Origin or Food Safety attributes? Analyzing consumer preferences using Likert Scale. Empirical evidence from Albania

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Introduction

Food quality is an important aspect of human life and consumers are becoming more aware of food quality issues and of what they consume (Grunert, 2005), especially as regards quality attributes associated with food safety, origin, nutritional values, the impact of consumption of a particular product on health, environment etcetera. These attributes have a significant impact on the overall acceptability of the product, on the return of investment, and as a result, on the success of the enterprise that produces it. Albania is a typical agricultural country. More than 50% of the labour force is involved in agriculture. This sector contributes about 18% of GDP (gross domestic product) and is dominated by conventional farming (50%) and Low External Input Agriculture (LEIA 40%) (MARDWA[1], 2014). According to INSTAT, organic farming and integrated production account for respectively 1% and 9 %[2] (MARDWA, 2014).

Abstract

Albania is moving forward in the process of alignment with EU legislation in agriculture, food and rural development sectors. In the years to come, the harmonization with the EU legislation will be the main workload for the Albanian policy makers. The role of consumers and their perception of new food-related regulations should be the main focus for policy makers in order to adapt and respond with the new policy instruments to consumer concerns. This paper aims at analyzing which type of potential label information is of interest to Albanian consumers in food products. We investigate consumer preference for different attributes of food products such as COOL (Made in Albania), pesticide-free, chemical- free, Organic production and Organic Certified Product, using an ordered five-point Likert Scale method. Ordinal regression is applied to investigate socio-economic effects on responses. Results show that consumers link domestic products with more safe products. High-income earners and highly educated people are more likely to give high scores to food safety attributes rather than to origin attribute.

Keywords: Albania, Likert Scale, preferences, ordinal regression, food safety, origin.

Résumé

L'Albanie est engagée de plus en plus activement dans le processus d'alignement avec la législation européenne dans le secteur agricole, alimentaire et du développement rural. Dans les prochaines années, l'harmonisation avec la législation de l'UE représentera le principal chantier de travail pour les décideurs politiques albanais. Ces derniers devront accorder une attention particulière au rôle des consommateurs et à leur perception des nouvelles règlementations dans le domaine alimentaire pour répondre à leurs préoccupations par des instruments politiques adaptés. Cet article a pour objectif d'analyser le type d'information sur les étiquettes des produits agro-alimentaires qui intéresse le plus les consommateurs albanais. Afin d'évaluer les préférences des consommateurs envers les différents attributs des produits alimentaires tels que COOL (Made in Albanie), sans pesticides, sans produits chimiques, production biologique, production certifiée biologique, une méthode de classement basée sur l'échelle de Likert à cinq points a été utilisée. Une régression ordinale a été appliquée pour étudier les effets socio-économiques sur les réponses. Les résultats montrent que les consommateurs considèrent les produits nationaux comme des produits plus sûrs. Les consommateurs avec un revenu et un niveau d'éducation plus élevée sont davantage susceptibles de donner des scores plus élevés à des attributs de sécurité alimentaire qu'à l'attribut origine du produit.

Mots-clés: Albanie, échelle de Likert, préférence du consommateur, origine, sûreté alimentaire**.**

In Albania limited access to agricultural inputs implies low-input agriculture (Bernet and Kazazi, 2011) and this means lower agricultural yields but also a limited amount of pesticides and other chemicals in the agricultural produce. The above structural characteristics of Albanian agriculture lead to add value to agricultural products by differentiating them on the basis of quality attributes such as Organic Production, Pesticide-free production etc. In addition, in view of the increasing interest of farmers in organic production (MARDWA, 2012), it is appropriate to understand consumer preferences regarding different attributes related to food safety.

As in other Mediterranean countries, Albanian consumers have strong links with the products coming from specific geographical areas (Barclay, 2010). Moreover, they confer to origin other attributes like better taste, food safety, nutritional values (Kokthi et al., 2014a). Geographical origin linked to the concept of *terroir* is also an attribute which affects Albanian consumer preferences (Kokthi et al., 2014a; Kokthi et al., 2014b). Country of origin (i.e. Made in Albania) attribute and its effect on consumer preferences has not been studied yet in Albania. Domestic products are often identified as low input and tastier products (Barclay, 2010) but more research is needed on consumer preferences for country of origin (Made in Albania).

