Segmenting Albanian consumers according to olive oil quality perception and purchasing habits

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Abstract

The objective of this paper is to analyze consumer purchasing behaviour and preference for olive oil, in the Albanian context of a weakly enforced public and private quality assurance system. A consumer survey was administered at retail outlets in Tirana. Data analysis was performed using descriptive statistics and a two-step cluster analysis to identify homogeneous groups within the sample. The results indicate that most consumers perceive the quality of olive oil they consume to be very high and tend to rely on and trust in the producers/suppliers of the product, rather than public institutions as a guarantee of the quality and safety of olive oil purchased.

Keywords: *consumer behavior, olive oil, food quality, two-step cluster analysis, Albania*

Introduction

The olive and olive oil industry is one of the most important sectors in Albania's agriculture, with almost 1/3 of the farms in the country or 118,000 farms being involved in this type of production activity (MoAFCP, 2009). Within a 10 year period, between 2000 and 2010, the demand for olive oil increased and the latest FAO figures on the supply of olive oil indicate that in 2009, Albanians consumed 0.6 kg of olive oil per capita per year (Zhllima *et al*, 2012). However, this is far less than the average consumption in other Mediterranean countries where olive oil is very popular, such as Greece (14.9 kg/capita), Italy (13.8 kg/capita) and Spain (11.5 kg/capita), but quite similar to consumption patterns of other Western Balkans countries, such as Montenegro (0.5 kg/capita), the former Yugoslav Republic of Macedonia (0.9 kg/capita) and

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Serbia (0.1 kg/capita) (FAO, 2012).

One of the key challenges facing this industry, as in the whole of the Albanian agri-food system, is the issue of food quality and safety enforcement (WB, 2007; Imami *et al.*, 2011). Recently, the olive and olive oil industry in Albania has been studied, with a focus both on the analysis of supply (DSA, 2010; Skreli *et al.*, 2009; Mane and Kapaj, 2009) and on consumer preferences for olive oil and table olives (Chan-Halbrendt *et al*., 2010; Zhllima *et al.*, 2011). However, consumer studies have been focused mainly on consumer preferences for various product attributes only, without exploring consumer perception of the overall quality of the olive oil they consume, and the types of quality assurance used. The aim of this work is to explore these understudied aspects of this product.

The objective of this research is to analyze consumer purchasing behavior and preferences for olive oil, in a context of a weakly enforced public and private food safety and quality assurance system. Quality and safety are often considered separately, but in this context food safety can be considered the most basic aspect of food quality, and thus in this study these two aspects were considered simultaneously. Food safety is of important public interest, but it is also a highly relevant quality attribute for marketers, traders, and consumers (Canavari *et al*., 2010). This research aims to provide answers to the following research questions:

- Which are the main signals of a (perceived) quality guarantee for consumers?
- Which are the strategies adopted by consumers to obtain higher quality olive oil?
- How do consumer socio-demographic factors affect consumer perceptions and behavior?

This study, focused on consumer behaviour regarding olive oil can benefit Albanian olive oil producers and policy-makers, to initiate and facilitate more efficient marketing strategies for the private sector and to support government policies in the industry, particularly pertaining to quality guarantee strategies. An outcome of the analysis was the classification of consumers into clusters based on their perception of olive oil quality, consumption patterns and socio-demographic variables. These clusters may represent market segments to be targeted by producers and traders with differential and appropriate marketing strategies.

The remainder of the paper is organized as follows: in Section 2, previous studies on this topic are reviewed; Section 3 provides a description and a discussion of the results of the analysis; and finally, in Section 4 conclusions are drawn.

Review of previous literature

There is considerable amount of literature focused on consumer preferences for olive oil, defining various product attributes chosen by the consumer, with many studies focusing in particular on the Italian consumer. Scarpa and Del Giudice (2004) confirmed that price considerably influences Italian consumer choice. In many other studies the role of other quality characteristics, such as search and experience attributes (packaging, sensory features) or credence attributes inferred from the information contained in the label (origin, organic farming methods, etc.) as a driver of consumer preference, was confirmed. For example, Finco *et al.* (2010) observed that origin of the product is considered as an additional assurance element concerning food safety and quality by

