

# Predicting Willingness to pay for Geographical Origin in Albania: A Logistic Approach

ELENA KOKTHI\* , ISABEL VÁZQUEZ BERMÚDEZ\* , MYRIAM GONZÁLEZ LIMÓN\*

Jel codes: M31, Q13

## 1. Introduction

The agricultural sector in Albania is penalized by some structural features (small scale of production, limited use of inputs, etc.) that are reflected in the limited productivity of land and work in rural areas (Guri *et al.*, working paper). Labour productivity in Albanian agriculture is three to five times lower than in other economic sectors (Guri *et al.*, working paper). Average agricultural monthly productivity does not reach the official minimum salary fixed by the Albanian government and rural areas have a significant share of the unemployed workforce. Rural migration to urban areas will be an accompanying phenomenon of Albania in the future (Guri *et al.*). However, agriculture is one of the most important economic sectors of Albania, accounting for 19.5% of the national GDP (INSTAT<sup>1</sup>, 2011), and employing nearly half of the country's labour force. The aforementioned structural problems of Albanian agriculture impede the competitiveness of agriculture products in domestic and foreign markets. There is a possible way to increase income in rural areas by considering value-added strategies based on geographical origin (Barjolle, 1998; Boisseaux and Dufour, 1998, Bourbouze and François, 2001; Pecqueur, 2001; Bérard and Marchenay, 2004; Vandecandelaere *et al.*, 2009). It is widely articulated that the contribution of origin-based products to rural development

## Abstract

*This study empirically evaluates the factors that determine willingness to pay a premium for a product's geographical origin and the effect of socio-demographics in indicating one or another factor. The premium to origin is linked with the traditional aspect, low health risk and high nutritional values. Logistic regression shows that elder, highly educated people buying in dairy shops are less likely to pay a higher premium. Consumers who are more likely to pay more include: those on high incomes who place importance on origin and taste attributes during the buying decision process and, in so doing, link the extra cost with the fact that it comes from a traditional cheese-producing region.*

**Key words:** geographical indication, Albania, contingent valuation, WTP, premium price.

## Résumé

Cette étude évalue de manière empirique les facteurs qui déterminent le consentement à payer une prime pour l'origine géographique d'un produit et les effets socio-démographie du consommateur en indiquant un ou l'autre facteur. Le prime à l'origine est liée à l'aspect traditionnel, au faible risque à la santé et de haute valeur nutritionnelle. La régression logistique montre que les personnes le plus âgées, bien éduqués qui achètent dans les magasins des produits laitiers sont moins susceptibles de payer une prime plus élevée. Tandis que les consommateurs qui sont plus susceptibles de payer plus comprennent: les personnes à revenus élevés qui placent importance sur l'origine et le goût pendant le processus de décision d'achat et le prime payée est lié avec les aspects traditionnels du produit.

**Mots clés:**

encompasses not only agricultural growth and agribusiness development, but also the development of other local activities, the social dimension and empowerment of local actors and the role of local resources (Vandecandelaere *et al.*, 2009). According to Vandecandelaere *et al.* (2009) and Bérard and Marchenay (2007; 2004), GIs (Geographical Indication) are particularly relevant for fragile or remote areas where the usual constraints and less competitive production conditions can be turned into assets by adding value. The protection of GIs as defined in TRIPS<sup>2</sup> is conditional on the quality, reputation

or other characteristics of the good being linked with the territory (Malorgio *et al.*, 2008). Since these attributes of GIs derive from traditional practices transmitted through time, this intellectual property right contributes to the preservation of traditional knowledge (Bramley, 2011). According to Bramley, GIs reward producers who utilise traditional knowledge-based processes and therefore indirectly encourage the continued use and preservation of the associated traditional knowledge. GIs enable people to translate their longstanding, collective and patrimonial knowledge into livelihood and income (Bérard and Marchenay, 2004).

However, the effectiveness of applying a GI strategy is linked, amongst others, with the willingness of consumers to pay for origin. Several authors enumerate various reasons explaining a positive WTP premium for geographical origin and to the instruments that institutionalise the linking of products with area of production, such as geographical indications (GI). Bramley

\* Department of Economic Analysis and Political Economy, University of Seville, (Spain).

<sup>1</sup> Albanian Institute of Statistics.

<sup>2</sup> Trade Agreements Related to Intellectual Property.