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In the framework of the EU pre-accession process, Albania has, among others, the obligation to approximate the national legislation to EU law. Mention should be made, in particular, of the legislation governing Rural Development and Food Quality Policy. Quality schemes related to food production such as Organic Agriculture have been successfully implemented in some EU countries like France, Italy, Spain and the inherent question that arises is whether these policies will be successful or not in Albania. Only a limited share of agricultural production is labeled "Organic production" in Albania. According to Bernet and Kazazi (2011), in 2010 only 284 ha of land were certified under organic farming and they were mostly covered by olive trees and cultivated herbs, mainly intended for export (respectively 22.1% and 58.3% of the total surface area). The public direct support to organic farms (nearly 500 EUR/ farm/year) had mitigated the effect on the total certified area[3].

The co-existence of certified organic production and production not certified but claimed as "organic" by the vendor is something usual in the food markets of Albania. In the case of claimed "organic production", there is no evidence that the product is really organic. Consumers generally view production marketed by farmers as a warranty that the growing techniques used are organic or close to organic practices. Taking into consideration the importance of this co-existence we introduced the non-certified "organic production" label in our analysis (hereinafter referred to as organic production).

In Albania it may be very hard for small farmers to fulfill conditions for certification of organic products, that is why we have introduced in our paper the "Pesticide-free" and "Chemical-free" labels in order to analyze the consumer behaviour for a possible label that can be more accessible to farmers.

The consumer behaviour research performed in Albania shows that consumers greatly prefer Albanian products (Barclay, 2010). This is the reason why we have integrated the "Made in Albania" label among the options proposed to consumers.

The application of methods analyzing consumer behavior used in Western countries is also an important issue for markets in developing countries and represents an opportunity to conduct and adapt research in an unconventional context. This paper provides a pre-diagnosis related to the relevant attributes for food safety which may be considered in future monetary research evaluations in Albania. The aim of this paper is to understand consumer attitudes towards different aspects of food labeling practices. More specifically, the research sought to understand whether consumers preferred labeling attributes signaling "Country of origin" (Made in Albania) or attributes such as pesticide-free, chemical-free, organic production and certified organic production.

Another objective of the paper is to provide insights to policy makers in order that they might adapt their policy instruments by designing a process based on consumer needs and taking into consideration their value scale. The paper seeks to draw conclusions on consumer preferences and to propose paths for policy makers.

As mentioned before, Albanian consumers relate domestic products to safety. Existing studies show that origin is less preferred than safety attributes (Becker, 1999; Loureiro and Hine, 2002; Loureiro and Umberger, 2004). Hence, analysing these attributes independently will allow gaining an insight into consumer preferences. Trade-offs among attributes and WTP measurement are not considered whereas the focus is on the importance of each attribute included in the analysis. Scholars have proved that preferences differed according to WTP and ranking methods. Product attributes have relatively high stated WTP, but when it was asked to rank the importance of these same factors using a numerical scale, they often received modest, or sometimes low, ranked preference scales (Shroeder et al., 2013). According to Shroeder et al., (2013) the number of attributes presented in WTP studies impacts relative and absolute product attribute valuation. Another issue is the difficulty and reliability of hypothetical methods to give the real value to these attributes in developing countries, due to the consumers' lack of experience with such methods and to their difficulties in understanding these methods (i.e. conjoint analysis). Accordingly, we have opted for a five scale importance based on a Likert scale principle (Likert, 1932). Food was used as an umbrella product category.

Also, the purpose of this paper is twofold: first, to examine consumer preferences related to the importance given to country of origin labeling (MA) and food safety attributes such as organic production, certified organic production, pesticide-free production, chemical-free production and second, to explore the role of consumer's sociodemographic characteristics in the preferred attributes.

This paper is subdivided in four sections: the first section deals with a brief literature review concerning preferences related to country of origin and food safety attributes. Section two explains data collection and the methodology, section three illustrates the results and the last section presents the conclusions including findings and result discussion.