Italian consumers in the Marche region. EU geographical indication labels were also investigated by Van der Lans *et al*. (2001) and by Aprile *et al*. (2012), confirming that these cues play an important role in signaling olive oil quality.
Other surveys on Greek consumer behavior indicate that domestic origin of olive oil is a highly appreciated attribute (Krystallis and Ness 2005, Matsatsinis *et al.*, 2007). A study by Topçu (2009) indicates that consumers prefer virgin olive oils to refined ones, low price (5 €/l), strong taste, yellow color, and tin box packages. Another study conducted by Sandalidou *et al.* (2002), examined consumer preferences and attitudes using Multicriteria Satisfaction Analysis considered five criteria for global customer satisfaction of organic olive oil: health, price/quality, packaging, specific characteristics, promotion and disposition.

Various studies used different techniques to assess the consumer perception toward olive oil quality attributes. Conjoint choice studies are frequently used for analyzing the principal product attributes, such as price, origin, type and color (Siskos *et al*., 2001; Sandalidou *et al.*, 2002; Mtimet *et al*, 2008, Gázquez-Abad and Sánchez-Pérez, 2009; Dekhili *et al.*, 2011; Topçu, 2009; Menapace *et al*., 2011; Mtimet *et al*, 2013).

Other authors such as Santosa *et al.* (2010) utilised a modified sorting task to investigate Californian consumer perceptions of extra virgin olive oils. Subsequently, Santosa and Guinard (2011) used a Means-End Chains analysis of extra virgin olive oil purchase and consumption behavior in the US. Whereas, Krystallis (2005) combined a qualitative Means-End Chains study with a Conjoint Analysis survey in order to identify quality-conscious consumer purchasing motives for olive oil and their attitudes related to different quality attributes. Other studies have utilized Factor Analysis and Discriminant Analysis (Siskos *et al*., 2001), as well as logit regression analysis (Kalogeras *et al* 2009). A recent consumer study by Chan-Halbrendt *et al*. (2010) analyzed Albanian consumer preferences for key intrinsic olive oil attributes (origin, type, taste, place of purchase and price) applying conjoint choice experiments (CCE) and latent class analysis. Four out of six identified consumer classes did not show any statistically significant preference for a single type of olive oil (extra virgin versus virgin and normal) or for the place of purchase, while only three classes showed preference for taste and origin (domestic versus imported). Unexpectedly, five out of six classes showed significant preference for a higher priced olive oil, as it is assumed that people would prefer lower price. However, this may be interpreted as a consumers association of better quality with a higher price, and may encourage people to select higher priced olive oils, especially if other signals indicating quality are lacking or absent. In developed countries, the use of food labeling has become increasingly important as a signal of quality (McCluskey and Loureiro, 2003). Food labels are considered the solution to the imperfect information dilemma, since quality signaling through product labeling provides a marketing opportunity for food companies, as well as incentive to provide high-quality commodities while requiring a relatively low involvement of governments and public bodies (Caswell and Padberg, 1992; Caswell and Mojduszka, 1996). However, in order to be effective both as a quality signal and as a market incentive, the label must be understood and must be represented by a trust cue. Therefore, this label or certification system should be issued by trusted and official third parties, either in the public or private sector, and furthermore enforced by rigid system of governmental and legislative controls. (Lacerneux *et al*., 2011). This is not the current situation in Albania, where the

food quality and safety assurance system is weakly enforced.

Therefore, the purpose of this study is to consider these understudied issues by providing a description of a sample of Albanian oil olive consumers, evaluate their perceived quality of the product, and to identify the indicators of quality of olive oil as perceived by the Albanian consumer.

Methods and data

A series of elements regarding perceptions and attitudes among Albanian consumers was measured, using basic descriptive statistics analysis to describe the responses of the sample group under study. In this study, tests of association among targeted variables were applied; with the use of Pearson's Chi Square tests and Kruskal-Wallis tests. Cross-tables of variables were measured, analysing nominal categories or ordinal scales to determine whether the hypothesized relationships were statistically significant.

Subsequently, cluster analysis was applied to identify homogeneous groups of consumers. A two-step clustering technique was used to classify consumers according to a chosen set of indicators, including consumer perception of olive oil quality. The two-step cluster analysis (available in the SPSS 19 statistical package) is an exploratory technique that allows a clustering of large data sets simultaneously using continuous and categorical variables. The main advantage of this approach is the avoidance of the randomness that can be generated in traditional clustering techniques, considering that, unlike other clustering techniques, this procedure is able to automatically detect the most appropriate number of clusters (Norusis, 2003). This method uses a probabilistic approach, in which the clustering of algorithms is based on a likelihood distance, measured as the similarity criterion, and the optimal number of clusters is selected on the basis of Schwarz's Bayesian information criterion (BIC).

