

ANALYSIS OF CONSUMERS' PREFERENCES FOR LOCAL CHEESE IN KOSOVO APPLYING CONJOINT CHOICE ANALYSIS

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Abstract

Analyzing consumer preferences for cheese consumption in the market of Kosovo is very important, very complex and also very interesting process to study, as cheese is part of every meal in all Kosovar families. Our goal in this research was to identify the impact of attributes and attribute levels on consumers' preferences when buying and consuming cheese.

The research was conducted in five cities in Kosovo (Pristina, Prizren, Peja, Gjilani, and Mitrovica) with a total of 225 cheese consumers' and we have used the type of questionnaires adapted to face-to-face contact with consumers'. These preferences were analyzed by applying conjoint choice analysis (CCA) and latent class analysis (LCA) methods. These methods (CCA and LCA) enabled us to classify consumers into five groups (classes), depending on the category of cheese they preferred: Origin ("Sharri" cheese, "Rugova" cheese, home-made cheese), price (3 €/kg, 4 €/kg, 5 €/kg, 6 €/kg), type of milk (cow milk, sheep milk, goat milk), type of cheese (soft cheese, medium-soft cheese, hard cheese), taste (white cheese, yellow cheese, cheese with added spices), and the attributes of cheese that have most preferences are shown with the highest level of significance ($P \leq 005$).

Research results have shown that attributes such as type of milk for producing cheese and taste of cheese are very important attributes with a final impact on consumer preferences, although the level of importance of the type of cheese varies according to classes (groups) of consumers depending on the type of milk and taste which have been shown to be important attributes to all consumers classes.

Cheese producers in Kosovo should be oriented in the production of their cheeses according to consumer preferences, adapting to their preferences according to the type of cheese, type of milk for producing cheese, taste and origin of cheese. The research analysis provided us useful information for producers and policymakers on the potential for further development of the cheese industry, for the creation of labels and brands for the type of milk and cheese, with regional indicators on milk content for production and protect the origin of the cheese.

Key words: Cheese, Consumers' preferences, Conjoint choice analysis, Latent class analysis.

1. Introduction

The total market for milk and dairy products in Kosovo, including fresh milk, is estimated at 441 thousand tons per year, which includes all domestic production, import and export of milk and dairy products, whereas the total dairy consumption per capita is estimated to be 0.59 liters per day [1]. With the existing livestock fund of milk that Kosovo has, it is estimated that it manages to cover 84% of the demands of the local market, while to meet local needs it continues to import about 16% of the amount of milk and its products. Cheese is one of the main dairy products that is widely consumed in Kosovo, where the total amount of cheese produced is estimated to be 17.9 million kg/year [1, 2].

Consumer studies have argued that consumers opt for products with extrinsic features not only related to the product itself, but also to the know-how required in the process of production and the associated culture

and tradition [3]. They might prefer these products because factors such as culture, history and heritage, embedded in the tradition and the resources of a certain territory, may be more preferred compared to convenience and appropriateness [4]. Scholars classify these broad concepts as credence attributes [5]. The value of such attributes is not easily determined by the consumer, since they are valued under partial information and its perception depends on trust [6].

The author Imami [7], in his paper has shown that country of origin has proven to be an important attribute for consumers in Albania for various food products. Albania has been subject of various studies on consumer preferences for products such as meat, olive oil, table olives, wine, apple and cheese [8, 9, 10, 11, and 7]. In Kosovo, some research has been conducted for some agro-food products using this method [12, 13, 14, and 15]. Further the author Imami [7], confirm that recent studies show that Albanian consumers have preference for food coming from specific Albanian regions, particularly for cheese [16, 17]. In any case, previous segmentation studies show that Albanian consumers show heterogeneous preferences [15, 18]. This best argues the fact that Albanian consumers in Kosovo, prefer to consume a variety of local products, as in our case local cheese.