2 Literature review

2.1 Geographical origin and consumer preferences

Scholars examined the use of geographical origin as a cognitive cue, namely, an informational stimulus about a product used by consumers to infer beliefs regarding product attributes such as quality. Bilkey and Nes (1982) and Errach (2014) consider origin as added information. In their works they regard the product as a multitude of characteristics where each characteristic serves as stimulus to help consumers evaluate the product. Origin is one of the sever-

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[3] During the period 2006-2010, the trend of the certified surface area is not clear with a sharp increase during the period 2006-2007, a net decrease during 2008 and a positive trend from 2009 and 2010.

al information cues that consumers consider before deciding whether to buy the product or not. Therefore, the impact of origin is not always important and its effect on the overall evaluation and choice of the product differs across products, consumers and countries (Tanner Ehmke *et al.*, 2006). Agrawal and Kamakura (1999) and Verleigh and Steenkamp (1999) show that the effect of country of origin on consumer behaviour is lower if the consumer has several pieces of information available. They agree as well that consumer preference evaluation based on only one type of information (i.e. origin) tends to over-evaluate its impact. Studies that integrate different types of information create a situation that is more likely the real market (Agrawal and Kamakura, 1999). According to Loureiro and Umberger, (2004)[4] consumer pays a higher premium for product characteristics such as food safety, freshness and traceability than for food origin. The same authors (Loureiro & Umberger, 2005) show that a higher premium for the origin is verified when the origin is the only piece of information considered for beef meat. Erickson et *al.* (1984) states that origin information can influence consumer attitudes and infer beliefs and might not have effect on the purchase decision. Origin has a heavier impact on creation of attitudes and beliefs regarding the product and a lower impact on the buying process itself. Several scholars (Erickson *et al.*, 1984) assume that the impact of the origin is higher in the perception creation process than in decision to buy.

2.2. Food Safety

Literature is not exclusive when it evaluates preferences regarding food safety attributes and therefore, several attributes conferred to food safety were studied in order to evaluate consumer preferences. Several studies consider pesticide residue risk reduction and food safety risk reduction as a top concern for consumers with respect to other food safety issues (Buzby *et al.*, 1995; Buzby *et al.*, 1998; Govindasamy *et al.*, 2001; Bazoche *et al.*, 2008).The analysis conducted by several authors on the impact of organic product information on product evaluation indicates a higher consumer preference for these quality schemes (Elsa *et al.*, 2007; Mahé, 2009; Tagbata and Sirieux, 2010; Henry *et al.*, 2012). Food safety certificates are another important attribute affecting choice (Fox *et. al.*, 1996; Rozan *et al.*, 2004). Individual differences like education and gender can affect pref-

erences for a different kind of information. Most of these studies have focused on socio-economic factors like gender, age, education, income, household size, etc. Different methods are employed for this purpose: 1) Contingent valuation method (Loureiro and Hine, 2002; Loureiro and Umberger, 2005; Bolliger and Réviron, 2008; Menapace *et al.*, 2009); 2) Conjoint analyses (Padilla *et al.*, 2005; Cortinas *et al.*, 2007; Berni *et al.*, 2009; Imami *et al.*, 2011; Resano *et al.*, 2012); 3) Choice experiment (Loureiro and Umberger, 2004); 4) Experimental auctions (Alfnes and Rickertsen, 2007; Bazoche *et al.*, 2009; Brugarolas *et al.*, 2009) etc.. In the present paper we will use a preference ranking method rather than WTP estimation.

3. Materials and methods
3.1. Sample selection

Considering the purpose of this study, "the household" is "the exploration subject". The respondent is the person responsible for food purchasing. Since a complete list of Tirana (capital city of Albania) households was not available, with identification and access elements, the city Phonebook was used referring also to similar studies. A combination of two common interviewing methods was adopted: "phone interview" and "face to face interview". The former was used to select the sample and contact the respondent, the latter to collect information based on the questionnaire.

