

“Analysis of consumers’ preferences for traditional local cheese in Albania applying conjoint analysis”

Abstract

This paper analyses Albanian consumer preferences for cheese on the basis of a structured survey. The objective of the study is to evaluate preferences of Albanian consumers for typical local cheese and partitioning them into homogenous groups by using a conjoint choice experiment (CCE) and latent class analysis. According to the results, area of origin is an important attribute but the level of importance varies by consumer classes. Two of three consumers’ classes that were identified have a strong preference for white cheese, and also prefer cheese from Gjirokaster. The analysis of consumers’ preference for cheese of different areas of origin within the country provides useful information to producers and policy makers on potentials to develop regional brands, including Geographical Indications or Protected Designation of Origin – specifically for the case of Gjirokaster which has a good reputation for cheese production.

Keywords: Consumer Preferences, Cheese, Conjoint Choice Experiment, Latent Class Analysis. Albania

Prof. Ass. Dr. Drini Imami (Corresponding Author)

Faculty of Economics and Agribusiness, Agricultural University of Tirana, Koder-Kamez, Tirana, Albania. Email: dimami@ubt.edu.al

Prof. Ass. Dr. Engjell Skreli

Faculty of Economics and Agribusiness, Agricultural University of Tirana, Koder-Kamez, Tirana, Albania. Email: eskreli@ubt.edu.al

Prof. Dr. Catherine Chan-Halbrendt

Department of Natural Resources and Environmental Management, University of Hawaii at Mānoa. 1910 East-West Road, Sherman 104, Honolulu, Hawaii, 96822, U.S.A. Email: chanhalb@hawaii.edu

Prof. Ass. Dr. Edvin Zhllima

Faculty of Economics and Agribusiness, Agricultural University of Tirana, Koder-Kamez, Tirana, Albania. Email: ezhllima@ubt.edu.al

Prof. Dr. Maurizio Canavari

Associate Professor of Agricultural Economics and Appraisal. Alma Mater Studiorum-University of Bologna, Via Zamboni, 50-40126 Bologna, Italy. E-mail: maurizio.canavari@unibo.it

Alban Cela

Albanian Institute of Statistics. Email: acela@instat.gov.al

Introduction

The livestock sector is the most important agrifood sector in Albania – it represents about ½ of the agriculture output value. The livestock sector, particularly meat and dairy production are considered also priority sector for policy-makers in Albania (MARDWA, 2014). On the other hand, dairy products represent a significant share of the average Albanian household consumer basket.

The dairy industry has been stable with a slight decrease of consumption of 7 per cent since 2005. The production has decreased by 11.5 per cent compared to 2005 whereas import has increased by 35 per cent during the same period. Increasing imports are triggered also by the low and inefficient production of domestic raw milk resulting from the highly fragmented dairy farm structure that characterises the Albanian agriculture. Meanwhile, no exports are recorded, except very few sporadic cases due to high dairy production costs, as well as compliance issues related to (international) quality standards.

Table 1: Supply balance of cheese (ton) during the period 2005-2011

Indicators	2005	2009	2010	2011
Production (Mt)	13,947	12,877	13,527	12,340
Export	0	1	0	0
Import	1,209	1,259	1,167	1,636
Export/Import	0.0%	0.1%	0.0%	0.0%
"Apparent Consumption"	15,156	14,135	14,694	13,976
Import penetration rate	8.0%	8.9%	7.9%	11.7%

Source: MoAFCP (2012) for production data, UNSTAT for trade data.

Despite a slight consolidation of the livestock farming, small scale subsistence and semi-subsistence husbandry still persist - where the average farm area is approximately 1.3 hectares, most cattle farms have 1-2 cows, and less than 2 per cent of the cattle farms own more than 5 cows (MoAFCP, 2012). The on-going development of the dairy sector is also driven by consumer preferences, for instance the sensitivity of consumers toward origin of the product, the high diversity of products, and the growing integration of farms in the market and the consolidation of the legal and institutional framework.

Cheese is one of the main food items of the Albanian household's consumer basket. There have been various studies on consumer preferences on cheese in Albania. In general, Albanian consumers prefer domestic cheese to imported one (Imami et al, 2013). According to Imami and Skreli (2013) consumers have strong preference for cheese from specific regions of Albania such as Gjirokaster. However, no in depth consumer segmentation study based on preferences for origin has been carried out. This information is necessary for marketing managers and policy-makers regarding origin certification and labelling.

In this study we analyse consumer preferences for cheese in Tirana, Albania. We aim to group consumers according to their preferences for the main cheese attributes, assess preferences of each identified class for each of the identified attributes, with particular focus on area of origin/production. Based on these research findings, we will provide marketing and policy recommendations for the sector's stakeholders, including producers (dairy processors) and policy-makers regarding potential of introducing PDO/GI schemes.