Our goal in this research was to identify the impact of attributes and attribute levels on consumers' preferences when buying and consuming cheese. The analysis of consumers' preferences for local cheese in Kosovo was done by applying conjoint choice analysis because this method has several advantages over the traditional analysis methods used in earlier studies. First, product design defines attributes, which can mimic a change in the product by allowing interviewees measurements and making the selection of one attribute over another. Second, the common multi-attribute analysis uses the selection of product

profile groups, for a total of seven profiles which are listed in twelve levels for each profile, thus reducing the possibility of customer fatigue, as was often the case with different traditional analysis methods [9]. The combination of multi-attribute selection analysis (CCE) with the Latent Class Analysis Method (LCA) for data analysis, represents an improvement of the traditional method (i.e. with a class) [11]. Latency class analysis considers different segments with different preferences [19]. In a latent class analysis, consumers are grouped according to their choices into a common multi-attribute analysis. The choices consumers make are considered in terms of attribute preferences and their socio-demographic characteristics [20, 21].

2. Materials and Methods

The research was conducted in five cities in Kosovo (Pristina, Prizren, Peja, Gjilani, and Mitrovica) with a total of 225 cheese consumers' and we have used the type of questionnaires adapted to face-to-face contact with consumers'.

Within the working methodology we used analysis of consumer preferences for local cheese applying the method Conjoint Choice Experiment (CCE) and Latent Class Analysis (LCA). These methods (CCA and LCA) enabled us to classify consumers into five groups (classes), depending on the category of cheese they preferred by: Origin ("Sharri" cheese, "Rugova" cheese, home-made cheese), price (3 €/kg, 4 €/kg, 5 €/kg, and 6 €/kg), type of milk (cow milk, sheep milk, and goat milk), type of cheese (soft cheese, medium-soft cheese, and hard cheese), taste (white cheese, yellow cheese, and cheese with added spices), and to identify which of the attributes of cheese has been shown with the highest level of significance 0.01 (Table 6).

Study process through Conjoint Choice Experiment is shown in Table 1.

Table 1. Study process through Conjoint Choice Experiment (CCE)

Stages	Description
Defining attributes	The selection of cheese attributes was used based on the consulted literature, direct interviews conducted with cheese experts as well as focus group discussions (focus groups), which helped us identify the most important attributes for cheese.
Determining attribute levels	Also, attribute levels are determined based on literature, interviews with experts and focus group discussions as well as analyzing the market situation. The attribute levels are set to be as realistic as possible for the cheese product.
Choice of experimental process	The scheme selection was used for possible combinations of attribute levels both to avoid interviewee fatigue and to guarantee efficiency in evaluating the method applied.
Building group selection	The profiles identified by the attributes found for the cheese are pooled, then grouped into profiles (7 versions for the cheese, for which version are included 12 profiles, with a possible solution of 5 alternatives in total) based on Sawtooth statistical program.
Preference measurement	The interviews conducted for cheese were conducted directly with consumers, while the measurement of consumer preferences for cheese are presented in the results of this study.

Source: Imami *et al.*, [7], Chan-Halbrendt *et al.*, [8], and Imami *et al.*, [9].

Based on these methods (CCE and LCA) it was possible to classify consumers into classes according to their preferences for attributes and levels of cheese attributes and their preferences for each consumer group were assessed. Identification of cheese attributes and their levels were identified based on literature review, expert evaluation, and focus group discussions.

Our research design is shown in Table 2.

Table 2. Research design

Stages	Description
Objectives of the research	The main objective of this study is the analysis of consumer preferences for local cheese in Kosovo, by identifying attributes and level of attributes of local cheese according to consumer preferences, applying the methods conjoint choice experiment/analysis (CCE) and latent class analysis (LCA).
Research strategy and plan	Qualitative and quantitative research
Data acquisition method	Detailed questionnaire survey
Data sources	Consumers'
Criteria for selection of respondents	< 210 consumers'. Sampling by random method, separated by gender (female and male consumers, approximately equally divided), different age groups and place of interviews.