Corresponding author: kokthi\_elena@yahoo.it

*et al.* (2008) link the premium with food quality, safety and product variety. Teuber (2010) shows that GI premium is associated with authenticity, cultural heritage and the ability of consumers to trace the food they eat. In an earlier paper (Teuber, 2009), the author links the premium with a quality warranty dimension, meaning that the consumer perceives such products as being of higher quality. Deselnicu *et al.* (2013), in a meta-analysis of GIs, deal also with the critical factors that determine GI premium and outlines those that are instrumental for a GI-based differentiation scheme in order to capture a price premium. They found that the magnitude of price premium varies across products and markets, and the prevalence of a high percentage GI premium corresponds to minimally-processed food, short value chains and a large number of atomistic undifferentiated producers. In contrast, premiums are small when products are more processed, value chains are long and the brand is known by the consumer (Deselnicu *et al.*, 2013). Menapace and Moschini (2012) state that GIs signal the specific minimal quality standards adopted by the region. Quality signals, such as origin, enhances both consumer quality expectations and their perceived value directly (Van der Lans *et al.*, 2001). Thus, consumers use origin information as an indication of quality in itself but also as a cue that suggests other cues or attributes related to product quality (*Ibid*; Ittersum *et al.*, 2003; Dentoni *et al.*, 2009; Stefani *et al.*, 2006). Product attributes that are inferred from origin may be either experience characteristics or other extrinsic or credence aspects (Dentoni, 2009). Loureiro and Umberger (2005) show that consumers exhibited a higher WTP when origin was linked to food safety. Dentoni *et al.* (2009) also found that in the case of locally-grown apples, their production proximity acts as a positive attribute, leading to the view that the product is fresher and environmentally friendly. The theoretical framework used in the above-mentioned research is based on the Lancastrian approach of consumer economics. According to Lancaster (1966), products possess a multitude of characteristics which are laid out in the works of Nelson (1970) and Darby and Karni (1973) in terms of search, experience and credence attributes. Search attributes can be assessed before purchase and consumption (size of eggs); experience characteristics can be assessed only during consumption; while the credence attribute cannot be assessed either before or after consumption. Origin is considered in literature as a credence attribute (Dentoni *et al.*, 2013). From this it is clear that consumers in many instances cannot fully assess product quality. The producer, on the other hand, has full information on product quality. According to Bramley (2011), this information asymmetry yields a market failure because some producers may be inclined to lower the quality of the product supplied and the producers who continue to supply high

quality products are exposed to unfair competition and free-riding from those who have lowered their quality but maintained their price. The potential GI product reputation is often attractive for imitators, usurpers and free-riders and for all these reasons a set of common rules built up at local level is strongly recommended to prevent the loss of product specificity, avoid misuse and foster consumer confidence (Vandecastelaere *et al.*, 2009). Since 1995, Albania has been a member of the World Trade Organization and in debates linked to Geographical Indications, it is ranked among those countries supporting these intellectual property instruments.

Among traditionally-produced agricultural goods, livestock and particularly milk-production activities have a long tradition in Albania due to the favourable natural resources for large and small ruminants. Cheese is the main dairy product produced and consumed<sup>3</sup>. According to a survey of the EU, (FAO, 2013) consumers show strong inclination towards the cheese of the Gjirokaštër region – 57 percent of the interviewees state that they would prefer to buy cheese from Gjirokaštër. This product is produced by mixing different types of milk (cow, sheep, goat). It is a ripened white cheese, similar to Greek ‘Feta’ and requires a 35 day ripening period, taking 4.5 litres of milk to produce 1kg of cheese. Traditional technology is used in its production. Mountain cheeses have important potential consumer recognition with Albanian consumers. An origin-based differentiation strategy will help producers and value chain actors to promote the product and support the interests of consumers by avoiding fraud, the region’s unfair usurpation, and rural exodus.

Consumer WTP for origin, and the factors that determine such a premium, will be addressed in this paper. Thus, the objective is to define the factors that determine the premium related to product geographical origin, in this case Gjirokaštër cheese, and determine if there are consumer characteristics driving this determination and WTP. The rest of this paper is organised as follows: the next section deals with the sample selection process and methodology, the third presents the results, while the paper ends with the discussion and conclusions.

## 2. Materials and method

### 2.1. Sample selection

A combination of two common methods of interviewing was used: ‘phone interview’ and ‘face to face interview’. The first was used to select the sample and contact the respondent; the second, to collect the information according to the questionnaire. Random selection was applied using the Tirana Phonebook, this resulted in an equally representative random choice for the entire population of the city. From about 140,000 households residing in the city, a sample of 300 households was selected. The sample error (which in the case of random sampling is simultaneously the margin of error), at a 95% level of confidence, is 5.7%. From 70,000 (about 50%) households equipped with a landline phone (INSTAT, 2012), 300 randomly selected

<sup>3</sup> “Consumer preferences for organic and regional/local products in Albania” that was developed by the project “Preparation of Intersectorial strategy for agriculture and rural development in Albania, financed by EU, implemented by FAO”.

