

UNIVERSITÀ DEGLI STUDI DELLA TUSCIA DI VITERBO
CORSO DI DOTTORATO DI RICERCA

ECONOMIA E TERRITORIO, XXV CICLO

**PETROVAC SAUSAGE AND FUTOG CABBAGE: MARKET
PERSPECTIVES FOR TWO SERBIAN PDO's:
A FIELD ANALYSIS ON ITALIAN AND SERBIAN CONSUMERS**

AGR/01

Coordinator: Prof. Alessandro Sorrentino

Tutor: Prof. Anna Carbone

Candidate: Biljana Panin

Academic year: 2012/2013

TABLE OF CONTENTS

i) INTRODUCTION	4
1. LITERATURE REVIEW ON THEORETICAL IMPACTS AND ACTUAL PERFORMANCE OF GEOGRAPHICAL INDICATIONS OF ORIGIN	6
1.1. Introduction.....	6
1.2. Socio - Economic rationales underlying GI schemes	8
1.2.1. GI labels as information tools for facilitating consumer choices.....	9
1.2.1.1. Country of origin effect	11
1.2.1.2. Consumers' Appreciation of PDO/PGI scheme and consumers' Satisfaction	12
1.2.2. GI labels in function of producer protection	16
1.2.3. GIs as a public policy instrument for fostering rural development	17
1.2.4. Preservation of traditional knowledge	19
1.2.5. Environmental protection	21
1.3. The expected impacts of the GI schemes in terms of welfare effects	22
1.4. Assessments of the actual results of the PDO/PGI schemes	25
1.4.1. Review of different methods.....	27
1.4.2. Evaluation of supply chains of PDO/PGIs.....	29
1.4.3. Evaluation of the effectiveness of the PDO/PGI scheme	31
1.4.3.1. Measuring the actual performance of the PDO/PGI products in relation to the objectives of the European Regulation.....	35
2. OVERVIEW OF DESIGNATIONS OF ORIGIN IN EUROPE	51
2.1. Introduction.....	51
2.2. The Development of the EU Policy for Agricultural Product Quality.....	52
2.3. European quality policy funding	56
2.4. Regulation 510/2006 on PDO/PGI schemes: focus on the objectives and content	57
2.4.1. Objectives of the regulation	57
2.4.2. The main features of the Regulation 510/2006	59
2.4.3. Main novelties introduced by Regulation 510/06	65
2.5. Overview of the situation in EU countries regarding products with registered geographical indications.....	67
3. THE AGRICULTURAL BUSINESS IN SERBIA.....	73
3.1. Introduction.....	73
3.2. Overview of agriculture in Serbia	73
3.2.1. Production.....	75
3.2.2. Trade in agricultural and food products	77
3.2.3. SWOT analysis of agriculture and food/processing industry in Serbia.....	80
3.2.4. Changes in agricultural policy and adaptation to CAP.....	82
3.3. Quality policy in agricultural and food sector in Serbia	84
4. RESEARCH METHODOLOGY	88
4.1. Introduction.....	88
4.2. Research objectives and method.....	88
4.3. Field Research	89
4.3.1. Primary data for case studies collection	91
4.4. SWOT Analysis	92