Source: Horská *et al.*, [22], Bytyqi, *et al.*, [2], and own processing (the data of this research are adapted according to the field of our research).

2.1 Organization and administration of the study

The study (sampling) - is located in the capital of Kosovo - Pristina. The basis of the study was the collection of data obtained from interviews conducted directly with cheese consumers as described above. This study was preceded by the discussion of the questionnaire, which was conducted in the period September to December 2021. The average duration of an interview with consumers was 20 minutes. During the customer interview process, basic structures such as: gender, age, through random sample selection were taken into account. During the processing and input of data into the program, it was found that all interviewees (with some exceptions) of both genders, with satisfaction and correctness answered the questions posed. Respondents responded with kindness and confidence to the interview process. The obtained data were analyzed through Sawtooth statistical software and SPSS (Statistical Program Social Science) statistical software. The Chi-square test was used to assess the significance of the variables included in the analysis of consumer buying habits. The interviews were conducted randomly. Data were taken from the

interviewer and at the same time were recorded in the questionnaire.

After completing all the interviews, the data were recorded in a database in Microsoft Excel statistical software, regrouped in Sawtooth statistical software and SPSS statistical software. The questionnaire was designed based on the evaluation of experts and focus groups, literature review, interviews with consumers. The questionnaire was also tested in the field, before being coded. 225 direct interviews with apple cheese consumers were conducted. The sample size of 225 questionnaires is considered as real representative and has been used in other similar research/surveys [8].

2.2 Data analysis

In conjoint choice analysis selection, the assumption is that the respondent will choose the product or profile that would give him/her maximum benefit - Multi-attribute selection analysis (CCE) model using latent class analysis (LCA). Based on the random utility model, the usefulness of an interviewee can be written as in equation (1) [23]:

$$U_{ij} = V_{ij} + e_{ij} \quad (1)$$

Where: U_{ij} = represents the total benefit of the consumer, i = derived from the product, j = represents the attributes of the product. V_{ij} = is the systematic component of the utility function defined by the product attributes. e_{ij} = indicates stochastic error.

Assuming that the function is linear in parameters, the functional form of the utility function for alternative j can be expressed as in equation (2):

$$V_{ij} = \beta_j + \alpha_j P_{ij} \quad (2)$$

Where: P_{ij} = is the price of the alternative, j = for the consumer i . β_j = are coefficients that represent alternative constants specific to each product attribute (partial benefits), and α_j = are coefficients that represent the effects of the product's price on utility.

As shown by Lusk and Schroder [23], the probability, P_{ij} , that the consumer chooses the alternative j is given by the multinomial logit (MNL) model:

$$P_{ij} = \frac{e^{\mu V_{ij}}}{\sum_{k \in c} e^{\mu V_{ik}}} \quad (3)$$

Where: μ is a parameter inversely related to the variance of the error term.

According to Lusk and Schroder [23], willingness to pay (GTP) can be derived from the price difference to reach the indifference between the two alternatives. The total GTP from option j in relation to the "nothing" option is calculated simply from the ratio between the specific alternative constant (partial benefits) and the pre-price coefficient: β / α . Marginal GTP for alternative (attributes) j in relation to alternative

(attributes) k can be calculated as the difference between the total GTP for alternative j and the total GTP for alternative k , or as the difference between the specific alternative constant (partial utility) of the attributes of j and k and the coefficient before the price: $(\beta_j - \beta_k)/\alpha$; the pre-price coefficient, α , is unique when β_j and β_k are attributes of the same product. The first step in latent class analysis (LCA) is to determine the optimal number of distinct classes for the database we have. To determine the optimal number of distinct classes, four criteria were used: (1) percentage security - the higher the security the more reliable the model is, (2) Akaike Consistent Information Criterion (CAIC) - the lowest level is preferred, (3) Hi2 Criterion - the higher, the more appropriate the model, and (4) the relative Hi2 criterion - the highest level is preferred.

