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.
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).
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.
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
Methodology

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

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price (ALL/kg)</td>
<td>400 600 800 1000</td>
</tr>
<tr>
<td>Origin</td>
<td>Shkoder Korce Gjirokaster</td>
</tr>
<tr>
<td>Type of milk</td>
<td>Cow milk Goat milk Sheep milk</td>
</tr>
<tr>
<td>Type of cheese</td>
<td>Yellow cheese White cheese</td>
</tr>
</tbody>
</table>
McFadden (1974)

\[
P_{ni} = \frac{\exp(\eta X_{ni})}{\sum_{h=1}^{t} \exp(\eta X_{nh})}
\]

Where \( \eta \) denotes the scale parameter, \( X_{ni} \) is the deterministic component.

\[
P_{ni} = \frac{\exp(\eta \beta Z_{ni})}{\sum_{h=1}^{t} \exp(\eta \beta Z_{nh})}
\]

Where \( Z_{ni} \) are the explanatory variables of \( X_{ni} \), and \( \beta \) 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.
## Attributes, Levels, and Consumer Classes

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Levels</th>
<th>Class 1</th>
<th>Class 2</th>
<th>Class 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (%)</td>
<td></td>
<td>29.1%</td>
<td>22.2%</td>
<td>48.7%</td>
</tr>
<tr>
<td>Attribute importance (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td></td>
<td>64.8%</td>
<td>21.5%</td>
<td>44.2%</td>
</tr>
<tr>
<td>Type of milk</td>
<td></td>
<td>2.8%</td>
<td>3.5%</td>
<td>8.4%</td>
</tr>
<tr>
<td>Type of cheese</td>
<td></td>
<td>16.0%</td>
<td>11.1%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Origin</td>
<td></td>
<td>16.4%</td>
<td>63.9%</td>
<td>35.7%</td>
</tr>
</tbody>
</table>

### 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    |
| Shkodra cheese         | -0.12359   | -1.34195** | -0.04543   |
| Korca cheese           | -0.43685** | -1.75133** | 0.15324**   |
| Gjirokastra cheese     | 0.56044**  | 3.09328** | -0.10780** |
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.


Thank You!