4.5. Technique and data collection from consumers.....	94
4.5.1. Design of consumer questionnaire.....	95
4.5.1.1. Questionnaire for Serbian consumers.....	96
4.5.1.2. Questionnaire for Italian consumers.....	99
4.5.2. Data collection.....	103
4.6. Analysis of the results - Cluster Analysis.....	106
4.6.1. Introduction.....	106
4.6.2. Purpose of cluster analysis.....	107
4.6.3. The technique of cluster analysis.....	108
4.6.3.1. Distance measures.....	108
4.6.3.2. Hierarchical cluster analysis.....	110
4.6.3.3. Non-hierarchical cluster analysis.....	112
4.6.3.4. Two – step clustering method.....	114
4.6.4. Practical implementation of cluster analysis in this research.....	115
 5. CASE STUDIES: SUPPLY SIDE ANALYSIS	122
5.1. Introduction.....	122
5.2. Petrovac sausage	124
5.2.1. Place of Origin.....	124
5.2.2. History, characteristics and way of the production.....	125
5.2.3. Producers – agricultural cooperative “Kulen”	128
5.2.4. Production.....	131
5.2.5. Sales and marketing.....	132
5.2.5.1. Prices	132
5.2.5.2. Communication and Promotion	134
5.2.6. Cultural events and linkages with other local organizations	135
5.2.7. SWOT Analysis	136
5.2.8. Concluding Remarks	138
5.3. Futog cabbage.....	139
5.3.1. Place of origin.....	140
5.3.2. History, characteristics and way of the production.....	140
5.3.3. Producers – Processors association “Futog Cabbage”	144
5.3.4. Production.....	147
5.3.5. Sales and marketing.....	149
5.3.5.1. Prices to final consumer of fresh cabbage	150
5.3.5.2. Prices to final consumer of acid cabbage.....	151
5.3.5.3. Communication and Promotion	151
5.3.6. Cultural events and Linkages with other local organizations.....	152
5.3.7. SWOT Analysis	153
5.3.8. Concluding Remarks	155
 6. DEMAND PERSPECTIVES: CONSUMER ANALYSIS.....	157
6.1. Evidences from the Serbian consumers	157
6.1.1. Introduction.....	157
6.1.2. Description of the sample	158
6.2. Differentiation within the Serbian consumers.....	172
6.2.1. Introduction.....	172
6.2.2. Overview on the Three clusters	172
6.2.2.1. Cluster 1 – Consumers strongly interested in Futog cabbage and Petrovac sausage.....	177
6.2.2.2. Cluster 2 – Consumers moderately interested in Futog cabbage and Petrovac sausage	188

6.2.2.3. Cluster 3 – Consumers not willing to pay any premium price for Futog cabbage and Petrovac sausage	200
6.2.3. Concluding remarks, main differences and comparison between the clusters	212
6.3. Evidences from Italian consumers.....	216
6.3.1. Introduction.....	216
6.3.2. Description of the sample characteristics	216
6.4. Differentiation within the Italian consumers.....	227
6.4.1. Introduction.....	227
6.4.2. Nature/ characteristics of clusters	227
6.4.2.1. Cluster 1 – Consumers not interested in two Serbian PDOs	233
6.4.2.2. Cluster 2 – Consumers interested in typical food	241
6.4.2.3. Cluster 3 – Consumers very interested in two Serbian PDOs	249
6.4.3. Concluding remarks, main differences and comparison between clusters.....	257
6.5. Differences between Serbian and Italian samples clusters.....	259
7. CONCLUSIONS AND FUTURE PERSPECTIVES.....	263
APPENDIX	273
References	40, 70, 86, 118, 156, 261

i) INTRODUCTION

In last decades, consumers' interest in food quality has significantly increased. Consumers have considerable difficulty in forming quality expectations due to the increasing importance given to credence quality attributes, which cannot be ascertained even after consumption of the product. On the other hand, there is a growing interest in the agricultural sector to produce differentiated products in order to avoid strong competition, with the main objectives to assure quality of the product to consumers, to improve incomes of farmers. Because of focus on quality issue, emphasis on products as protected designation of origin or protected geographical indication, has acquired such an important role within CAP of today. The European Union has provided protection to specific quality characteristics connected with the place of origin of the food product and special methods of production through the implementation the European policy on Protected Designations of Origin and Geographical Indications (PDOs, PGIs). Besides establishing a harmonized scheme of registered names and labels across Europe, the policy aims include fostering diversification of agricultural production, increasing farmer's income, enhancing fair competition and improving rural development. The promotion of products with a strong geographical connotation has now become a strategic factor for the development of the European agro-food system. This has led to an increscent number of PDO and PGI food products in EU, as well as increasing of their market.