For any possible clustering solutions, SPSS calculates "silhouette coefficients" that measure clustering quality. The silhouette coefficient is independent from the number of clusters, *k*. A higher silhouette coefficient (that is, approaching 1), indicates a better clustering solution (Al-Zoubi and al Rawi, 2008).

As discussed in the literature review, a previous segmentation study of olive oil consumers in Albania applied a CCE approach. In this study, a two-step cluster analysis was preferred, conferring a higher degree of flexibility, since quality attributes under investigation do not need to be limited to a small number and strictly defined in advance. Therefore, this method was considered more appropriate for the specific purpose of this analysis. Moreover, this type of analysis has been previously used in various consumer studies, especially those focused on acceptance of intrinsic product attributes, including health and safety concerns, such as in Loizou *et al* (2013), where different levels of innovative product adoption among consumers were explored. Furthermore, this analysis was utilised in evaluating organic food choice motives, attributes of organic food, and barriers to purchase in Polish consumers (Zakowska-Biemans, 2011). In a subsequent study, Simunaniemi *et al* (2013) focused on fruit and vegetables-related perceptions of Swedish consumers, with the use of the two-step cluster analysis accompanied by regression analysis.

The data obtained was derived from face-to-face consumer surveys, administered during autumn 2010 to 259 participants randomly selected amongst olive oil consumers

at food retail outlets in Tirana. Tirana is the capital city and largest city in the country, and consequently offers the advantage of a high diversity in terms of culture, religion and income. Locations of the surveys, the number of interviews, and the questionnaire design, were based on literature reviews, expert assessment and two consumer and industry focus groups, as well as considering budget constraints for data collection. In order to derive wide range of consumer opinion and ensure a representative sample of all urban consumers was obtained, the sample population was divided into two groups based on the location where respondent commonly shop. One sample group, comprised of one hundred respondents, was interviewed at the "Uzina Dinamo" market, which is both a wholesale and retail market, and is one of the main retail outlets for Tirana consumers. The other sample group, comprised of one hundred and fifty respondents, was recruited at the largest outdoor food retail market, the "Pazari i Ri" in Tirana, in which all types of food retailers can be found, and therefore is frequented by several types of consumers.

Table 1 summarizes the gender and age structure[5] of the Tirana survey respondents, comparing the same parameters to the population of Tirana, as reported by official statistics (INSTAT, 2001). The study sample is representative of the population demographics in Tirana, except for the proportion of male respondents which are overrepresented in the sample group. This can be attributed to the fact that surveys were administered in a shopping context and focused on the food shopper, and in Albania, similar to many other developing countries, men rather than women engage in food purchasing activities (Findlay *et al.*, 1990).

Table 1: *Socio- demographic Comparison of Survey Respondents with Tirana's Population*

Variable	Variable categories	Survey Respondents (%)	Tirana Population (%)
Gender			
	Female	34	50.14
	Male	66	49.86
Age			
	18-30	19	21
	31-40	19	22
	41-55	30	31
	56-64	20	14
	65 and up	12	13

Source: Field survey data and INSTAT. Available at: http://www.instat.gov.al/

[5] Not all the questions were responded by all interviewees therefore the total number of respondents for some questions may be smaller than the total number of interviewees.

Results

Descriptive statistics of the sample

It is common for consumers to buy olive oil directly from producers in Albania. In our sample group, it is apparent that buying directly from producers may be a strategy to obtain higher (perceived) quality, also by building long term relations with producers/suppliers which may be important for consumers. For most consumers (more than 2/3 of respondents), the main indicator of a guarantee of quality is a personal/direct interaction and familiarity with the producer. The use of direct sale for assuring quality is congruent with other studies conducted in Italy, where Tuscany producers experienced an increase in direct sales responding to changing consumer behaviors of urban Italians (Belletti and Marescotti, 1997). Also other studies conducted in Greece highlight similar behaviors (Matsatsinis *et al.*, 2007). The second most important indicator of a quality guarantee appears to be the label (Table 2). Interestingly, most studies on olive oil carried out in developed countries, identified packaging and labeling as main preferred attributes of this commodity (Topçu, 2009; Sandalidou *et al.*, 2002).