3. Results and Discussion

Table 3 presents the attributes and attribute levels for cheese obtained according to the study scheme through conjoint choice analysis (CCE) as presented above in Table 1.

The data obtained in Table 4, present the importance of attributes claimed by consumers, according to the level of importance of these attributes.

In class 1 (group 1), consumers claim that the most important attribute is the type of milk from which the cheese is produced with 29.71% of their claims, the type of cheese is estimated to be significant with 19.12% of them, the price of cheese is estimated to be important with 18.97%, the taste of cheese is considered to be important with 16.35% of the level of importance,

while the origin of the cheese has the least importance with only 15.85% of claims by consumers within this class (group) of consumers.

In class 2, the importance of apple attributes is limited only to the apple cultivar with 78.81% indicating that in this class (class 2), consumers consider the type of cheese as the most important attribute in relation to other attributes (taste, origin, price), followed by 23.58% of the type of milk from which the cheese is produced as an important attribute, as well as the taste of the cheese with 18.43% of the level of importance, while the price of cheese is estimated to be of minor importance on only 6.95% of consumers.

In class 3 (group 4), the importance of attributes is claimed to be in the taste of cheese with 46.76% of the level of importance, followed by the type of cheese with 29.13% of the level of importance, the type of milk has been shown to be important with 13.87% of claims from consumers, the price of cheese participates with 5.85%, the origin participates with 4.39%. In grade 4 (group 4), the most important attribute is rated the type of milk from which the cheese is produced, with 47.52% of the level of importance, followed by the other attribute the type of cheese is shown as the important attribute with 22.31% of the level of importance, the taste of the cheese participates with 16.14% of the importance, while the origin of the cheese is estimated with low level of importance with only 2.57%.

Based on the results of the selection of multi-attribute analysis in the cheese product, the market division into 5 classes, respectively class 2 (group 2) has been

Table 3. Attributes and attribute levels for cheese - conjoint choice analysis (CCE)

Description	Attributes				
	Origin	Price	Type of milk	Type of cheese	Taste
Levels of attribute	"Sharri" cheese	3 €/kg	Cow milk	Soft cheese	White cheese
	"Rugova" cheese	4 €/kg	Sheep milk	Medium-soft cheese	Yellow cheese
	Home-made cheese	5 €/kg	Goat milk	Hard cheese	Cheese with added spices
	-	6 €/kg)	-	-	-

Source: Own processing.

Table 4. Level of importance of cheese attributes according to customer preferences divided into classes

Description	Class 1	Class 2	Class 3	Class 4
Origin	15.85%	9.28%	4.39%	2.57%
Price	18.97%	6.95%	5.85%	11.46%
Type of milk	29.71%	23.58%	13.87%	47.52%
Type of cheese	19.12%	41.76%	29.13%	22.31%
Taste	16.35%	18.43%	46.76%	16.14%
Total	100%	100%	100%	100%

Source: Field data (survey), processing in Sawtooth statistical program.

selected as the basis for further analysis, due to the fact that this group best presents the preferences of for cheese, which are presented in detail in Table 5, which reflect the preferences of consumers to the attributes and attribute levels of cheese (which are presented in Table 5), these data (data in Table 5) show the preferences of consumers for cheese according to their perceptions, to the attributes and levels of cheese attributes divided into classes. In class 1, consumers prefer to consume "Sharri" cheese (0.12143) and home-made cheese (0.12553), the type of goat milk for cheese production (1.47072), the type of medium-soft cheese (1.87950), the taste of cheese preferred by consumers is declared white cheese (0.14374).

In class 2 (group 2), consumers prefer to consume cheese with origin "Sharri" cheese (0.25165) "Rugova" cheese (0.15227), the type of milk that is produced cheese from cow's milk (0.47915) and goat's milk (0.21424), Soft cheese (1.14350) and Medium-soft cheese (0.19453) and white cheese (1.86123). Market segmentation in class 3 indicates that in this class, consumers prefer to consume cheese of home-made cheese origin, milk type from all three levels (cow milk, sheep milk and goat milk), soft type and hard type of cheese. In this class (group 3), consumers have stated that they prefer to consume Yellow cheese and Cheese with added spice.