The agricultural production is an important sector of Serbian economy. It greatly contributes to the overall values of its society, much more than it is the case in many other European countries. Agricultural production in Serbia is far more than an economic sector that provides food security for the citizens of the country and the raw materials for the food industry. About 44% of the country's population lives in rural areas and find their most basic income in agriculture or in industries closely related to agriculture. The overall development of the rural areas of the country, aided by the strengthening the economic diversification of agricultural production and development of the activities more or less related to agriculture. In order to enter and survive on EU market, Serbia had to implement agricultural quality policy, and within it geographical indication policy. The Law on protected designations of origin in Serbia exists from 2010. It is written completely in accordance to EU regulation 510/2006. As it is novelty on the market, there are not many certified products, but their number has been increasing. Although, these products are familiar as typical and traditional products for Serbian consumers, but the PDO/PGI certification is something new for them. As well, these products are not very familiar for consumers out of Serbian or Balkan borders.

Consumer market research is important element of strategic planning efforts of PDO/PGI in Serbia. Market segmentation allows producers of niche products to understand who consumers of their products are, and to find target consumer groups, who possess strong feelings toward certain attributes of the product, or may be willing to pay premiums for the product. Market segmentation techniques, thus also cluster analysis, play a critical role in determining consumer perceptions of novel market goods, and ultimately can be useful in implementing marketing and labeling strategies, as consumer demand for quality differentiated products grows. In a base of consumer market research, producers could design future marketing strategies.

The objective of the research was to analyse potential of two Serbian products, with geographical indication, in the market. Another objective was to understand who are consumers of these products and if they would pay for these products. These questions were explored in cases of two Serbian PDO products – Futog cabbage and Petrovac sausage, on two markets – in Serbia and in Italy. Aspects that were analysed are Serbian and Italian consumers' behavior and attitudes towards PDO/PGI products; exploring the food consumers' preferences related to the geographically determined food; their attitudes towards the quality guarantee labeled food and if they are willing to pay for it. One additional aspect of the research was to explore consumers' attitude for non EU, in this case Serbian PDO/PGI products, in Italy, where these products are not familiar, and even not frequently present in the habitual diet.

Research was divided into two parts. Both supply and demand side were analysed. Supply side analysis was a qualitative analysis. Field research was conducted with open interviews, in order to find case studies, to collect data about them, to get information from authorities and producers, in order to have enough information to continue research with consumers. Demand side analysis was a quantitative analysis. Consumer surveys were conducted, in order to assess future perspectives for two products. On the basis of data collected from consumers in Serbia and Italy, collected data were analysed quantitatively, by using cluster analysis.

1. LITERATURE REVIEW ON THEORETICAL IMPACTS AND ACTUAL PERFORMANCE OF GEOGRAPHICAL INDICATIONS OF ORIGIN

1.1.Introduction

There is a growing interest in the agricultural sector to produce differentiated products in order to avoid strong competition, with the main objectives to assure quality of the product to consumers, to improve incomes of farmers and to contribute to rural development by retaining population in less-favored areas. Because of that, focus on products as protected geographical indication and designation of origin has increased, and as a consequence there has been increscent of studies and literature that research these phenomena.

The global competitive environment is characterized by declining agricultural commodity prices, thus trend towards traditional and/or quality products with a strong cultural link provides producers of value added products with a strong link to a particular geographical origin, with the opportunity to move away from commodity markets into more lucrative niche markets through differentiation (Bramley et al., 2009).

According to European Union policy, Geographical Indications (GIs) are used as a generic term for names or signs used on products that correspond to a specific geographical location. Specific forms of GIs are Protected Designations of Origin (PDO) and Protected Geographical Indications (PGI). European quality policy, by introducing these products, make a direct link between geographical origin and quality of the product. Based on the objectives of EC Reg. 511/06 that reformed PDO/PGI schemes, first introduced by Reg. 2081/92, these schemes grant producer groups the right to label the geographical origin of their products, in order to make them recognizable to consumers. GIs give protection to both consumers by realizing quality, and producers through their role in building reputation (OECD, 2000).

The identity of GI products reflects the unique combination of local natural resources (climate, soils, local breeds and plant varieties, traditional equipments, etc.) and cultural ones (traditions, know-how and skills, some of which are transmitted through generations) in a given territory, linking the product, the people and the place (FAO, 2009).