***Table 2**: Main indicator of a quality guarantee*

Category	Frequency	Percent
Knowing the producer	149	66.8%
Knowing the seller	25	11.2%
Label	30	13.5%
Other	19	8.5%
Total	223	100.0%

Source: Field survey

Most consumers in the sample group (almost 4/5 of respondents) buy olive oil from the same supplier (seller or producer) (Table 3). Loyalty to same supplier may be interpreted as a consumer strategy to obtain safer and higher quality agri-food products; by establishing a long-term relationship with a supplier, there is the assumption that loyalty will be reciprocal with the sales of 'better' product. However, the systematic and direct contact with the olive oil supplier may instead implicitly indicate the importance of the origin attributes similar to surveys conducted by Scarpa *et al.* (2004), Dekhili and D'Hauteville (2009) and Finco *et al.* (2010).

About 75% of the respondents state that quality of olive oil they buy/consume is very high. In total 85%of respondents are pleased or very pleased with the quality of olive oil they purchase (Table 4). However, it must be noted that according to Chan-

***Table 3**: The main source of olive oil*

Category	Frequency	Percent
Same supplier/seller	185	78.7%
Different suppliers/sellers	50	21.3%
Total	235	100.0%

Source: Field survey data

***Table 4**: Consumers' perception of the quality of the olive oil currently consumed*

	Frequency	Percent
1. Very low	2	0.9%
2.	8	3.6%
3.	24	10.8%
4.	20	9.0%
5. Very high	169	75.8%
Total	223	100.0%

Source: Field survey data

Halbrendt *et al.* (2010), there are concerns over Albanian consumer's lack of knowledge on olive oil types and quality.

Association between variables

Olive oil consumer studies have also examined individual factors that may affect consumer preferences, such as socioeconomic characteristics, including income, occupation status, gender and education (Tsakiridou *et al.*, 2008; Siskos *et al*., 2001; Sandalidou *et al.*, 2002). In this study, the main indicator of a perceived quality guarantee seems to vary according to the education level of the consumer. Results of the survey provide strong evidence to suggest that with a decreasing level of consumer education, trusting or knowing of producer becomes an increasingly important parameter as an indication and guarantee of the quality of olive oil. More than 4/5 of consumers who have up to 8 years of education, and more than 2/3 of consumers with a high school education choose "knowing the producer" as the first indicator of a quality guarantee, while only about half of consumers with university education express the same view. In

***Table 5**: Main indicator of quality guarantee for olive oil for consumers sorted by education*

Category		Up to 8 years	High school	University	Total
Knowing the producer	Frequency	51	63	35	149
	%	81.0%	68.5%	51.5%	66.8%
Knowing the seller	Frequency	6	13	6	25
	%	9.5%	14.1%	8.8%	11.2%
Label	Frequency	3	10	17	30
	%	4.8%	10.9%	25.0%	13.5%
Other	Frequency	3	6	10	19
	%	4.8%	6.5%	14.7%	8.5%
Total	Frequency	63	92	68	223
	%	100.0%	100.0%	100.0%	100.0%
Kruskal- Wallis test p-value = 0.0004					

Source: Field survey data

contrast, 25% of consumers with university education trust the label as primary indicator of a quality guarantee, while only 4.8 percent and 6.5 percent of consumers with lower and high school education, respectively, align with this trend (Table 5).

Most consumers (90% or more) who consider familiarity with the producer or the seller as the main indicator of a quality guarantee, tend to buy from the same supplier; while most consumers who trust the label or rely on other indicators of trust, tend to buy from different suppliers (Table 6).