No sample selection method can guarantee the non-existence of sampling error, but the tendency was to minimize the error depending on the subject and available budget and capacities. Since we wanted to give all residents an equal opportunity to be selected, regardless of their neighborhood and their demographic characteristics, the use of random sampling (a probability sampling method), (Consumer Survey, 2011) was recommended. When we are dealing with a "homogeneous population" (all families were food consumers), access to fixed telephony had no relation to consumer preferences or demographic characteristics. Random selection was applied using Tirana Phonebook, thus allow-

Table 1 - *Survey variable description.*

Variables	Scale	Description	Mean	Sd
Gender	Dummy (0,1)	0 male, 1 female	74 052	74 052
Age	Scale 1-6	Age categories 18-24, 25-34, 35-44, 45-54, 55-64, 65+	74 052	74 052
Education1	Scale 1-3	Education levels (Low 1-8 years; Medium 8-12 years; High more than 12 years)	74 052	74 052
Marital status	Scale 1-3	Married, Single, Other	74 052	74 052
Income EUR/monthly	Scale 1-5	(71-214€,215-428€,429-642€,643-857€,>857€)	74 052	74 052
Household size	Scale 1-3	Number of persons living in the household (1-2,3,>4)	74 052	74 052

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[4] The study is conducted on beef meat using the Choice experiment method.

Table 2 - *Description of attributes and scale.*

Attributes included in the analyses			Mean	Sd	Skwness
Pesticide-free (PF)	Scale 1-5	Rating of importance of information on pesticide-free product (not important at all=1 very important=5) 0=don't know	4	74 052	-1.8
Chemical- free (CF)	Scale 1-5	Rating of importance of information on chemical-free product (unimportant=1 very important=5) 0=don't know	74 052	74 052	-2
Organic production(OP)	Scale 1-5	Rating of importance of information on organic production (unimportant=1 very important=5) 0=don't know	74 052	74 052	-1.4
Certified organic production (COP)	Scale 1-5	Rating of importance of information on organic production (unimportant=1 very important=5) 0=don't know	74 052	2	-0.6
Made in Albania (MA)	Scale 1-5	Rating of importance of information on origin (unimportant=1 very important=5) 0=don't know	74 052	74 052	-1.18
Source: Authors, elaboration.					

ing for an equally representative random choice for the entire population of the city. A sample of 300 households was selected from about 140, 000 households residing in the city of Tirana. The sample error, (which represents at the same time the margin of error in the case of random sampling) at a 95% confidence level, was 5.7%. From 70,000 (about 50%) households in Tirana, equipped with a landline phone (IN-STAT, 2012), 300 randomly selected households were called. A systematic selection with random start was applied. The step was calculated as the ratio of the total number of households to the number of selected households (about 230). Any non-response was replaced with the following number of the phonebook. Table 1 provides a description of the socioeconomic characteristics of the interviewed sample.

3.2. Method

Questions regarding attributes importance were based on a 5-poin Likert scale (Likert, 1932). Likert scales are a commonly used method for measuring opinions and attitudes and are applied to a range of disciplines. They measure the extent to which participants agree or disagree with a given statement typically ranged from 1 strongly disagree to 5 strongly agree. In the present study the scale measures the extent to which the participant valuates the attribute as not important or very important. Zero was also included in a don't know option in order not to force consumers to rate the importance when they don't really know what to say. The description of attributes and scale are presented in Table 2.

The question is repeated for each attribute included in the analysis. In order to detect the most preferred (high scored) attributes in buying decision process for food products, a non-parametric test, namely Wilcoxon signed-rank test, was performed. Kruskall-Wallis one-way Anova test was

carried out to analyze the effect of socio-demographic variables in consumer attitudes. In addition, an ordered logistic approach was used to capture the role of consumer characteristics in all the attributes included in this research. The ordinal regression method was used to model the relationship between response variables and a set of explanatory variables. Our dependent variable is an ordinal outcome with five levels (1, 2, 3, 4, 5), hence five logits will be modeled, one for each cut point. Let fi (xi)...fk (xk) denote the response probabilities at values for a set of explanatory variables. Cumulative probabilities are formed as follows:

$$F_k = P (Y<k/x_i) = f_i(x_i)+...f_k(x_i), \quad k=1,2....K-1$$

Cumulative logits are then formed as follows:

$$L_k=Logit \; [(F_k (x_i)] \; =\log (\frac{Fk (xi)}{1Fk(xi)}), \quad k=1,2....K-1$$