Agro-food typical products, and especially PDO/PGI, are, by definition, the expression of the area of origin (in its different dimensions) and they are therefore one of the most evident manifestations of locality both for people belonging to the area and not (Pacciani et al, 2001). A product marketed with a regional indication, a regional product, is defined as “a product whose quality and/or fame can be attributed to its region of origin and which is marketed using the name of the region of origin” (van Ittersum, 2001, pg1).

Protection of GIs requires more than the mere protection of geographical names because of the triple association between product, place of origin and quality-related factors (Rangnekar, 2004). Two central legal principles within the common law tradition that enable GI-protection are: i) Protection against misleading use of a protected indication – a measure aimed primarily at consumers.; ii) Protection against the dilution of an indication – a measure aimed primarily at the producer (Rangnekar, 2004).

This chapter provides a literature review of the geographical indications, with particular reference to the PDO/PGI schemes, and with special emphasis on the potential socio-economic benefits, welfare effects and contributions on the assessment of GI system.

In the first section of the chapter are briefly reviewed contributions from the literature in the past 10-15 years on the rationales of GIs and PDO/PGI schemes. In this section accent is on the social and economic rationalities, both from consumers and producers point of view. From the consumers point of view, explanation about country of origin effect is provided, and also review of consumers' appreciation of PDO/PGI scheme and their satisfaction. Beside, in this part are explained also impacts of PDO/PGI schemes on fostering rural development, preservation of traditional knowledge and environmental protection. The second section reviews some theoretical articles on welfare effects deriving from the introduction of designations of origin schemes. In the third section of this chapter empirical contributions on the assessment of GI system are presented. Here are highlighted the main criticisms encountered in the analysis, review of the methods, evaluation of the economic impact of GIs schemes on supply chains, and the evaluation of the effectiveness, in order to understand to what extent empirical evidences inform and support the conclusions of the theory.

Structure of the chapter is following: Socio - Economic rationales underlying GI schemes; GI labels as information tools for facilitating consumer choices, with overview of Country of origin

effect and Consumers' Appreciation of PDO/PGI scheme and consumers' Satisfaction; GI labels in function of producer protection; GIs as a public policy instrument for fostering rural development; Preservation of traditional knowledge; Environmental protection; The expected impacts of the GI schemes in terms of welfare effects; Assessments of the actual results of the PDO/PGI schemes, with emphasis on Impact of GIs: review of methods, Evaluating of the economic impact of PDO/PGIs on supply chains, Assessment of the Performance of PDO/PGI Schemes with A Multi-Criteria Approach, Evaluation of the effectiveness of the PDO/PGI scheme; and Critical findings and further extensions.

1.2. Socio - Economic rationales underlying GI schemes

Economical rationality for food labeling relates to the presence of market failures associated with the supply of high-quality goods in markets with asymmetric information. The presence of asymmetric information is common in agricultural and food markets. On these markets product characteristics, including different quality attributes, usually cannot be assessed by consumers prior to purchase and/or after consumption. Furthermore, regarding to GIs, it is presumed that some quality attributes are linked to the specific geographical origin and/or special methods of production of the product. Those attributes consumers cannot determine prior to purchase the product and sometimes after consumption.

The economic rationale for protecting GIs fundamentally derives from the fact that place of origin may be used as a quality signal and that the resources of the region may be captured in the origin-labeled product as quality attributes (Pacciani et al, 2001). The informative meaning of the geographical name is emphasized in order to reduce information asymmetries. Where place of origin is used as an attribute, resources of the region are used to increase the value of the product (Pacciani et al, 2001).

Geographical indication, by differentiating products by its area of origin, restricting supply and creating barriers to entry, may act as a powerful marketing tool which could improve market access (Bramley et al., 2009). In the literature it can be underlined the three basic objectives pursued through GI protection, which are: consumer protection, producer protection and rural development.

1.2.1. GI labels as information tools for facilitating consumer choices

Two reasons for which consumers consider the labels to be valuable can be identified. According to Menapace et al. (2009) reasons for which consumers consider valuable labels are that they inform consumers that the expected quality of the product is provided and they assure the degree of quality and thus reduce the risk connected to the purchase decision (Menapace et al., 2009).