Consumer preferences for typical cheese have been investigated by many authors. De Souza Monteiro and Ventura Lucas (2001), focused analysis in the urban Portuguese consumers' motivation, attitudes and preferences when considering protected designation of origin (PDO).

According to the authors, the recognition as PDO is the most important attribute for the choice of traditional cheeses, followed by price, texture and unit of sale. PDO may affect also the intrinsic value of the cheese. Tendero and Bernabéu (2005) found that consumers value most the PDO labelled cheese as a guarantee of quality and food safety. Later on, Garavaglia et al (2011) found that Italian consumers are greatly influenced by P.D.O. certification in cheese purchasing decisions, and that this quality mark resulted in increasing consumer willingness to pay. In a recent study, Braghieri et al. (2014), along with sensory properties, processing characteristics and ethical attributes found out that geographical indications may play an important role in affecting traditional cheese preference and consumer WTP. However, another group of authors, Bonnet and Simioni (2001), found no additional willingness to pay for origin certification in the case of PDO French Camembert cheese. In Western Balkans there are very few studies scrutinizing the issue of local cheese consumer preferences. Giraud et al. (2013) identified 4 consumer clusters for white cheese: 1) those focused more on the local origin; 2) oriented more toward the scale of production (on-farm and small dairy); 3) favoring low prices and 4) preferring high prices and industrial products.

It is important to find out the potentials for consumer preferences related to the attributes related with the origin of the local cheese. GI registration and protection, may become potentially work as useful tools for the market consolidation of the domestic cheese in Albania. Any investments regarding GI in the future create the basis for sustainable maintenance of the agricultural sector in Albania and especially in mountainous areas. The following of this paper is organized in three sections. The next section describes the methodological procedure implemented for studying consumer preferences on cheese. The third section presents the results, followed by conclusions and recommendations for both producers and policymakers.

Methods and Procedures

We use a conjoint choice experiment (CCE) to analyse consumer preferences, and to perform consumer segmentation, and assess preferences for each of the identified consumer classes and the relative importance of Albanian cheese attributes. Lancaster (1966) developed the theory in which the utility of a product is based on the bundle of attributes it has rather than the good itself. Later on in 1980s classical conjoint analyses and CCE has been used widely in market research. Using the conjoint choice method with Latent Class Analysis (LCA) to analyse the data collected is attained an improvement compared to the traditional (i.e. one class) aggregated model analysis, since with this method it is possible to account for heterogeneity among respondents.

Various CCE studies on cheese consumer surveys have used various attributes according to the objective of the research. Imami et al (2013) used the type of raw material in producing cheese such as dry milk versus fresh milk, and imported versus domestic cheese. De Souza Monteiro and Ventura Lucas (2001), focused their analysis in the urban Portuguese consumers' motivation, attitudes and preferences when considering PDO labelling. Price is a stable attribute in most of the consumer studies. Moreover in order to identify the local cheese, type of cheese is also added as a very important attribute. As a results, the chosen attributes and their levels are as follows:

Price – prices levels were based on market observation.

Origin – based on previous research results and experts assessments, the most important regions of Albania in terms of tradition in production and consumption are Shkoder (north), Korce (southeast) and Gjirokaster (southwest).

Types of milk – in Albania are typically used three types of milk (available in the country) for cheese production, namely milk from cow, goat and sheep.

Types of cheese – in Albania two types of cheeses are most commonly produced: white (feta-like) cheese and hard matured cheese (yellow, known also as “kashkavall” in Albania).

The data collection tool was designed based on literature review, expert interviews and a focus group with food marketing experts. The structured questionnaires consisted of one choice set containing choice tasks and additional structured questions. After cheese attributes have been selected and attribute levels assigned, the later have been combined into choice sets of triple concepts or profiles (Table 1). Seven versions of twelve choice sets are included in each questionnaire.

Table 1: Cheese attributes and their levels

Attribute	Levels			
Price (ALL¹/kg)	400	600	800	1000
Origin	Shkoder	Korce	Gjirokaster	
Type of milk	Cow milk	Goat milk	Sheep milk	
Type of cheese	Yellow cheese	White cheese		

Source: Authors estimations

The questionnaire was coded and tested. Altogether 210 interviews in Tirana which is the largest urban area and market in Albania. This study was designed to be conducted through face-to-face interviews. The interviews were carried out by trained students at various sites within Tirana, according to suggestions derived from focus groups. Interviews took place close to agriculture markets and supermarkets, and consumers were selected using a market intercept method – people were approached randomly and after completing each face-to-face interview, interviewers would approach the next closest person who walked by.

