


Analysis of consumers' preferences for typical local cheese in Albania applying conjoint analysis




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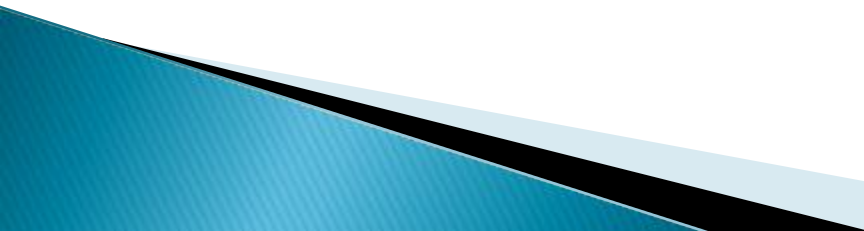
Albania

- ▶ **Economic Growth**
 - Dairy industry is growing
 - ▶ **Increasing imports of cheese**
 - Cheese consumer preferences – important
 - ▶ **Benefit to stakeholders**
 - Production & Marketing
 - Potentials for introducing PDO/GI schemes.
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Previous Albanian consumer studies

- ▶ Albanian consumers prefer domestic cheese to imported one (Imami et al, 2013).
 - ▶ Consumers have strong preference for cheese from specific regions of Albania (Imami and Skreli, 2013) .
 - ▶ No previous experimental studies/surveys for consumers preferences for typical local cheese carried out in Albania (to the best of authors knowledge).
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PDO in consumer studies

- ▶ De Souza and Ventura (2001) – recognition as PDO is the most important attribute for the choice of traditional cheeses, followed by price, texture and unit of sale
 - ▶ Bonnet and Simioni (2001) – no willingness to pay for a Protected Designation of Origin (PDO) – French Camembert cheese
 - ▶ Tendero and Bernabéu (2005) – Consumers value most the PDO labelled cheese as a guarantee of quality and food safety
 - ▶ Garavaglia et al (2011) PDO certification greatly influences cheese purchasing decisions, increasing consumer willingness to pay.
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Objective

- ▶ Determine consumer preferences for cheese in Tirana, Albania.
 - Group consumers according to their preferences for the main cheese attribute,
 - Assess preferences of each identified class for each of the attributes.
- ▶ Methods
 - Conjoint Choice Experiment
 - Latent Class Analysis

Survey administration

- ▶ Direct interviews by trained graduate students
 - ▶ Sample – 210
 - ▶ Carried out in Tirana (the country capital and the main market) in summer 2013
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Methodology

1. Selection of Attributes
2. Assignment of attribute levels
3. Construction of Choice sets (using Sawtooth, Inc)
4. Data Collection
5. Data Analysis

Attribute	Levels			
Price (ALL/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		

Latent Class Analysis

- ▶ McFadden (1974)

$$P_{ni} = \frac{\exp(\eta X_{ni})}{\sum_{h=1}^I \exp(\eta X_{nh})}$$

Where η denotes the scale parameter, X_{ni} is the deterministic component


$$P_{ni} = \frac{\exp(\eta\beta Z_{ni})}{\sum_{h=1}^I \exp(\eta\beta Z_{nh})}$$

Where Z_{ni} are the explanatory variables of X_{ni} , and β is the vector of estimated parameter coefficients

Product attributes

- type of milk (T), Type of cheese (Tc), origin (O) and price (C);
- CAIC 3 classes of consumers


Model interpretation

- ▶ CAIC is used to determine the best model – smaller values of CAIC are preferred and bigger values of CHI square, Bozdogan (1987).
 - ▶ The CAIC falls drastically when moving from 2 class segmentation to 3 class segmentation;
 - ▶ A model of 3 class was chosen for the segmentation of cheese consumers.
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Estimated parameters, relative importance of attributes and size consumer 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
	Kashkavall cheese	-0.48845**	-0.41884**	0.04543
Origin	Shkodra cheese	-0.12359	-1.34195**	-0.04543
	Korca cheese	-0.43685**	-1.75133**	0.15324**
	Gjirokastra cheese	0.56044**	3.09328**	-0.10780**

Conclusions

- ▶ Region of origin is an important attribute for two of the consumer classes.
 - ▶ Potentials to develop regional brands, including Geographical Indications or Protected Designation of Origin.
 - ▶ Private businesses may also consider developing short market chains to protect brands.
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References (selected)

- ▶ Bonnet, C., & Simioni, M. (2001). Assessing consumer response to Protected Designation of Origin labelling: a mixed multinomial logit approach. *European Review of Agricultural Economics*, 28(4), 433–449.
- ▶ Bozdogan, H. (1987). Model selection and Akaike's information criterion (AIC): The general theory and its analytical extensions. *Psychometrika*, 52(3), 345–370.
- ▶ de Souza Monteiro, D. M., & Lucas, M. R. V. (2001). Conjoint measurement of preferences for traditional cheeses in Lisbon. *British Food Journal*, 103(6), 414–424.
- ▶ Garavaglia, C., & Marcoz, E. M. Paper 1: Consumer Preferences And Certification Of Origin. A Conjoint Analysis of the Case of Fontina Cheese. *ENHANCING REGION DEVELOPMENT THROUGH TYPICAL FOOD MARKETING AND DESTINATION BRANDING*, 13.
- ▶ Imami, D., and Skreli, E. (2013). Consumer preferences for regional/local products in Albania. Report prepared for FAO.
- ▶ Imami, D., Zhllima, E., Merkaj, E., Chan–Halbrend, C., and M. Canavari. (2013). Clustered preferences for powdered milk use in cheese–making: A latent class analysis of a choice experiment with Albanian consumers. *IFAMA World Forum 2013*.
- ▶ Tendero, A., & Bernabéu, R. (2005). Preference structure for cheese consumers: a Spanish case study. *British Food Journal*, 107(2), 60–73.

Thank You!