Consumers seem to be increasingly preoccupied with the quality of the food they purchase and have come to associate geographically labeled foods with high quality products and their reputation (London Economics, 2008). Because of that, consumers have increased demand for products that have such quality designations like PDO or PGI (Fotopoulos et al., 2009) and are willing to pay premiums for them (Loureiro and Hine, 2001).

Nelson (1970) has identified three categories of goods, depending on the ease with which consumers can access information on the product's quality: search, experience and credence goods (Nelson, 1970). This differentiation depends on possibility of consumer to evaluate the attributes and quality before (search attributes), or after purchase and experience (experience attributes), or consumer is unable to evaluate either before or after purchase (credence attributes). As individual consumers differ in their preferences, a particular good could be classified differently between consumers.

The theory of asymmetry of information helps to analyze behaviours and situations common to a market economy. Information is a valuable resource and it is not always totally available for consumers (Sanjuan, 2002). This leads to asymmetric information: while producers know all the properties of the products, consumers don't (Sanjuan, 2002).

Shapiro's model of reputation shows that the market imperfection derived from asymmetric information can be mitigated through the building up of reputation. Consumers have expectations about the product quality based on past experience on the purchasing of the products. In the other words, learning processes in the formation of quality expectations are the premises to build the firm's reputation. The firm will invest in building reputation only if that learning process exists, and if it will have a return, in terms of a price premium. Therefore the price premium is an extra cost due to the need of building reputation what in turn is consequence of lack of information. The faster

the consumer learns the true quality of the product, the smaller the over-price will be (Sanjuan, 2002).

According to Belletti (1999) reputation can only improve market efficiency by avoiding the impact of information asymmetries, if it is protected through a process of “institutionalisation of reputation”. This institutionalisation takes place by legal instruments (such as GIs) that formalise the connection between a product’s attributes and its region of origin.

The market success of products with a non verifiable claim requires a mix of verifiable attributes and non verifiable ones, that together will credibly signal quality (as Grolleau and Caswell suggest in their contribution on environmental labeling (2006, pp.474). GI labels are extrinsic indicators, that together with other cues (e.g., brand name, packaging, price) can be used to provide signals about intrinsic quality attributes (Galli, 2011).

Majority of agrofood products can be viewed as experience goods, given that most of their characteristics cannot be ascertained before consumption (Sanjuan, 2002). Because of that the consumer needs cues, to infer quality. The PDO/PGI provides intrinsic and extrinsic quality cues, and symbolic signals. It is an intrinsic cue, because of providing the technical specifications on raw materials, methods of production, quality controls, etc.. As an extrinsic cue, giving their linkage to territory/origin; and symbolic, due to the human factors (historical, cultural, social implication...) involved by that specific geographic area. The quality expectations that the consumer have, contribute to build up the reputation of the label, and help again to reduce the lack of information (Sanjuan, 2002).

Secondly, the PDO/PGI is also associated to specific values of experience attributes and, therefore, it reduces the risk at the time of evaluation of the product properties. Thirdly, the PDO/PGI confers a guarantee on credence attributes. Therefore, the PDO/PGI in its role as signal of quality, reduces the need for search of information by consumer, reducing as a result the pernicious consequences of the asymmetric information on the consumers grounds (Sanjuan, 2002).

Market relevance from the consumer aspect can be evaluated from three sub-factors: (i) Customer appeal created by the product's specific characteristics. This is dependent on the level of consumer expectations and on how well the product meets those expectations. Long-standing ties between the product and the region; (ii) significant willingness to pay. This was evaluated through

consumer surveys (Van Ittersum et al., 2000); (iii) a distribution system geared to the targeted consumers. Choosing the right distribution channel is one of the main factors in market relevance (Barjolle, Sylvander 2000).

