Survey conducted by the Ministry of Agriculture, Forestry and Rural Development (MAFRD) during the period December 2013 – January 2014. This is the only data provided from MAFRD that has information regarding the organic awareness and perceptions, and as a result is going to be used also for this study.

The survey conducted from MAFRD, consists of 300 direct interviews with randomly selected consumers. The surveys were implemented during December 2013 – January 2014. The survey was developed in the capital city of Kosovo, in Prishtina, but also in two other large cities, in Prizren and Gjilan. Distribution of the sample was based on the simple random sample technique – the sample be allocated to the cities according to the respective size of the population. Questionnaires were designed based on literature review, expert interviews and were pre-tested through direct interviews with consumers. For quantitative data analysis, different techniques have been used. Data from the structured surveys were entered into excel databases and were analyzed using SPSS and also STATA.

4.1. Data Description

A series of elements about perceptions and attitudes among Kosovo consumers was measured, using basic descriptive statistics analysis to describe the responses of the sample group. In this stage this method of analysis represents the largest part of this report.

The sample is relatively balanced from gender prospective – slightly more than ½ (namely 55%) of the interviewees are males.

Table 2. Gender

Description	Frequency	Percentage
Male	165	55%
Female	135	45%
Total	300	100%

Source: MAFRD, 2014.

About 42% of the interviewees have university education level, whereas 48% have high school education. Thus, consumers are largely educated, which is common feature for urban areas in Kosovo.

Table 3. Education Level

Description	Frequency	Percentage
Basic	6	2%
Middle	23	8%
High school	145	48%
University	125	42%
Total	299	100%

Source: MAFRD, 2014.

Table 4. Descriptive Statistics

Description	**Mean**	***Std. Deviation***
Year of birth	1975.5	12.6
Place of birth	6.3	2.0
Children in the household	1.1	1.1
How much do you exactly spend on food every month in your household?	306.3	122.9

Source: MAFRD, 2014.

Average sample age is 38, however, as shown by standard deviation, the sample includes a wide range of ages. Average households size is slightly more than 6. Average interviewee monthly spending for food is ca 306 EUR/month, however, there is a wide range of values reported by different households.

4.2. Consumer Perceptions and Preferences and Behaviors towards Organic Food Products

Overall most consumers expect/prefer that organic products should be identified by either an independent national/domestic institution or an international independent institution – no major differences between both types. Consumers state that they would trust that a product is organic only if it is officially labelled "bio" and recognized by Ministry of Agriculture (MAFRD).

Table 5. Perceptions/Preferences toward Organic Products Certification

Description	Indicator	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
An organic product must be certified from an independent institution based in Kosovo	Frequency	7	25	29	166	68	295
	Percentage	2.4 %	8.5%	9.8%	56.3%	23.1 %	100. 0%
I trust a product is really organic only if it is officially labelled "bio" and recognized by Ministry of Agriculture	Frequency	2	24	31	130	109	296
	Percentage	1%	8%	10%	44%	37%	100 %
An organic product must be certified from an international independent institution	Frequency	4	34	35	159	63	295
	Percentage	1%	12%	12%	54%	21%	100 %

Source: MAFRD, 2014.

Most consumers (around 80%) perceive that organic/bio food is safer, environmental friendlier, fresher and tastier than conventional food. On the other hand, when it comes to view, most consumers don't seem to agree that bio products look nicer than conventional food products – or, in other words many perceive bio food products (e.g. fresh fruits and vegetable) that have not so attractive view as the conventional ones (e.g. in terms of standardization, shame etc.).

Table 6. Perceptions Related to Food Production (Technologies)

Description	Indicator	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
The organic farming system is more environmentally friendly than conventional farming	Frequency	1	13	44	150	80	288
	Percentage	0.3%	4.5%	15.3%	52.1%	27.8%	100.0%
In my opinion bio products are safer than regular food products	Frequency	4	4	28	131	132	299
	Percentage	1.3%	1.3%	9.4%	43.8%	44.1%	100.0%
In my opinion bio products taste different than regular food products	Frequency	6	25	53	138	73	295
	Percentage	2.0%	8.5%	18.0%	46.8%	24.7%	100.0%
In my opinion bio products look nicer than conventional food products	Frequency	9	80	87	87	30	293
	Percentage	3.1%	27.3%	29.7%	29.7%	10.2%	100.0%
Organic fresh fruit and vegetables are fresher than regular ones	Frequency	1	32	43	160	55	291
	Percentage	0.3%	11.0%	14.8%	55.0%	18.9%	100.0%

Source: MAFRD, 2014.