Letting $L_k(x_i)=logit[(F_k (x_i)]$, where $F_k (x_i)$ is the cumulative probability up to, and including category k, the proportional Odds model (McCullag, 1980) can be expressed as follows:

$$L_k (x_i)= \alpha_k+\beta_k(x_i), \quad k=1,2....K-1$$

The α parameters are the intercepts of cut points. The parameter vector β expresses the regression coefficients for the covariate vector xi. Inherent in this model is the proportional odds assumption, which states that the cumulative odds ratio for any two values of the covariate is constant across response categories. The interpretation of the estimates is as follows: for β>0 the odds ratio $e^{-\beta}$ <1 meaning that higher cumulative scores are more likely than lower cumulative scores, for β=0 the odds ratio $e^{-\beta}$ =1 means that high cumulative scores are equally likely to low cumulative scores and finally for β<0 the odds ratio $e^{-\beta}$ >1 lower cumulative scores are more likely than higher cumulative scores. The model that we will test is the following:

$$P=\beta_0+\beta_1Female+\beta_2Age2+\beta_3Age3+\beta_4Age4+\beta_5Age5+\beta_6Education1+\beta_7Education2+\beta_8Status2+\beta_9Status3+\beta_{10}Income1+\beta_{11}Income2+\beta_{12}Income4+\beta_{13}Income 5+\beta_{14}Hh1+\beta_{15}Hh3+\varepsilon$$

Where:

Consumer characteristics	Feature value=1	Feature value=1
Gender	female	Otherwise
Age 2	25-34.	Otherwise
Age 3	35-44.	Otherwise
Age 4	45-54.	Otherwise
Age 5	55-64.	Otherwise
Age 6	More than 65	Otherwise
Education 1	Low educated	Otherwise
Education 3	Highly educated	Otherwise
Income 1	71-214€	Otherwise
Income 3	429-642€	Otherwise
Income 4	643-857€	Otherwise
Income 5	More than 857€	Otherwise
MStatus 2	Bachelor	Otherwise
MStatus 3	Widow or divorced	Otherwise
Household size 1	1-3 household members	Otherwise
Household size 3	More than 4 household members	Otherwise
Source: Authors' elaboration.		

4. Results and discussion

When comparing MA label with OP through Wilcoxon signed-rank mean paired t-test, p (0, 05) shows that consumers do not make any differentiation between these two attributes and give the same importance to MA-OP(-0.4[ns5]). This occurs because consumers associate domestic food products with products produced with low input techniques, similar to organic produce, and also the uncertainty regarding the true attributes of organic leads to this result. Furthermore, consumers give a higher score to MA than to COP attribute, MA-COP (0.67[***]). This result reveals a lower confidence of Albanian consumers in these certificates (organic production). However the attitudes change when the origin is compared with other attributes such as PF and CF. Food safety attributes such as PF and CF are more important than the origin attribute: MA-PF(-0.23[**]), MA-CF(-0.4[***]). In this research we have included two attributes concerning organic production. One refers to the importance of organic production itself and the other to the importance given by consumers to the certificate, testifying the presence of this attribute. Wilcoxon paired test, OP-COP, shows that consumers give greater importance to OP than to COP (0.7[***]). As mentioned before, these findings reveal a lower confidence of Albanian consumers in these certificates and in the institutions that issue certification. Consumers give the same importance to attributes like PF and CF, which means that they do not have enough information regarding the differences among these two attributes. CF is more important (CF-OP =0.3[***]) compared to OP because the first type of information is more explicit to consumers. Wilcoxon paired test (COP-CF -1, 07[***]), COP-PF=-0.9[***]) shows that preferences regarding food safety are more related to PF and CF than to OP and COP. This is an important finding which implies that PF and CF can be considered as more appropriate attributes for Food Safety research in Albania. The percentage of respondents who selected the don't know option MA (3%), COP (25%) OP

[5] P<0.10* significant at p<0.05; ** significant at p<0.01; *** ,not significant=ns.

and PF (12%) CF (8%) suggests that these consumers have not developed attitudes towards these attributes.