Table 1 - Survey variable description.

Variables	Description	Mean	Sd
Gender	0 males, 1 female	0.69	0.45
Age	Age categories 18-24, 25-34, 35-44, 45-54, 55-64, 65+	3.02	1.37
Education	Education levels (Low: 1-8 years; Medium: 8-12 years; High: more than 12 years)	2.33	0.66
Marital status	Married, Single, Other	1.38	0.6
Incomes Euro/monthly	(€71-214, €215-428, €429-642, €643-857, €>857)	2.8	1.2
Household size	Number of persons living in the household 1=1-2 persons, 2=3 persons, 3=>4 persons)	2.4	0.7
Buying frequency	1=0-3times/month; 2=4-7times/month; 3=>8times/month	1.62	0.63
Purchase place	1=Dairy shop; 2=Dairy production unit; 3=Minimarket; 4=Supermarket	2.43	1.16
When you buy cheese, you focus more on:	Origin 1= Yes 0=No	0.52	0.5
	Taste 1= Yes 0=No	0.34	0.47
	Price 1= Yes 0=No	0.75	0.43
	Cheese Type 1= Yes 0=No	0.52	0.5
	Producer info 1= Yes 0=No	0.8	0.3
	Retailer info 1= Yes 0=No	0.8	0.3
	Safety certificates 1= Yes 0=No	0.8	0.3
You link the extra payment for origin with:	Freshness 1= Yes 0=No	0.6	0.4
	Taste 1= Yes 0=No	0.3	0.4
	Traditional aspects 1= Yes 0=No	0.7	0.4
	Nutritional value 1= Yes 0=No	0.6	0.5
	Low health risk 1= Yes 0=No	0.6	0.5

households were contacted. A systematic selection with random start was applied.

The step is calculated as the ratio of total number of households with the number of selected households (about 230). Any non-response is replaced with the following number in the phonebook. Table 1 provides a description of the interviewed sample's socio-economic characteristics. The questionnaire consists of three sections. The first asks for the demographical characteristics of respondents including gender, age, education and income. The second section investigates cheese consumption behaviour, expenses, buying frequency, place of purchase and also the characteristics they retain as important when buying cheese. The third section is focused on the contingent scenario, the consumer indicates his/her WTP and to what they link the extra payment: the freshness of Gjirokaštër cheese, its taste, the traditional aspect, low health risk and high nutritional values. Table 2 reports the descriptive statistics of our sample and the statistics of the variables included in the study.

## 2.2. Method

A payment card design of CV similar to Hu *et al.* (2011) is applied. The respondents were asked: *Assuming that 1kg of white cheese (Greek type feta) is priced at 400ALL in your store shop (dairy shop, minimarket or supermarket), how much of a premium price would you be willing to pay for a kg of white cheese produced in the Gjirokaštër Region?* Respondents were presented with 12 bid intervals: 401-410, 411-420, 421-430... 511-520 ALL/kg. Additionally, a regular price of 400ALL was given to respondents. It was explained to participants that the anchor price is hypothetical and included in the payment card to help in the pricing process. We included also the response of zero payment and the option that indicates that they do not wish to pay any positive amount for Gjirokaštër cheese. Hence, we have the possibility of capturing values that are not listed on the payment card. Negative WTP suggests that consumers may require compensation to consume cheese from Gjirokaštër. No negative payment was observed in this study. Respondents could mark an interval as an indication of their willingness to pay. The interval midpoint is used as an approximation of consumer WTP following Hanemann and Kanninen (1998); Mahieu, Riera and Giergiczny (2012); Tian, Yu and Holst (2011); Hackl and Pruckner (1999) and Cameron and Huppert (1989) for interval data. The logit model is selected as the regression method in this paper. This model is usually used where the dependent variable is binary. The empirical model assumes that the probability of paying or willingness to pay a premium for origin is dependent on a vector of independent variables ( $X_{ij}$ ) associated with the consumer  $i$  and variable  $j$  and a vector of unknown parameters  $\beta$ . The likelihood of having a given value of dependent variables is tested as a function of variables which included socio-demographics, consumption characteristics, buying behaviour, etcetera.