In class 4, consumers prefer to consume cheese with origin "Sharri" cheese (1.12103) and "Rugova" cheese (0.32006), the type of milk from the two levels of this attribute cow milk (0.22780) and sheep milk (0.12385), while the preference of consumers for the type of cheese in this group, consumers have stated that they prefer

to consume all three types of cheese as soft cheese, medium-soft cheese, and hard cheese as presented in Table 5, flavored white cheese and cheese with added spices. In class 5, consumers prefer to consume cheese with origin "Rugova" cheese and Home-made cheese, type of milk from cow milk, type of cheese types of cheese such as soft cheese and hard cheese, flavored white cheese and cheese with added spices.

As for the price as an important attribute of cheese, consumers in class 3 and class 4, have stated that even for any change in the price of cheese, their preference for cheese will change, so from this we can show that consumers in these two classes are affected by the price change and will not prefer to consume again the same amount of cheese that they usually consume, so there will be an increase or decrease in cheese consumption for each price change, while in class 1, in class 2 and class 5, consumers even against the price change did not give any result that they would react to the increase or decrease in the purchase or consumption of cheese.

The data obtained in Table 6, show the level of sensitivity of consumers to the attributes of the cheese obtained according to their perceptions of cheese. In class 1, the type of milk (Cow milk, sheep milk, goat milk) is shown to be sensitive with a level of 0.03, in the type of milk from cows, 0.01 in the type of milk from sheep and 0.02 in the type of milk from goats. The taste of the cheese (White cheese 0.03215 **, yellow cheese 0.02318 **, cheese with added spice 0.04159 **) and the type of cheese (Soft cheese 0.04521 **, Medium-soft cheese 0.01913 **) are also shown with the level of high sensitivity (0.01).

Table 5. Consumers preferences for cheese based on attributes and attribute levels divided into classes (groups)

Description		Class 1	Class 2	Class 3	Class 4	Class 5
Attributes and level of attributes						
Origin	"Sharri" cheese	0.12143	0.25165	-0.12298	1.12103	-0.20108
	"Rugova" cheese	-1.13214	0.15227	-0.12757	0.32006	0.03021
	Home-made cheese	0.12553	-0.27982	0.14224	-0.71108	0.01108
Type of milk	Cow milk	-0.31208	0.47915	0.23251	0.22780	0.25827
	Sheep milk	-0.31208	-0.42579	0.22772	0.12385	-0.17527
	Goat milk	1.47072	0.21424	0.16326	-0.21584	-1.77512
Type of cheese	Soft cheese	-0.22785	1.14350	0.14714	1.85537	1.34659
	Medium-soft cheese	1.87950	0.19453	-0.21391	2.28145	-1.57245
	Hard cheese	-0.14224	-0.01108	0.00326	1.45327	2.65934
Taste	White cheese	3.07983	1.86123	-1.47072	1.47072	0.17258
	Yellow cheese	-0.31208	-0.42038	0.17526	-0.23385	-0.27285
	Cheese with added spices	-0.21391	-0.14944	0.30211	0.10804	0.10478
Market participation in %		9.28%	6.95%	23.58%	41.76%	18.43%
Price		-0.14374	-0.12475	0.24508	0.13018	-1.12983

Source: Field data (survey), processing in Sawtooth statistical program.

Explanation: Positive value (bold) represents consumer preference for attributes or attribute levels, while negative values indicate less preference by consumers, or have little importance to consumers.