***Table 6**: Main source of quality guarantee for olive oil for consumers by sorted type of relation with supplier (same buyers versus different buyers)*

Category	Same supplier		Different supplier		Total	
	Freq.	%	Freq.	%	Freq.	%
Knowing the producer	133	89.3%	16	10.7%	149	100.0%
Knowing the seller	24	96.0%	1	4.0%	25	100.0%
Label	13	44.8%	16	55.2%	29	100.0%
Other	6	33.3%	12	66.7%	18	100.0%
Total	176	79.6%	45	20.4%	221	100.0%
Pearson's Chi-Square test p-value = 0.000						

Source: Field survey data

***Table 7**: Perception of olive oil quality amongst consumers by choice of the main quality guarantee*

Category		Knowing the producer	Knowing the seller	Label	Other	Total
1. Very low	Frequency	0	1	0	0	1
	%	0.0%	4.2%	0.0%	0.0%	0.5%
2.	Frequency	5	0	1	1	7
	%	3.4%	0.0%	3.4%	6.3%	3.2%
3.	Frequency	9	3	10	1	23
	%	6.1%	12.5%	34.5%	6.3%	10.6%
4.	Frequency	4	6	5	5	20
	%	2.7%	25.0%	17.2%	31.3%	9.2%
5. Very high	Frequency	130	14	13	9	166
	%	87.8%	58.3%	44.8%	56.3%	76.5%
Total	Frequency	148	24	29	16	217
	%	100.0%	100.0%	100.0%	100.0%	100.0%
Kruskal- Wallis test p-value = 0.000						

Source: Field survey data

Consumers who consider knowing the producer or seller as the first indicator of quality are much more satisfied with the quality of olive oil they buy/consume, when compared to those who trust the label (Table 7).

Approximately 80% of respondents who buy olive oil from same supplier, consider the quality of olive oil to be very high, while only approximately 58% of those who buy from different suppliers have the same opinion (Table 8).

Table 8: *Perception of olive oil quality amongst consumers by type of relation with supplier (same supplier versus different suppliers)*

Category		Same	Different	Total
1. Very low	Frequency	2	0	2
	%	1.1%	0.0%	0.9%
2.	Frequency	6	2	8
	%	3.4%	4.4%	3.6%
3.	Frequency	13	11	24
	%	7.3%	24.4%	10.8%
4.	Frequency	14	6	20
	%	7.9%	13.3%	9.0%
5. Very high	Frequency	142	26	168
	%	80.2%	57.8%	75.7%
Total	Frequency	177	45	222
	%	100.0%	100.0%	100.0%
Kruskal-Wallis test p-value = 0.002				

Source: Field survey data

Cluster analysis

The two-step cluster analysis was based on consumer behavior/perception as determinant/input factors, specifically the perceived indicator of a quality guarantee, perceived quality of olive oil and behavior in relation to suppliers (buying from same supplier versus different suppliers). The results of the cluster analysis suggest that the sample may be divided in two clusters (Table 9). Consumer socio-demographic variables were also analyzed and compared between identified clusters.

The two clusters were characterized by quite distinct profiles. Most consumers who select "knowing the producer as the main indicator of a quality guarantee" fall in Cluster 2, which consists of this consumer choice only; while Cluster 1 includes all other remaining types of consumer choice (Table 10). All consumers in Cluster 2 consider the olive oil quality as very high, while Cluster 1 has a wider range of opinions regarding this parameter (Table 11). All consumers in Cluster 2 buy olive oil from the same supplier; in contrast Cluster 1 is comprised of a mixture of consumers who buy from the same and a different supplier (Table 12).

***Table 9**: Summarizing olive oil consumer clustering results Input factors: Source of quality, perception of quality and relation with supplier 15 BIC, 3 Clusters, Average Silhouette = 0.6*

Determinant/ input factor	Importance	Cluster 1	Cluster 2
		98 (45%)	118 (55%)
Source of quality guarantee	1	Knowing the producer (30) Knowing the seller (24) Label (28) Other (16)	Knowing the producer (118)
Quality perception	0.73	Very low (1) Low (7) So-so (23) High (20) Very high (47)	Very high (118)
Supplier	0.61	Same (55) Different (43)	Same (118)

Source: Field survey data

***Table 10**: Distribution of consumers within clusters according to the choice of main source of quality guarantee (Cluster Input/determinant Factor 1)*

Cluster	Knowing the producer		Knowing the seller		Label		Other	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
Cluster 1	30	20.3%	24	100.0%	28	100.0%	16	100.0%
Cluster 2	118	79.7%	0	0%	0	0%	0	0%
Combined	148	100.0%	24	100.0%	28	100.0%	16	100.0%

Source: Field survey data

***Table 11**: Distribution of consumers within clusters according to the perception of olive oil quality (Cluster Input/determinant Factor 2)*