$$P_i = F(Z_i) = F(\alpha + \beta x_i) = 1 / (1 + \exp(-Z_i)) \text{ where:}$$

$F(Z_i)$  = represents the value of the logistic cumulative density function associated with each possible value of the underlying index.  $Z_i, P_i$  = represents the probability that individuals would be willing to pay for origin attribute at least 16% given the independent variables  $X_i, S, Z_i$  = the underlying index number of  $\alpha + \beta X_i, \alpha$  = intercept, and  $\beta X_i$  = is the linear combination of the independent variables so that:

$$Z_i = \log \left[ \frac{P_i}{(1-P_i)} \right] = \alpha + \beta_{i1} X_{i1} + \beta_{i2} X_{i2} + \dots + \beta_{in} X_{in} + \epsilon_i$$

where

$i = 1, 2, \dots, n$  are observations,  $X_n = 1, 2, \dots$  explanatory variables  $\beta_n$  = parameters to be estimated,  $\epsilon$  = standard error. The following model is developed to evaluate consumer demographics, buying behaviour in WTP:

Pay



$$10\% \leq WTP \leq 16\% = Y = \beta_0 + \beta_1 F + \beta_2 A_2 + \beta_3 A_3 + \beta_4 A_4 + \beta_5 A_5 + \beta_6 A_6 + \beta_7 E_1 + \beta_8 E_2 + \beta_9 M + \beta_{10} S_2 + \beta_{11} I_1 + \beta_{12} I_3 + \beta_{13} I_4 + \beta_{14} I_5 + \dots + \varepsilon \quad (1)$$

Where:

Pay  $10\% \leq WTP \leq 16\% = 1$  if the individual indicated an extra payment in this payment interval and 0 if otherwise, and pay  $16\% < WTP \leq 21\% = 1$  if the individual indicated an extra payment in this payment interval, and 0 if otherwise. The tested premiums are based on  $WTP \text{ mean} \pm \sigma$  (mean of  $WTP (16.1) \pm$  (one standard deviation which is 5.6). Female = 1 if the individual is female, and 0 if otherwise, Age 2 = 1 if the individual is between 25 years and 34 years old, and 0 if otherwise, Age 3 = 1 if the individual is between 35 and 44 years old, and 0 if otherwise, Age 4 = 1 if the individual is between 45 and 54 years old, and 0 if otherwise, Age 5 = 1 if the individual is between 55 and 64 years old, and 0 if otherwise, Age 6 = 1 if the individual is 65+, and 0 if otherwise, Education 1 = 1 if the highest level of education attained is 8 years, and 0 if otherwise, Education 3 = 1 if the level of education attained is higher than 12 years, and 0 if otherwise, Income 1 = 1 if the monthly household income was €71-214, and 0 if otherwise, Income 3 = 1 if the monthly household income was €429-642, and 0 if otherwise, Income 4 = 1 if the monthly household income was €643-857, and 0 if otherwise, Income 5 = 1 if the monthly household income was €857, and 0 if otherwise, Status 1 = 1 if the individual is married, and 0 if otherwise, Status 2 = 1 if the individual is single and 0 if otherwise, Household size 1 = 1 if the number of the persons residing in the family is 1-3, and 0 if otherwise, Household size 3 = 1 if the number of the persons residing in the family is greater than 4, and 0 if otherwise, Buying frequency 1 = 1 if buying frequency is 0-3 times/month, and 0 if otherwise, Buying frequency 2 = 1 if the buying frequency is 4-7 times/month, and 0 if otherwise, Purchase place 1 = 1 if the consumer buys in dairy shop, and 0 if otherwise, Purchase place 2 = 1 if the consumer buys in dairy unit production, and 0 if otherwise, Purchase place 3 = 1 if the consumer buys in minimarket, and 0 if otherwise, Origin = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Taste = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Price = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Type = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Producer info = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Retailer info = 1 if the consumer considers it important in the buying decision, and 0 otherwise, Security certificates = 1 if the consumer considers it important in the buying decision, and 0 otherwise.

Taste 1 = 1 if the consumer pays the given premium due to better taste produced in this region, and 0 otherwise, Traditional and typicity = 1 if the consumer pays the given premium because of the typicity of this area in producing cheese, and 0 if otherwise, Nutritional values = 1 if the

consumer pays the given premium for nutritional value, and 0 if otherwise, Low health risk = 1 if the consumer pays the given premium because of inferred safety issues in the cheese-producing region, and 0 if otherwise.