Table 6. Consumer significant level based on their cheese preferences

Description		Class 1	Class 2	Class 3	Class 4	Class 5
Origin	"Sharri" cheese	1.27011	0.45218**	0.00412**	0.23851	0.00214**
	"Rugova" cheese	0.14527	0.01058**	0.02219**	0.75415	0.04705**
	Home-made cheese	1.26065	0.00147**	0.31450	0.01418**	0.01029**
Type of milk	Cow milk	0.03125**	0.01587**	0.01343**	0.03175**	0.00425**
	Sheep milk	0.00117**	1.09870	0.78471	0.04754**	0.52411
	Goat milk	0.02418**	0.57819	0.01442**	0.27823	0.04173**
Type of cheese	Soft cheese	0.04521**	0.48387**	0.02561**	0.02035**	0.58904
	Medium-soft cheese	0.01913**	0.04497**	0.00133**	0.01714**	0.02147**
	Hard cheese	0.14224	0.10504	0.01326**	1.56772	0.04985**
Taste	White cheese	0.03215**	1.01425	0.05072	0.31812	0.00427**
	Yellow cheese	0.02318**	0.20431	1.52174	0.03452**	0.02987**
	Cheese with added spices	0.04159**	0.47532**	1.21730	0.08019	0.00758**
Price		0.37161	0.12475	0.01583**	0.01829**	1.12983

Source: Field data (survey), processing in Sawtooth statistical program.

Explanation: Any value less than 0.05 indicates the sensitivity level **, any value greater than 0.05 does not indicate the sensitivity level.

In this class 2 (group 2), the origin of the cheese ("Sharri" cheese, 0.45218 **, "Rugova" cheese 0.01058 **, home-made cheese 0.00147 **) are shown to be sensitive to consumer preferences with 0.01 sensitivity level, the origin of the cheese is not shown sensibly along with the price. Whereas in grade 3, the origin of the cheese was shown to be sensitive in two cases (0.00412 **, 0.02219 **) together with the price as an attribute with a sensitivity level of 0.01, while the type of cheese as an attribute of the cheese together with the levels of attributes (soft cheese, medium-soft cheese and hard cheese) are indicated with a high level of sensitivity to consumer preferences of 0.01.

In class 3, consumers prefer to consume cheese with the origin "Sharri" cheese (0.00412 **), "Rugova" cheese (0.02219 **), this is best confirmed by the level of sensitivity that consumers have to this very important attribute to the preferences of consumers, the type of milk from which the cheese is produced is evaluated cow's milk and goat's milk, with a high level of sensitivity 0.01 (0.01343 **), respectively 0.01 (0.01442 **). In this class (class 3), consumers have indicated that they prefer to consume all three levels of cheese type as the most influential attribute to their preferences, affirming their preference for cheese type as: soft cheese (0.02561 **), Medium-soft cheese (0.00133 **), Hard cheese (0.01326 **).

In class 4, consumers stated that they prefer to consume only home-made cheese (0.01418 **), cow milk (0.03175 **) and sheep milk (0.04754 **), the preferred cheese type in class 4, has been shown to be soft cheese and medium-soft cheese, while the preferred taste by consumers for cheese is declared yellow cheese (0.03452 **) with a sensitivity level of 0.03.

In class 5, consumers have shown that they prefer to consume the origin of cheese in all three levels of this

attribute ("Sharri" cheese 0.00214 **, "Rugova" cheese 0.04705 **, Home-made cheese 0.01029 **) with a high level of significance. Cow and goat milk type is also indicated with high level of significance. The preferred type of cheese in this class (class 5) by consumers has been shown their preference for medium-soft cheese 0.02147 ** and hard cheese 0.04985 ** with level of significance (0.02 and 0.04). The taste of cheese in this group of consumers is indicated with a high level of significance in all three levels of this attribute, white cheese with a significance level of 0.00427 **, yellow cheese with a level of 0.02987 ** and cheese with added spices with a level of significance of 0.00758 **.

4. Conclusions

- Undoubtedly, cheese is the product that now takes place in every food meal, especially when consuming dinner in Kosovar families. In the Kosovo market, we have a variety of cheeses that can be bought in the market. Our research has enabled us to best identify consumer preferences for cheese based on the attributes and attribute levels of their preferred cheese (Table 3).