Table 7. Motivation Related to Organic Food Preference

Description	Frequency	Percentage
They are fresher	43	14.6%
They are healthier	209	71.1%
They taste better	39	13.3%
Because friends buy it	3	1.0%
Total	294	100.0%

Source: MAFRD, 2014.

The main reason why consumers prefer organic food products, is that it is perceived to be safer – thus any promotion of organic future in the future, should take into consideration this important aspect.

Table 8. Answer to the Question: "When a Product is Considered Organic?"

Description	Indicator	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
A product produced in a mountainous areas is organic	Frequency	13	39	61	129	52	294
	Percentage	4.4%	13.3%	20.7%	43.9%	17.7%	100.0%
Products sold directly at the farm are organic	Frequency	17	81	86	86	24	294
	Percentage	5.8%	27.6%	29.3%	29.3%	8.2%	100.0%
I trust a product is really organic if it is imported	Frequency	42	157	56	35	6	296
	Percentage	14.2%	53.0%	18.9%	11.8%	2.0%	100.0%
I trust a product is really organic if it is produced locally	Frequency	28	105	61	82	19	295
	Percentage	9.5%	35.6%	20.7%	27.8%	6.4%	100.0%

Source: MAFRD, 2014.

Table 9. Perceptions Related to Processing, and Use of Chemicals and Hormones

Description	Indicator	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Total
Processed food can also be organic, not just agricultural products	Frequency	27	138	78	43	7	293
	Percentage	9.2%	47.1%	26.6%	14.7%	2.4%	100.0 %
Organic farmers use agro-chemicals just like conventional farmers	Frequency	48	125	65	28	4	270
	Percentage	17.8%	46.3%	24.1%	10.4%	1.5%	100.0 %
Organic livestock can be treated with hormones	Frequency	43	80	78	52	5	258
	Percentage	16.7%	31.0%	30.2%	20.2%	1.9%	100.0 %

Source: MAFRD, 2014.

Consumers tend to trust more than a product is organic, when it is domestically produced, than when it is imported, and the trust is even higher for mountainous food products – it is perceived that it is more likely to be organic compared to other areas.

Most consumers perceive only fresh food products (eg. fresh fruits and vegetable) can be organic – most consumers disagree with the statement "Processed food can also be organic, not just agricultural products". Most consumers believe that organic agriculture/farming cannot use agrochemicals and hormones (eg. in the case of livestock).

Most consumers prefer to buy organic food in specialized organic shops (more than 75%). The second most preferred option, is buying in supermarket, in separate dedicated shelves for organic products. Quite many (although less than the aabove mentioned 2 options) prefer buying on farm, however, this is not practical/convenient for many households – nevertheless this represents a potential for agro-tourism in the future.

Table 10. Answer to the Question: "Where do You Prefer to Buy Organic Food Products You Consume at Home?"

Description	**Indicator**	**Strongly Disagree**	**Disagree**	**Neither Agree nor Disagree**	**Agree**	**Strongly Agree**	**Total**
Specialized bio shops that have only bio products	Frequency	7	27	32	145	81	292
	Percentage	2.4%	9.2%	11.0%	49.7%	27.7%	100.0%
On farm directly	Frequency	9	39	64	125	51	288
	Percentage	3.1%	13.5%	22.2%	43.4%	17.7%	100.0%
Neighborhood shop	Frequency	11	69	117	82	11	290
	Percentage	3.8%	23.8%	40.3%	28.3%	3.8%	100.0%
Supermarket - separate stand for bio products	Frequency	3	29	61	166	31	290
	Percentage	1.0%	10.0%	21.0%	57.2%	10.7%	100.0%
None of the above, I prefer other outlets	Frequency	91	98	7	7	2	205
	Percentage	44.4%	47.8%	3.4%	3.4%	1.0%	100.0%

Source: MAFRD, 2014.

Most consumers state two reasons why they don't buy organic food: because that is more expensive and because they cannot find them. Only 6% state that they don't buy organic food because they are not interested.