Cluster	1. Very low		2		3		4		5. Very high	
	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.	Freq.	Perc.
Cluster 1	1	100%	7	100%	23	100%	20	100%	47	28.5%
Cluster 2	0	0%	0	0%	0	0%	0	0%	118	71.5%
Combined	1	100%	7	100%	23	100%	20	100%	165	100%

Source: Field survey data

***Table 12**: Distribution of consumers within clusters according to single or multiple suppliers (Cluster Input/determinant Factor 3)*

Cluster	Same supplier		Different suppliers	
	Freq.	Percent	Freq.	Percent
Cluster 1	55	31.8%	43	100.0%
Cluster 2	118	68.2%	0	0%
Combined	173	100.0%	43	100.0%

Source: Field survey data

***Table 13**: Average age by cluster*

Indicator	Cluster 1	Cluster 2	Student's T stat.
Average	46.1	46.7	0.4
St. Dev.	15.3	13.2	

Source: Field survey data

***Table 14**: Gender by cluster*

Education	Cluster 1		Cluster 2	
	Freq.	%	Freq.	%
Male	69	70%	74	63%
Female	29	30%	44	37%
Total	98	100%	118	100%
Pearson's Chi-Square test p-value = 0.234				

Source: Field survey data

Considering the above-described results, the label "Critical and quality seeking" was assigned to Cluster 1, while Cluster 2 was labeled as "Happy and loyal". There is no statistical difference between the two clusters regarding age (Table 13), consumers in both groups have almost the same average age. Furthermore, gender does not significantly differ between the clusters (Table 14).

In contrast, education levels, vary significantly between the two groups. The "Critical and quality seeking" Cluster 1 is dominated by consumers with a university and high school education (41% and 39%, respectively), while only 20% has a basic education (Table 15).

Household income also differs significantly between the two consumer clusters. About 46% of consumers in the "Critical and quality seeking" Cluster 1 declare a household income of more than 80,000 ALL/month, while only 14% of consumers in "Happy and loyal" Cluster 2 are within this income bracket (Table 16).

To summarize, the "Happy and loyal" Cluster 2 (the largest cluster) is dominated by consumers who consider familiarity of producer as the principal indicator of an olive oil

***Table 15**: Education by cluster*

Education	Cluster 1		Cluster 2	
	Freq.	%	Freq.	%
Basic (max 8 years)	20	20%	43	36%
High school	38	39%	52	44%
University	40	41%	23	19%
Total	98	100%	118	100%
Kruskal-Wallis test p-value = 0.0004				

Source: Field survey data

***Table 16**: Household income by cluster*

Income interval (ALL/month)[6]	Cluster 1			Cluster 2		
	Freq.	Share	Cumul	Freq.	Share	Cumul
over 120,001	8	8%	12%	1	1%	1%
100,001 - 120,001	12	12%	20%	6	5%	6%
80,001 - 100,000	25	26%	46%	9	8%	14%
60,001 - 80,000	21	21%	67%	52	44%	58%
40,001 - 60,000	23	23%	91%	39	33%	91%
0 - 40,000	9	9%	100%	11	9%	100%
Total	98	100%		118	100%	
Kruskal-Wallis test p-value = 0.0005						

Source: Field survey data

quality guarantee. All consumers within this cluster, buy olive oil mainly from the same supplier and consider the quality of olive oil they buy as very high. Consumers in this cluster have a significantly lower level of education level, and a lower income, when compared to consumers classified in the "Critical and quality seeking" Cluster 1. The latter cluster contains a mix of various types of consumer behavior. This group includes all consumers who trust in the label, seller, as well as other indicators of a quality guarantee, rather then knowing the producer directly. Furthermore, within this cluster, the perception of bought and consumed olive oil quality varies, with all consumers who do not perceive quality of olive oil as very high are in this group. In the "Critical and quality seeking" Cluster, all consumers buying olive oil mainly from different suppliers are within this grouped, but it is important to consider that also the presence of 'single-supplier' consumers is also dominant in this cluster.