- Based on the findings of this paper and looking at the topic of studies so far for cheese from the context of consumer preferences, it is suggested that this analysis of consumer preferences for cheese in the Kosovo market, be attributed a special attention by consumers for the importance that has their own cheese preferences for manufacturers, processors, traders and distributors.

- The findings from the confirmation of the hypotheses raised regarding the consumer preferences for cheese, respecting the main attributes such as: origin, price, type of milk, type of cheese and taste of cheese enable us to recommend policy makers (in the context of policy making/development and import substitution

strategies), as well as traders, considering these findings in their development activity.

- Analysis of consumer preferences for cheese has shown that consumers prefer to consume variety of cheeses. Consumers in Kosovo in most cases prefer to consume cheese of origin - "Sharri" cheese, "Rugove" cheese and homemade cheese. Consumer preference has also shown that the type of milk used for cheese production in most cases is preferred to be cow's milk.

- Also another important finding from this study, has shown that mostly Kosovar consumers prefer to consume the type of soft and semi-soft cheese, while in rare cases the strong type of cheese. The taste of cheese has also shown interesting results showing that the most preferred taste of consumers is the taste of white cheese and in rarer cases the preference of consumers is declared to the taste of yellow cheese and to the taste of spicy cheese.

- Research results have shown that attributes such as type of milk for producing cheese and taste of cheese are very important attributes with a final impact on consumer preferences, although the level of importance of the type of cheese varies according to classes (groups) of consumers depending on the type of milk and taste which have been shown to be important attributes to all consumers classes.

- Cheese producers in Kosovo should be oriented in the production of their cheeses according to consumer preferences, adapting to their preferences according to the type of cheese, type of milk for producing cheese, taste and origin of cheese. The research analysis provided us useful information for producers and policymakers on the potential for further development of the cheese industry, for the creation of labels and brands for the type of milk and cheese, with regional indicators on milk content for production and protecting the origin of the cheese.