Table 11. I don't Buy Organic Food because…

Description	Frequency	Percentage
I cannot find them in store	112	41%
I am not interested	15	6%
They are more expensive	144	53%
Total	271	100%

Source: MAFRD, 2014.

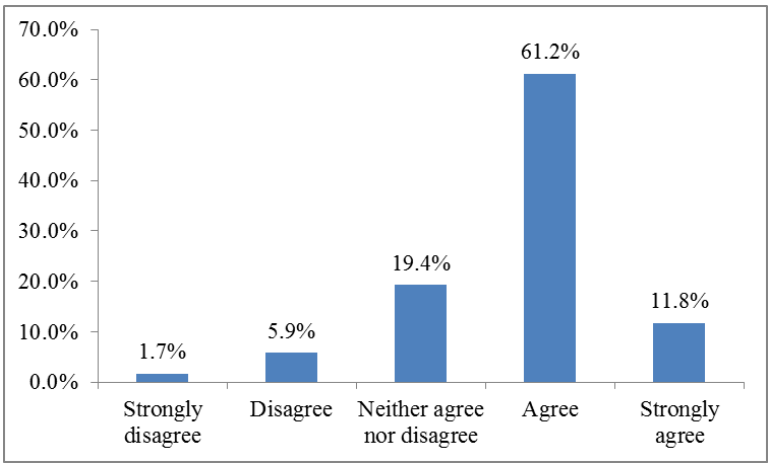
On average, consumers would be willing to pay a premium of almost 19% for product without synthetic chemicals and hormones – however, there is strong differences between various consumers as also shown by standard deviation.

Table 12. Willingness to Pay for Organic Products

Description	Mean	Std. Deviation
Premium (percentage)	18.6	14.1

Source: MAFRD, 2014.

Most consumers state that they are familiar with at least one of the words "bio", "organic food" and "organic agriculture"



Source: MAFRD, 2014.

Figure 2. Answer to the Statement: "I am Familiar with at least one of the Words "Bio", "Organic Food" and "Organic Agriculture"

4.3. Empirical Analysis

In addition to the summary of the data provided in the section above, in this paper is going also to be performed an OLS regression through the use of STATA. As the depended variable is going to be used the amount of money spend in a month for food products in Euro while as the independent variables are going to be used: age (years), education (years), family members (number), children under the age of 14 (numbers).

Table 13. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Food Expenses	299	306.29	122.87	100	1000
Age	300	38.49	12.64	16	70
Education	299	3.30	0.70	1	4
Family Members	300	6.29	1.98	3	15
Children <14	300	1.12	1.08	0	5
Family Incomes	300	701.25	306.16	375	2000

Source: Authors own calculations with MAFRD data.

From the table above, we can suggest that families spend on average 306 Euros for food from their average incomes of 701 Euros. The age of the responded was 38 years old. The families on average was composed from 6 family members and on average they had 1 child under the age of 14. The respondent had on average high school.

The OLS estimation of the regressing for 300 surveys is provided in the table below. The results suggest that the variables of Age and Family Incomes are significant at 1% significance level while the variable of Family Members is significant at 5% level of significance. The

variables of Education and number of Children under the age of 14 are found to not have an impact on food expenses.

However, before interpreting the result, will be conducted some diagnostic test and checks such as the test for heteroscedasticity and the check for normality.

Table 14. Estimates of the OLS Regression

lnFood Expenses	Coef.	Std.Err.	t	P>|t|	[95%	Conf.Interval]
Age***	0.004156	0.001394	2.98	0.003	0.001413	0.0069
Education	0.019149	0.025033	0.76	0.445	-0.03012	0.068416
Family Members**	0.021165	0.008693	2.43	0.016	0.004056	0.038274
Children <14	0.011328	0.015606	0.73	0.469	-0.01939	0.042043
lnFamily Incomes***	0.675021	0.03793	17.8	0.000	0.60037	0.749673
_cons	0.915371	0.254097	3.6	0.000	0.415277	1.415464

Source: Authors own calculations with MAFRD data.

The test below suggests that there is no problem of heteroscedasticity. The test of Breusch-Pagan / Cook-Weisberg test for heteroscedasticity suggests that there is no enough evidence to reject the null hypothesis of constant variance (homoscedasticity) even at 10% significance level and as a result we can suggest that there is no heteroscedasticity but we have homoscedasticity, constant variance.