4.1. Socio-demographic effect on preferences

Kruskall-Wallis one-way Anova test was carried out to analyze the effect of socio-demographic variables on consumer atttitudes. Made in Albania products are highly preferred by married, small households, low-educated people aged 45 to 65+ years. The lack of information of these consumers about imported products and their characteristics may produce this effect. OP is highly scored by the respondents' high-income segment. These results confirm what other scholars have previously found in WTP studies, that is to say high-income people are more aware about health issues than low-income people (Bech *et al.*, 2001; Govindasamy *et al.*, 2001; Ubilava *et al.*, 2010). It is generally accepted that a higher proportion of income is needed to purchase safe and high quality products. Highly-educated people give greater importance to organic production. In WTP evaluations (Buzby *et al.*, 1995; Elsa *et al.*, 2007) low educated people seem to be more affected by food safety information because of the high risk perception associated to product quality. To conclude, the characteristics affecting attitudes are age, education, income and family size. Older people with low education, married and living in small households, give great importance to Made in Albania label. Ranked preferences are homogenous regarding pesticide-free and chemical-free attributes in all the socio-demographic variables considered in this study.

4.2. Proportional odds model results

The test of parallel lines is designed to make a judgment concerning the adequacy of the model. The null hypothesis is that the corresponding regression coefficient is equal across all the levels of the response variable. The alternative hypothesis states that the corresponding regression coefficients are different across all the levels of the response variables.

Table 3 reports the estimation results of the ordered logit model for the attributes where the null hypothesis of the test of the parallel lines is rejected. As regards food safety attributes gender, age, education and income show a significant effect. **Gender** effect is estimated with negative coefficient, women are more likely to give low cumulative scores to CF attribute than men. This finding is not consistent with other findings according to which women exhibit higher risk aversion towards food safety attributes; **Age**-young people are more likely to give high scores to CF compared to the other groups and this is consistent with other findings (Buzby *et al.*, 1995; Govindasamy *et al.*, 2001); older respondents are less aware of food safety risk because this does not affect their life expectancy. **Education**- highly educated people are more likely to give a high score to certified organic produce. However, low educated people are more likely to score higher CF attribute (about 0.47 times for one unit change in this variable); according to Buzby (1995), this is explained by the fact that consumers

Table 3 - *Results of Proportional Odds Model results.*

Attributes	MA		CF		COP	
Variables	Estimation	OR[6]	Estimation	OR	Estimation	OR
Female	,193	,825	-,612	**1,844****	-,074	1,077
Age 1	,696	,499	1,241	**,289****	,082	,921
Age2	,087	,916	1,001	**,367****	,035	,966
Age 3	-,080	1,084	,168	,845	-,369	1,446
Age 4	-,573	1,774	,408	,665	-,470	1,601
Age6	-,611	1,842	,793	,453	,203	,816
M status2	,376	,686	,499	1,647	-,022	1,022
M status 3	1,136	**,321****	-,187	1,205	,427	,652
Education1	,276	,759	,741	*,477**	,643	,526
Education1	,245	,783	,726	,484	,590	**,554****
Income 1	,103	,902	1,207	**,299*****	1,249	**,287*****
Income 3	-,032	1,033	-,802	**2,230****	-,446	1,562
Income 4	,042	,959	-1,748	*,174****	-,331	1,393
Income 5	,352	,703	-1,159	**3,187****	-,765	**2,149****
Hhsize1	-,993	**2,699****	,350	,705	-,201	1,223
Hhsize1	-,264	1,303	,554	,575	,143	,867
R²	74 052		74 052		74 052	

P<0.10* significant at p<0.05; ** significant at p<0.01; ***, not significant=ns

with a higher level of education are probably more capable of processing this type of information and therefore, they will be less concerned. **Income**-as regards this variable we observe an inverse relationship. Low income people seem to be more likely to give high cumulative scores to CF and COP than high income people. This result is also consistent with other findings (Buzby *et al.*, 1995); respondents with better incomes may be less concerned by food safety issues because they have access to better information. As regards food origin attributes, marital status, household size and income represent a significant effect. People with a low income and living alone are more likely to give high scores to MA attribute.