Conclusions

In Albania, serious food safety problems are still prevalent due to weaknesses in the enforcement of public quality control structures. Consequently, most consumers distrust

[6] ALL (Albanian Lek), is the Albanian currency. Approximately 1 EUR = 140 ALL and 1 USD = 110 ALL.

public institutions as guarantors of food quality, quality control and assurance services, as demonstrated by Imami *et al.* (2011) in the case of the meat sector. According to Imami *et al.* (2011), consumers tend to develop trust relations with producers/suppliers of food products as an assurance of food quality and safety, rather than to rely on public institutions for that guarantee.

The results of this study suggest the behavior of olive oil consumers is congruent with this trend. The main indicator of olive oil quality guarantee for most consumers (more than 2/3 of respondents), is knowing the producer directly. The second most important indicator of guarantee, although at a much lower frequency, is the product label. Here, trust in the label may be considered as a proxy for trust in formal food quality, safety assurance system and in the related enforcement institutions. However, although this quality signal may be considered similar to the veterinarian stamp in the case of meat (Imami *et al.*, 2011), the case of olive oil is different because the product is intrinsically posing less risks in terms of safety, but a higher risk in term of authenticity and quality integrity. Indeed, most consumers (almost 4/5 of respondents) buy olive oil from the same supplier (seller or producer). Buying from the same supplier may be easily interpreted as a strategy chosen by consumers to obtain safer and higher quality agri-food products. This behavior is linked to the level of education, since with a lower level of the consumer education, knowing the producer directly becomes an increasingly important and principal indicator of olive oil quality guarantee. In contrast, more educated consumers tend to rely more on labels as a signal of quality.

As expected, most consumers (circa 90 percent) who consider knowing the producer or knowing the seller as the main indicator of a quality guarantee, tend to buy from the same supplier; while most consumers trust in the labels or other quality indicators rather than trusting/knowing the producer and seller, tend to buy from different suppliers. Consumers who consider knowing the producer or seller as the first indicator of quality verification and that usually buy from the same suppliers are much more satisfied with the quality of olive oil they buy/consume, when compared to those who rely on the label as a primary means of quality verification. Surprisingly however, most respondents are satisfied with the quality of olive oil they consume, thus indicating a confidence in the strategy utilized to obtain a certain level of perceived safety and quality.

The two-step cluster analysis of consumer behavior produces 2 clusters. The Cluster labeled as “Happy and loyal” (the largest cluster) is comprised only of consumers who consider knowing the producer as the main indicator of olive oil quality guarantee. All consumers in this cluster buy olive oil mainly from a single supplier and consider the quality of purchased olive oil to be very high. Consumers in this cluster have significantly lower education levels and lower incomes, when compared to the other cluster. In contrast, the cluster labeled “Critical and quality seeking”, contains a greater variety in the types of consumers behavior. This group includes all consumers that trust in the label, those that trust the familiarity with the seller, as well as consumers that utilize other quality indicators. In this group, the perception of olive oil quality varies from the highest to the lowest level, and all consumers who perceive the quality of olive oil to be low are in this group. Although, consumers who buy mainly from the same supplier also dominate the “Critical and quality seeking” cluster, along with all the consumers who buy olive oil mainly from different suppliers are grouped here.

These results may be useful to both practitioners and policy makers in designing,

planning and adjusting their strategies to improve the quality of olive oil offered to Albanian consumers. The agri-food value chain is expected to change substantially in the coming years, with the share of supermarket in the retail sector that is expected to increase significantly, similarly to other transition and developing countries (FAO, 2009; Zhllima *et al.*, 2012). Moreover, continuous urbanization and weakening of social relations with kins and acquaintances in rural areas, is expected to reduce the direct sales from producers to final consumers. Thus, it is expected that a growing number of consumers will switch from purchasing olive oil from producers to supermarkets. However, trust in quality is and will remain a challenge, given the insufficient quality control systems in place. Strengthening enforcement of regulation institutions is therefore instrumental to enable food quality (and safety) control. A key issue in improving customer confidence is to develop transparent standards and rigidly regulate compliance (Chan-Halbrendt *et al*., 2010). The Albanian institutions that are in charge of controlling and promoting agricultural development and consumer quality and safety need to focus on strengthening the standards of food safety, quality control and certification to gain Albanian consumers' confidence on domestic labeling and standards. On the other hand, marketing managers should consider introducing private quality management and assurance schemes, since in this market environment the perception of overall food quality and food safety provided by the external private company may represent a considerable competitive advantage.

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