### 3. Results and discussion

As mentioned before, the interval midpoint is used as an approximation of consumer WTP. Consumers are willing to pay on average 16% more for Gjirokastër (from the anchor price presented by 400ALL/kg). The minimum level of willingness to pay is 15%, the maximum being 17.2%. The small difference between the maximum and minimum value of WTP suggests that the use of the midpoint for estimation purposes is correct.

Table 2 - Adequacy indicators for the tested logit model.

Quality of the logit model	10% ≤ WTP ≤ 16%		16% < WTP ≤ 21%	
	Intercept model	Model	Intercept model	Model
Predicting accuracy	77.9%	81.4%	59.3%	75.1%
Wald test	Chi-square	p(value)	Chi-square	p(value)
	77.853	0.000	100.127	0.000
Pseudo R <sup>2</sup>	-2log likelihood	Nagelkerke	-2log likelihood	Nagelkerke
	249.206	0.25	285.053	0.40
Test of Hosmer-Lemeshow	Chi-square	p(value)	Chi-square	p(value)
	8.566	0.358	2.763	0.948

As previously mentioned, the effect of consumer characteristics is tested in the case where WTP premium is between  $10\% \leq WTP \leq 16\%$  and  $16\% < WTP \leq 21\%$ .

The Wald chi-square tests the null hypotheses that the constant of the model is zero. The null hypothesis is rejected in both cases because the p-value is smaller than the critical value p-value 0.05 (see table 2). The test of goodness of fit of Hosmer-Lemeshow indicates the extent to which the model provides a better fit, the chi-square goodness of fit is not significant, meaning that the model is adequate. A disadvantage of this goodness of fit measure is that it is a significance test and only gives information as to whether the model is fit but does not explain the extent of the fit. The values of this test show that for the two predicted WTP intervals, the null hypotheses are rejected. As in ordinary linear regression R<sup>2</sup> is an indicator of the percentage of variance in the independent variable explained by the model. In this case, the pseudo R<sup>2</sup> Nagelkerke shows the explained variance by the explanatory variables in WTP and is measured in scale from 0 to 1. Pseudo R<sup>2</sup> is presented in table 2. A higher variance is explained by the model when the premium payment is between  $16\% < WTP \leq 21$ . When the dependent variable ranges between  $10\% \leq WTP \leq 16\%$ , factors with significant effects are age, household size and buying frequency. Elder people are more likely to pay in this range than not to pay, and small households with low frequency are less likely to pay a premium between  $10\% \leq WTP \leq 16\%$ . When WTP premium is higher than 16%

Table 3 - Logistic regression prediction of WTP for geographical origin.

The dependent variable	10%≤WTP≤16%				16%<WTP≤21%			
	B	Wald	p(value)	odd ratio	B	Wald	p(value)	odd ratio
Females	-.439	1,152	,283	,645	,304	,671	,413	1,356
Age 2	1,018	3,313	,069	<b>2,767</b>	-.098	,027	,871	,907
Age 3	1,293	3,552	,059	<b>3,643</b>	-.177	,064	,800	,838
Age 4	2,856	11,874	,001	<b>17,391</b>	-.715	,986	,321	,489
Age 5	2,313	7,455	,006	<b>10,108</b>	<b>-1,428</b>	<b>3,387</b>	<b>,066</b>	<b>,240</b>
Age 6	3,191	5,815	,016	<b>24,305</b>	-.609	,346	,556	,544
Married	-.491	,416	,519	,612	,224	,117	,732	1,251
Single	-.247	,091	,763	,781	,022	,001	,976	1,022
Education 1	,319	,257	,612	1,376	-.347	,413	,520	,707
Education3	,504	1,766	,184	1,656	<b>-.906</b>	<b>6,332</b>	<b>,012</b>	<b>,404</b>
Income 1	,331	,317	,573	1,392	-.564	1,130	,288	,569
Income 3	-.252	,295	,587	,777	,629	2,080	,149	1,876
Income 4	-.679	1,516	,218	,507	<b>1,315</b>	<b>5,660</b>	<b>,017</b>	<b>3,723</b>
Income 5	,545	,946	,331	1,725	,436	,709	,400	1,547
Household size1	-1,199	3,586	,058	<b>,301</b>	,804	2,101	,147	2,234
Household size 3	-1,195	5,305	,021	<b>,303</b>	-.089	,046	,830	,915
Buying frequency1	-1,135	9,332	,002	<b>,321</b>	,580	3,016	,082	1,786
Buying frequency 3	-.498	,689	,407	,608	<b>1,476</b>	<b>5,504</b>	<b>,019</b>	<b>4,375</b>
Dairy shop	,672	2,083	,149	1,959	-.665	2,342	,126	,514
Dairy unit production	1,188	1,974	,160	3,282	<b>-1,751</b>	<b>5,739</b>	<b>,017</b>	<b>,174</b>
Minimarket	-.178	,146	,702	,837	-.005	,000	,991	,995
Taste	-.226	,328	,567	,798	<b>1,187</b>	<b>10,052</b>	<b>,002</b>	<b>3,278</b>
Type	-.002	,000	,996	,998	,063	,037	,847	1,065
Price	-.152	,122	,727	,859	-.079	,046	,831	,924
Origin	-.149	,170	,681	,861	<b>1,854</b>	<b>29,064</b>	<b>,000</b>	<b>6,385</b>
Producer confidence	,611	1,347	,246	1,843	-.344	,518	,472	,709
Seller confidence	,317	,453	,501	1,374	-.561	1,603	,205	,570
Safety certificate	,300	,430	,512	1,350	-.454	1,069	,301	,635
Freshness	,016	,002	,968	1,016	-.477	1,616	,204	,621
Traditional aspect	-.422	,865	,352	,656	<b>1,083</b>	<b>7,672</b>	<b>,006</b>	<b>2,953</b>
Low health risk	-.357	,788	,375	,700	,012	,001	,973	1,012
Nutritional values	,170	,200	,655	1,185	,222	,372	,542	1,249