4.3. Policy effects and recommendations

The analysis of consumer preferences in Albania provides insights that can be used by policy makers and for the implementation of new and improved policy instruments in Albania.

The consumer preferences analysis shows that Albanian consumers give more importance to organic products than to certified organic products. This is mainly due to a gap of information that still exists in Albania. Focussing on the limited development of organic certification in Albanian agri-food markets, Bernet and Kazazi (2011) argue that limited information to consumers is the main impediment to a continuous development of certified organic production. Lack of information and little confidence in organic certification bodies generally lead to Albanian consumers making

no discrimination between certified and non-certified organic production.

On these grounds, policy instruments aimed at improving consumer information awareness should be designed in the future in Albania.

Taking into account the preference for organic production instead of certified organic produce, it may be concluded that Albanian consumers prefer agricultural products that are produced in a "traditional way", pesticide and chemical free and obtained by using traditional production methods e.g. low intensification, local varieties etc. This conclusion can have important implications in terms of policy and lead to the introduction of an alternative label for agri-food products which is less demanding compared to the standard organic production certification process. This alternative is accessible to a larger share of small farmers in the country and is more attractive for consumers. In Albania public authorities should consider the opportunity of creating a new label which targets the main Albanian consumers' concerns and provide information about a product obtained traditionally and with a lower level of chemicals and pesticides. This label might fulfill the same purpose as TSG (traditional specialty guaranteed) for highly processed products in EU countries. In contrast, for non-highly processed and fresh products, a "domestically produced" label might be considered. The results of this paper may support the decision taken by the Albanian government to apply a quality sign called "domestic production". The modalities of application and the requirements that should be met to obtain this quality sign are still unclear and not well specified[7]. The results of this paper may help policy makers specify the characteristics that this new quality sign should have in order to be successful and well accepted by consumers.

5. Conclusions

This paper provides a pre-diagnosis of relevant attributes for food safety which may be considered in future monetary research evaluations in Albania. A five-point Likert scale was used to get an insight into consumer attitudes towards several attributes of food products in Albania. Consumers give greater importance to organic production than to certified organic produce thus showing less confidence in this type of certificates in Albania. Albanian consumers lack trust in the regulatory system's ability to monitor and guarantee food safety and have little confidence in organic certification bodies. The preference for PF and CF demonstrates that these attributes are more important compared to OP or COP.

The Albanian government supports organic agriculture through direct payments with a view to fostering the development of this sector. However, if consumers do not trust this label in Albania, then the policy impact can be different from what expected. The possibility to develop other schemes which are more clear/evident for consumers as regards the information they provide (e.g. pesticide-free, chemical-free) is one of the motivations behind this research. This research also suggests that consumers who do

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[6] Odds ratio.

[7] Decision of the Council of Ministers no. 1705 dated 29 December 2008 "Regulation on the registration of geographical indications."Domestic product is a strategy based on the whole territory of Albania.

not give importance to organic attribute may have a general knowledge about that, but they do not have enough detailed information to clearly differentiate the unique characteristics of organic from pesticide/chemical free alternatives. Hence, consumer knowledge and awareness prove to be quite important for successful quality schemes in Albania. This finding also suggests that the application of WTP analyses in the framework of conjoint analysis when information/knowledge/awareness is poor can possibly generate non-valid results.

These findings will direct producers not only towards organic labeling but also to other labeling possibilities for their products. Young people with higher incomes and highly educated people are more likely to give high cumulative scores to COP attribute. Organic production attribute is ranked higher by low income consumers. When WTP measurement is applied to measure preferences, there is a positive income effect implying that high income people are more willing to pay for attributes conferring food safety (Govindasamy *et al.*, 2001; Ubilava *et al.*, 2010) ; in this research low income people give more importance to food safety attributes.

In Albania policy makers can use the results of this paper in order to properly design a new and effective quality sign called "traditional production" or "domestic production", including all the characteristics appreciated by consumers (pesticide-free, chemical-free and produced in a traditional way).

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