5. References

- [1] MAFRD. (2020). *Report Milk Market Analysis in Kosovo*. Ministry of Agriculture Forestry and Rural Development, Department of Economic Analyzes and Agricultural Statistics, Pristina, Kosovo. 2015, page 2-24, <URL:https://www.mbpzhrks.net/repository/docs/TreguqumeshtitFinal15102015.pdf. Accessed 25 October 2021.
- [2] Bytyqi N., Mestani N., Mehmeti H., Muji S., Mehaj E. (2022). *Factors influencing consumers' behavior and purchase of milk and dairy products in the green market of Kosovo*. Journal of Hygienic Engineering and Design, 38, pp. 292-297.
- [3] Pilone V. De Lucia C., Del Nobile M. A., Contò F. (2015). *Policy developments of consumer's acceptance of traditional products innovation: The case of environmental sustainability and shelf life extension of a PGI Italian cheese*. Trends in Food Science and Technology, 41, (1), pp. 83-94.
- [4] Zander K., Hamm U., (2010). *Consumer preferences for additional ethical attributes of organic food*. Food quality and preference, 21, (5), pp. 495-503.
- [5] Nelson P. (1970). *Information and Consumer Behaviour*. Journal of Political Economy, 78, (2), pp. 311-329.
- [6] Anderson J. G., Anderson J. L. (1991). *Seafood quality: Issues for consumer researchers*. Journal of Consumer Affairs, 25, (1), pp. 144-163.
- [7] Imami D., Skreli E., Zhllima E., Canavari M., Chan C., Cela A. (2016). *Analysis of consumers' preferences for typical local cheese in Albania applying conjoint analysis*, New Medit., 15, (3), pp. 49-55.
- [8] Chan-Halbrendt C., Zhllima E., Sisor G., Imami D., Leonetti L. (2010). *Consumer preferences for olive oil in Tirana, Albania*. International Food and Agribusiness Management Review, 13, (3), pp. 20.
- [9] Imami D., Chan-Halbrendt C., Zhang Q., Zhllima E. (2011). *Conjoint analysis of consumer preferences for lamb meat in central and southwest urban Albania*. International Food and Agribusiness Management Review, 14, (3), pp. 111-126.
- [10] Skreli E., Imami D. (2012). *Analyzing consumers' preferences for apple attributes in Tirana, Albania*. International Food and Agribusiness Management Review, 15, (3), pp. 137-157.
- [11] Zhllima E., Chan-Halbrendt C., Zhang Q., Imami D., Long R., Leonetti L., Canavari M. (2012). *Latent class analysis of consumer preferences for wine in Tirana, Albania*. Journal of International Food and Agribusiness Marketing, 24, (4), pp. 321-338.
- [12] Bytyqi N. (2015). *Analysis of the consumer preferences of some important agrifood products in Kosovo applying Conjoint Choice Experiment*. PhD thesis, Faculty of Economy and Agribusiness, Agricultural University of Tirana, Albania.
- [13] Bytyqi N., Skreli E., Vercuni A., Imami D., Zhllima E. (2015). *Analyzing Consumers' Preferences for Apple Attributes in Prishtina - Kosovo*. Die Bodenkultur - Journal for Land Management, Food and Environment, 66, (1-2), pp. 61-69.
- [14] Zhllima E., Imami D., Bytyqi N., Canavari M., Merkaj E., Chan C. (2020). *Emerging Consumer Preference for Wine Attributes in a European Transition Country - The Case of Kosovo*. Wine Economics and Policy, 9, (1), pp. 63-72.
- [15] Imami D., Zhllima E., Merkaj E., Chan-Halbrendt C., Canavar M. (2016). *Albanian consumer preferences for the use of dry milk in cheese-making: A conjoint choice experiment*. Agricultural Economics Review, 17, pp. 20-33.
- [16] Kokthi E., González Limón M., Vázquez Bermúdez I. (2014). *Analyzing Albanian consumer preferences for origin using cluster analysis (The case of cheese)*. International Journal of Innovative Research in Science and Engineering, 2, (10), pp. 718-729.
- [17] Imami D. Skreli E. Zhllima E. Cela, A., Sokoli O. (2015). *Consumer preferences for typical local products in Albania*. Economia agro-alimentare, 17, (3), pp. 11-29.
- [18] Imami D. Zhllima E. Canavari M., Merkaj E. (2013). *Segmenting Albanian consumers according to olive oil quality perception and purchasing habits*. Agricultural Economics Review, 14, (1), pp. 97-112.

- [19] Vermunt J. K., Magidson J. (2005). *Factor analysis with categorical indicators: A comparison between traditional and latent class approaches*. In: van der Ark A., Croon A. M., Sijtsma K. (Eds.), *New developments in categorical data analysis for the social and behavioral sciences*, Psychology Press, London, UK, pp. 41-62.
- [20] Green P. E., Srinivasan V. (1978). *Conjoint Analysis in Consumer Research: Issues and Outlook*. *The Journal of Consumer Research*, 5, pp. 103-123.
- [21] Halbrecht C. K., Wirth F. F., Vaughn F. G. (1991). *Conjoint Analysis of the MidAtlantic Food-Fish Market for Farm Raised Hybrid Striped Bass*. *Southern Journal of Agricultural Economics*, 23, pp. 155-164.
- [22] Horská E., Petrilák M., Šedík P., Nagyová Ľ. (2020). *Factors Influencing the Sale of Local Products through Short Supply Chains: A Case of Family Dairy Farms in Slovakia*. *Sustainability*, 12, (20). DOI:10.3390/su12208499. Accessed 25 October 2021.
- [23] Lusk J., Schroeder T. (2004). *Are Choice Experiments Incentive Compatible? A Test with Quality Differentiated Beef Steaks*. *American Journal of Agricultural Economics*, 86, (2), pp. 467-482.