and less and equal to 21%, the model shows that predictors such as age, education, income, buying frequency and purchase place have a significant effect. Age – individuals within group 5 (corresponding to age 55-64 years old) are less likely to pay this premium for the origin of Gjirrokastër cheese. For these consumers, the model predicts that only 16%<sup>4</sup> are willing to pay that premium. Education – highly educated people are less likely to pay than not to pay that premium. The model shows that only 28% of consumers in

<sup>4</sup> Odd ratios are converted into probabilities for the significant effects in the dependent variable by:  $\hat{Y} = \text{Odds}/(1+\text{Odds})$ .

this category will do so. Income – those with high income (a monthly income €643-857) are three times more likely to pay the premium: that is, 77% will pay the indicated premium. Buying frequency – high buying frequency households are four times more likely to pay than not to pay this premium. Purchase place – consumers buying in dairy shops are less likely to pay that premium. This result is explained by the level of information available. Consumers buy in dairy shops, other information is at their disposal and for this purpose they are not willing to pay a higher premium for origin.

These consumers focus on two attributes in the buying decision process: taste ( $p=0.002$ ) and origin ( $p=0.000$ ), and link the extra payment for origin with the traditional aspect ( $p=0.006$ ).

Binomial test (0.5), testing the hypotheses of equal probability of indicating yes or no to the attributes linked to the origin premium, indicates that the extra payment for Gjirrokastër origin is dedicated to its traditional aspect, low health risk and high nutritional value attributes. While when dealing with a high extra payment, only the traditional aspect of this product had a significant effect. Related to consumer characteristic effects, no gender effect is observed. Elderly people are more likely to pay a higher premium of 10% to 16% than 16% to 21%. This finding is in line with other research (Quagraine *et al.*, 1998; Becker, 1999; Loureiro and Umberger, 2005) and it is the experience of this consumer group that explains the result: older people are price sensitive and because of their experience with the product, they tend not to overestimate the effect of origin in their preferences, choosing to focus on its intrinsic characteristics. Those on high incomes are more likely to pay a higher premium; other researchers have found a positive relationship, meaning that this consumer group is more willing to pay more for the product's origin. On the topic of education, these paper's findings are in line with Loureiro and Umberger (2005) who show that highly-educated consumers are able to process other types of information, leading to

their decision to pay less for product origin. Other authors, however, show that this same group of consumers are more willing to pay high premiums for origin (Sánchez *et al.*, 2012). The comparison of results should be taken with caution because of the differences that exist in terms of: products considered, sample sizes, WTP estimation methods and statistical analysis. Buying frequency is another factor considered in the analysis - high purchasing frequency households are four times more likely to pay a higher premium. These consumers consider the product to be very important in their daily diet, hence their willingness to buy at a higher price.