H_0: Constant variance

chi2(1) = 1.74

Prob > chi2 = 0.1872

In addition, there should be conducted the check for normality of the residuals. According to kdensity of the residuals, it can be clearly suggested from the figure that the residuals are normally distributed.

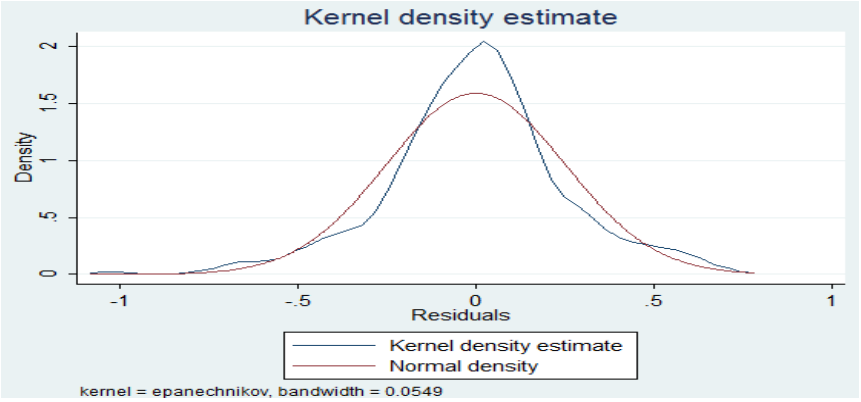


Figure 3. Kernel Density Estimate of Residuals together with the Normal Density

In addition, was conducted also the test for multicollinearity through the vif command. This test suggests a number of 1.34, while the rule of thumb is that if the vif number is greater than 10, one should concern about multicollinearity and if the number is below 10, then there is no problem with multicollinearity.

From all of these diagnostic tests, it can be suggested that the OLS estimation of the model does not suffer from heteroscedasticity, non-normal distribution of residuals, and multicollinearity and as a result it can be continued with the interpretation of the results. However, will be interpreted only the variables which are significant, which have an impact on the increase or decrease of the food expenses.

- Age: for every additional increase of the year of age, the food expenses increase for 0.4.
- Family Members: for every addition increase of the members of the family, the food expenses increase by 2.1%
- Family Incomes; for every additional increase in family incomes, the food expenses increase by 0.67%

Also, in this paper was also mentioned that the respondents were willing to pay on average 18.6 % more for organic product. When this variable is correlated with the family incomes, it can be suggested that there exists a positive relationship but not very strong. This weak correlation can indicate that the Kosovar customers are not highly willing to pay more for organic products

Table 25. Correlation coefficient between Willingness to pay Higher for organic products and Family Incomes

	Willingness to pay Higher for Organic Products	**Family Incomes**
Willingness to pay higher for organic products	1	
Family Incomes	0.2024	1

Source: Authors own calculations with MAFRD data.

5. Discussion

Compared to previous years, the importance of organic land and organic market is increasing day by day, in some countries more and in some less. It is important that consumers are able to assess the benefits of organically produced foods from conventional ones. In Kosovo there is no satisfactory development of organic agriculture and organic food, however, the development prospects for the future are good.

Regarding the statistical analysis in this paper, it was mentioned that:

- Consumers state that they would trust that a product is organic only if it is officially labelled "bio" and recognized by Ministry of Agriculture (MAFRD).
- Most consumers perceive that organic/bio food is safer, environmental friendlier, fresher and tastier than conventional food.
- Consumers tend to trust more than a product is organic, when it is domestically produced, than when it is imported.
- Most consumers perceive only fresh food products (eg. fresh fruits and vegetable) can be organic.
- Most consumers prefer to buy organic food in specialized organic shops
- Most consumers state two reasons why they don’t buy organic food: because that is more expensive and because they cannot find them.
- On average, consumers would be willing to pay a premium of almost 19% for product without synthetic chemicals and hormones – however, there is strong differences between various consumers.
- Most consumers state that they are familiar with at least one of the words “bio”, “organic food” and “organic agriculture”

Regarding the empirical analysis, it was regressed the variable of Food Expenses over Age, Family Members, Children <14, Education and Family Incomes. The results suggest that the variables of Age and Family Incomes are significant at 1% significance level while the variable of Family Members is significant at 5% level of significance. The variables of Education and number of Children under the age of 14 are found to not have an impact on food expenses. After the model has passes the diagnostic tests and checks, these interpretation of the results were made for the significant variables only.