Results

Male and older consumers are slightly over-represented in the sample in comparison to Tirana demographics (Table 2). This can be attributed to the fact that shopping is more commonly performed by males and elders in Albanian households (Imami et al. 2011; Skreli and Imami, 2012; Imami et al, 2013)

Table 2: Socio- demographic comparison of survey respondents with Tirana’s population²

		Survey Respondents	Tirana Population
		(%)	(%)
Gender	Male	53	49
	Female	47	51
Age	18-34	28	42
	35-54	40	32
	55-64	18	13
	Over 64	14	13

Source: Survey results and Albanian Institution of Statistics, Available at: <http://www.instat.gov.al/>

An important decision regards the choice of the number of classes to be estimated. The Consistent Akaike Information Criterion (CAIC) is used to determine the best model – smaller values of CAIC and bigger values of Chi square are preferred (Bozdogan, 1987). We analysed several combinations with several consumer classes, segmenting consumers into 2, 3, 4 and 5 classes. The CAIC falls drastically when moving from 2 class segmentation to 3 class segmentation; it falls more slowly

¹ ALL is the Albanian currency (Albanian Lek). Approximately 100 ALL = 1 USD

² Census of households and dwellings 2011 data, INSTAT

when moving from 3 class to 4 class segmentation and even more slowly when moving from 4 class to 5 class segmentation. Based on CAIC “behaviour”, we choose the 3 class segmentation model of cheese consumers for interpretation.

Class 3, is the largest class, representing almost half of the sample (48.7%). For consumers in this class, price and origin are the most important factors. There is a strong preference for cheese from Korca region.

Class 1 is the second largest class, comprising 29.1% of the sample. For this class, price is by far the most important attribute –consumers in this class are strongly price sensitive and prefer white cheese from Gjirokaster.

Class 2 represents 22.2% of the sample. For consumers of this class, origin is the most important factor – there is a strong preference for cheese from Gjirokaster. White cheese is preferred to kashkavall. Consumers in this class can be considered “Hedonists”, who consider a price premium on a product as a signal of a higher quality product (Bonti-Ankomah and Yiridoe, 2006). Consumers often associate higher prices with better quality (Volckner and Hofmann 2007) – similar result was found for olive oil in Albania too (Halbrendt et al, 2010).

For certain groups of consumers, there is no clear preference for type of milk used (Table 3).

Table 3: Estimated parameters, relative importance of attributes and size of each of the three classes

Attributes	Levels	Class 1	Class 2	Class 3
Size (%)		29.1%	22.2%	48.7%
Attribute importance (%)				
Price		64.8%	21.5%	44.2%
Type of milk		2.8%	3.5%	8.4%
Type of cheese		16.0%	11.1%	11.7%
Origin		16.4%	63.9%	35.7%
Estimated parameters				
Price		-1.31479**	0.54490**	-0.10779**
Type of Milk	Cow milk	-0.10785	0.00510	-0.01666
	Goat milk	0.06240	-0.13698	0.03903
	Sheep milk	0.04545	0.13188	-0.02236
Type of Cheese	White cheese	0.48845**	0.41884**	-0.04543
	Yellow cheese	-0.48845**	-0.41884**	0.04543
	Shkodra cheese	-0.12359	-1.34195**	-0.04543
Origin	Korca cheese	-0.43685**	-1.75133**	0.15324**
	Gjirokastra cheese	0.56044**	3.09328**	-0.10780**

** Significant at 1%

Source: Authors calculations based on survey data

Conclusions

This research work provides some understanding of consumer preferences, by conducting consumer preferences for price, type of milk, origin and type of cheese. Region of origin is an important attribute but the level of importance varies by consumer classes. Two of the classes that have a strong preference for white cheese, also prefer cheese from Gjirokaster and for one of these consumer classes (Class 2), origin is by far the most important attribute. The preference of consumers for cheese of different origin within the country informs producers and policy makers on potentials to develop regional brands, including Geographical Indications (GI) or Protected Designation of Origin (PDO) – specifically for the case of Gjirokaster which has tradition for cheese production. Identification of consumer groups with similar preferences indicates potential market segments that can be targeted by producers/traders. Processors and retailers can brand/label the product to promote preferred origin to increase sales and profits.

Development of capacities related to GI and PDO certification can strengthen sector competitiveness, while increasing support in context of EU integration (given the importance of PGO and GI in EU) represents a development opportunity. Albanian policymakers have to identify viable instruments of support for the adoption of GI and PDO certification to dairy producers targeting the local and regional markets. Processing and marketing activities of traditional or regional cheese, which some may have the potential to be classified as products of Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI) or Traditional Speciality Guaranteed (TSG), may be supported. In order to maximise the benefits of such schemes a challenge for the policymakers would remain the establishment of a proper legislative and institutional harmonised framework for the provision and enforcement of these certification schemes.

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