## 4. Discussion and conclusions

Outlining the reasons determining the premium for product origin is crucial in the attempt to better signal the product to consumers. The study's results show that for a given premium, consumers link the additional payment differently. Those paying a higher premium, from 16% to 21%, linked the extra payment for origin with the product's tradition. Traditional products are defined as coming from a specific area produced with specific knowledge and dispensing specific sensorial properties (Bérard and Marchenay, 2004). That is, the traditional attribute conferred to origin implies also a given set of sensorial properties. This result is also sustained in other research with the same product (Kokthi *et al.*, 2014), the disconfirmation of taste in a disconfirmation of expectations approach shows that origin generates a taste expectation. The origin of Gjirokastër articulates expectations not only for the credence attributes (tradition) of the product but also for intrinsic ones, such as taste. These results are quite important for the policymaking process because traditional knowledge is embedded in GIs and the fact that consumers expressed an extra payment for origin linked to the traditional aspect may result in a successful GI strategy for Gjirokastër cheese. The extra payment shows also that GI can lead to higher incomes to local actors who are in charge of transmitting the tradition and preserving the reputation of Gjirokastër cheese. Indeed, the economics of product differentiation for origin-based product lies in the creation of a monopolistic competition. The monopoly formation in the case of GI products protects producers because it establishes barriers for other producers located outside the area of production. Other works<sup>5</sup> sustain that Gjirokastër cheese is facing some erosion in the WTP and in its reputation as a result of free-riding (other producers that use the same region name with different quality of cheese in the marketplace), resulting in a confusing process for the consumer decision process. Adding value to such a product allows for the remuneration and reproduction of specific local resources, thus not only benefiting from the production system but also creating possibilities for rural development dynamics. Bramley (2011) states that GIs potentially impact rural development through their remuneration of specific assets directly involved in the production process, but also in the creation of rent indirectly by activating other sectors in the region. In the case of the Gjirokastër region, the GI differentiation strategy can possibly increase local revenues and local employment in various stages: production, processing and distribution, maintaining traditional farming and keeping alive the local culture related to the product, but also fostering the development of tourism. However, the first step of the GI activation process is the clear identi-

fication of the product and the local resources needed for production, not only on product reputation as in the actual study but also in scientific studies on resources such as soil analyses, breeding and the history of the product. This process requires the participation of local actors and public policies which can help in rising and improving awareness among producers and other local stakeholders of GI characteristics and potential by: i) designing technical and socio-economic programmes for GI products characterisation, ii) raising awareness for GI products in public administration, iii) supporting local actor involvement in national inventories; and iv) supporting the establishment of local GI groups to discuss GI products and their link with the territory. Public policy can also engage in improving knowledge of GI protection schemes and other or different legal tools that use geographical names; this can be achieved by i) providing clear information on GI protection schemes and their benefit/risk, ii) providing instructions on how to apply for GI protection from regional/local authorities and iii) emphasising practical examples of related GI systems and the potential benefit for local stakeholders from the experience of other Mediterranean countries.

## References

- Barjolle D., Boisseaux S. and Dufour M., 1998. *Le lien au terroir*. Bilan de Travaux de Recherche. Lausanne, Switzerland: Institut d'Economie Rural.
- Becker T., 1999. Country of origin as a cue for quality and safety of fresh meat. France: *Economie et sociologie rurales*, 187-208
- Bérard L. and Marchenay P., 2004. Protéger sans appauvrir. In: *Les produits de terroir entre cultures et règlements*, 1: 45-77. France: CNRS.
- Bérard L. and Marchenay P., 2007. Localized products in France: Definition, protection and value adding. *Anthropology of Food (S2)*.
- Bourbouze A. and François M., 2001. Terroir et fromages en Albanie: Recomposition des filières laitières dans une économie en transition. In: Civici A. and Lerin F. (eds.). *L'agriculture albanaise: contraintes globales et dynamiques locales*. Montpellier : CIHEAM, pp. 177-180. Options Méditerranéennes, B28.
- Bramley C., 2011. A review of the socio-economic impact of geographical indications: considerations for the developing world. *Lima*, 28.
- Bramley C., Biénabe E. and Kirsten J., 2008. The economics of geographical indications: toward a conceptual framework for geographical indication research in developing countries. In: WIPO (ed.) *The economics of intellectual property: Suggestions for further research in developing countries and countries with economies in transition*. Geneva: World Intellectual Property Organization, pp. 109-149.
- Cameron T.A. and Huppert D.D., 1989. OLS versus ML estimation on non-market resource values with payment card interval data. *Journal of Environmental Economics and Management*, 17(3): 230-246.