- Age: for every additional increase of the year of age, the food expenses increase for 0.4.
- Family Members: for every addition increase of the members of the family, the food expenses increase by 2.1%
- Family Incomes; for every additional increase in family incomes, the food expenses increase by 0.67%.

In addition, was conducted also the correlation check between the variable of the Willingness of Customers to pay higher price for organic products vis-à-vis the variable of Family Incomes. Even though the customers are on average willing to pay 19% more for organic products, there was found a weak correlation with Family Incomes. This weak correlation can indicate that the Kosovar customers are not highly willing to pay more for organic products.

6. Conclusion

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for everyone involved (International Federation of Organic Agriculture Movements, 2008, (IFOAM)). Consumer demand for organic products has led to an increase in the number of farmers adopting organic farming. The growing demand for organic products has also prompted international trade to develop.

For the case of Kosovo in particular, agriculture is considered as one of the most important sectors for the economic development. There are 1.1 million hectares of land from which 53% is agricultural land and 41% is forest land (Ramadani, 2012). Agriculture contributes highly in GDP and provides employment for more than 2.25% percent of total employment, as of 2016. If informal employment is considered, it is estimated that agriculture provides nearly 25 % of total employment. Results of 2011 from the Population, Households and Housing Census in Kosovo, shows the employment rate in agriculture is 4.4% while the number of rural population is 1,078,239 or 61.97% (KAS, 2011).

Growing interest in organic farming has prompted multiple studies comparing various aspects of organic and conventional food. Organic agriculture has a contentious history. Some authors support it as the best food, produced in a more natural way, without the use of synthetic pesticides and fertilizers, while others see as inefficient in terms of production after organic production systems are often associated with lower yields and higher costs (Trewavas 2001; Emsley 2001; Willer & Lernoud, 2015; Oughton & Ritson, 2007).

Most research on organic food has identified factors that promote or constrain the consumption of organic food, taking into consideration food quality, food safety, health, (Magnusson et al., 2003; Shreck, Getz &Feenstra, 2006; Liang, 2016). Health concerns are often found to be the most important motivating factor for buying organic foods (Magnusson et al., 2003). Health benefits associated with fewer additives and chemicals in food, that results

on healthy eating, what helps to avoid health problems. So that is why food organic should be recommended to everyone, but particularly to young children, pregnant women, breast-feeding mothers, elderly and chronically ill people.
Consumer sacrifice to pay more for organic products compared to conventional is related to the quality that distinguishes these two types of products. The quality concept according to (Oughton & Ritson, 2007), is based on effective process management of growth and differentiation (including ripening).

In order to investigate the awareness and perception of Kosovar costumers for organic products, there were used the data from a Structured Consumer Survey conducted by the Ministry of Agriculture, Forestry and Rural Development (MAFRD) during the period December 2013 – January 2014. This survey consisted of 300 direct interviews with randomly selected consumers in the capital city of Kosovo, in Prishtina, but also in two other large cities, in Prizren and Gjilan. Distribution of the sample was based on the simple random sample technique – the sample be allocated to the cities according to the respective size of the population. Questionnaires were designed based on literature review, expert interviews and were pre-tested through direct interviews with consumers. For quantitative data analysis, different techniques have been used. Data from the structured surveys were entered into excel databases and were analyzed using SPSS and also STATA.

As part of the empirical analysis was conducted the OLS regression of variable Food Expenses over Family Incomes, Age, Education, Family Members and Children under the age of 14. It was suggested that families spend on average 306 Euros for food from their average incomes of 701 Euros. The results suggest that the variables of Age and Family Incomes are significant at 1% significance level while the variable of Family Members is significant at 5% level of significance. The variables of Education and number of Children under the age of 14 are found to not have an impact on food expenses. On the other hand, it is also evaluated that the Kosovar customers are willing to pay on average 19% higher price for organic products but this variable is found to be weakly correlated with family incomes. This weak correlation can indicate that the Kosovar customers are not highly willing to pay more for organic products.

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