<sup>5</sup> Accepted paper at Journal of Food Products Marketing, Kokthi&Kruja (2016) Consumer Expectations for Geographical Origin: Eliciting WTP using the Disconfirmation of Expectation Theory (EDT)



- Darby M.R. and Karni E., 1973. Free competition and the optimal amount of fraud. *Journal of Law and Economics*, 16(1): 67-88.
- Dentoni D., 2009. *Branding agri-food products with credence attributes*. Michigan: Michigan State University. Dissertation. [http://www.aec.msu.edu/theses/fulltext/dentoni\\_phd.pdf](http://www.aec.msu.edu/theses/fulltext/dentoni_phd.pdf).
- Dentoni D., Tonsor G., Calantone R.J. Peterson C.H., 2009. The direct and indirect effects of locally grown on consumers attitudes towards agri-food products. *Agricultural and Resource Economics Review*, 38(3): 384-396.
- Dentoni D., Tonsor G., Calantone R. and Peterson C.H., 2013. Brand coepetition with geographical indications: Which information does lead to brand differentiation? *New Medit*, 12(4): 14-27.
- Deselnicu O., Costanigro M., Souza-Monteiro D. M., and Thilmany D., 2013. A meta-analysis of geographical indication food valuation studies: What drives the premium for origin based labels. *Journal of Agricultural and Resource Economics*, 38(2): 204-19.
- Hackl F. and Pruckner G.J., 1999. On the gap between payment card and closed ended CVM answers. *Applied Economics*, 733-742.
- Hanemann M. and Kanninen B., 1998. The statistical analyses of discrete-response CV DATA. Department of Agricultural and Resource Economics and Policy Division of Agricultural and Natural Resources, University of California, Berkeley.
- Ittersum K. van, Candel M.J.J.M. and Meulenberg M., 2003. The influence of the image of a product's region of origin on product evaluation. *Journal of Business Research*, 56: 215-226.
- Kokthi E., Hodaj N. and Topulli E., 2014. Assimilation-contrast theory supporting quality signal based on geographical origin in Albania: (The case of Gjirokastra cheese). *International Journal of Innovative Research in Science and Engineering*, 2(10): 714-717.
- Lancaster K.J. 1966. A new approach to consumer theory. *Chicago Journals*, 24(2): 132-157.
- Loureiro M.L Umberger W.J., 2005. Assessing consumer preferences for country of origin labeling. *Journal of Agricultural and Applied Economics*, 37(1): 49-63.
- Mahieu P.A., Riera P. and Giergiczny M., 2012. Determinants of willingness to pay for water pollution abatement: A point and interval data payment card application. *Journal of Environmental Management*, 108: 49-53.
- Malorgio G., Camanzi L. and Grazia C. (2008). Geographical indications and international trade: evidence from the wine market. *New Medit*, 7(3): 4-13.
- Menapace L. and Moschini G.C., 2012. Quality certification by geographical indications, trademarks and firm reputation. *European Review of Agricultural Economics*, 39(4): 539-566.
- Nelson P., 1970. Information and consumer behavior. *Journal of Political Economy*, 78(2): 311-329.
- Pecqueur B., 2001. Qualité et développement territorial: L'hypothèse du panier de biens, *Economie Rurale*, 261: 37-49.
- Quagraine K.K., Unterschultz J. and Veeman M., 1998. Effect of product origin and selected demographics on consumer choice of red meat. *Canadian Journal of Agricultural Economics*, 46: 201-219.
- Sánchez M., Beriain M.J. and Carr T.R., 2012. Socio-economic factors affecting consumer behaviour for United States and Spanish beef under different information scenarios. *Food Quality and Preference*, 24(1): 30-39.
- Stefani G., Romano D. and Cavicchi A., 2006. Consumer expectations, liking and willingness to pay for specialty foods: do sensory characteristics tell the whole story? *Food Quality and Preference*, 17: 53-62.
- Teuber R. 2009. Producers' and consumers' expectations toward geographical indications-empirical evidence for Hessian apple wine. *113th Seminar, September 3-6, Chania, Crete, European Association of Agricultural Economists*.
- Teuber R., 2010. *The economics of geographically differentiated agri food products, theoretical consideration and empirical evidence*. University of Giessen. Dissertation.
- Tian X., Yu X. and Holst R., 2011. Applying the payment card approach to estimate the WTP for green food in China. *IAMO Forum, Halle (Saale), Germany, June 23-24, 2011*.
- Vandecandelaere E., Arfini F., Belletti G. and Marescotti A., 2009. *Linking people, places and products. A guide for promoting quality linked to geographical origin and sustainable geographical indications*. 2<sup>nd</sup> ed. Jointly produced by FAO and SINER-GI.
- Van der Lans I.A., Ittersum K. van, De Cicco A. and Loseby M., 2001. The role of the region of origin and EU certificates of origin in consumer evaluation of food products. *European Review of Agricultural Economics*, 28(4): 451-477.