Verbeke, Pieniak, Guerrero, Hersleth (2012) conducted a study that validates a research framework with consumers' use of quality labels as the behavioural response or outcome variable of interest. Their assumption is that quality labels fail to have an impact on behaviour and food choice unless they are used by consumers (Verbeke, 2005; Grunert and Wills, 2007). That makes it relevant to gain more insight in determinants of quality label use. The framework of the study is a classical stage model of consumer decision-making (Solomon et al., 2006) in which interest in getting information about product quality through a PDO/PGI/TSG quality label is hypothesised to trigger attitude formation and a subsequent behavioural response (Verbeke et al., 2012). According to these authors main consumers motivations for purchasing are: i) consumers might prefer products from certain regions or countries since they are believed to be simply better (i.e. more tasty, safer, healthier, more sustainable) (e.g. Loureiro and Umberger, 2007; Resano et al., 2007; Dekhili et al., 2011); ii) consumer ethnocentrism (van Ittersum et al., 2007); which means that consumers might prefer products from their own region or country, e.g. because of loyalty to it and/or animosity towards others, or because of a related preference to support the local economy rather than remote or foreign economies (Verbeke et al., 2012).

1.2.1.1. Country of origin effect

As two Serbian PDO products that we used as case studies are not present on Italian market, and Italian consumers do not know them, and even they do not have them in their diet, in the research was important to consider the so called country of origin effect (COO). We included this aspect both directly and indirectly while preparing questionnaire for Italian consumers.

The influence of country of origin, beside other factors, can influence consumers purchase. The country of origin effect refers to the evaluation that consumers make on products based upon the country of production (Lantz, 1998). There are two distinct parts to the COO effect: a part related to product assessment, where stereotyping or country image is concerned, and another part, which is concerned with consumers' feelings associated with their home country (Lantz, 1998). This can be connected to consumers' ethnocentrism (Shimp and Sharma, 1997). According to Shimp and Sharma, the term "consumer ethnocentrism" is used to represent the beliefs held by

consumers about purchasing foreign-made products. From the perspective of ethnocentric consumers, purchasing imported products is wrong because, it hurts the domestic economy, causes loss of jobs, and is plainly unpatriotic; products from other countries (i.e., outgroups) are objects of contempt to highly ethnocentric consumers. To nonethnocentric consumers, foreign products are objects to be evaluated on their own merits without consideration for where they are from.

While some demographic characteristics, such education, and age, can influence on purchasing foreign products, in sense that persons with higher level of education, and younger once are more likely to buy some foreign product, these are not the main factors that influence the COO effect. There are only few studies that explain impact of country of origin on food products (Krystallis and Chryssochoidis, 2006). According to these authors, older persons and persons with lower level of education are expected to exhibit highly ethnocentric attitude in their evaluations about the food products. Opposite, consumers around 35 years old, and well educated are marginally ethnocentric, and they likely consume foreign food products. The COO of the specific food products is not included among the most important evaluation criteria evaluated by respondents in the study of Krystallis and Chryssochoidis. But also, it is important to have in mind that limited familiarity with the foreign products stimulates the COO effect at the food product level (Krystallis and Chryssochoidis, 2006). An other very important factor for making decision whether to buy the product is familiarity with the product (Lantz, 1998). Many COO studies focusing on perception of product regarding consumer stereotype of a country. Willingness to buy a product from a particular country will be high when the country image is also an important characteristic for a product category (Roth and Romero, 1992.). According to Laroche et al. (2005) country image affects product evaluation and attitudes towards a product, through beliefs about product attributes such as quality, reliability and pricing. Rahman (2000) says that the COO effect influences consumer product evaluations but not necessarily the final purchasing behaviour, which is affected also by price sensitivity.

1.2.1.2. Consumers' Appreciation of PDO/PGI scheme and consumers' Satisfaction

To examine consumers' appreciation of regional certification labels, van Ittersum, Meulenberg, van Trijp and Candell were developed a model that relates consumers' image of regional certification labels to their willingness to buy and pay for protected regional products. They defined a regional product as “a product whose quality and/or fame can be attributed to its

region of origin and which is marketed using the name of the region of origin”(van Ittersum et al, 2007, pg2). They defined consumers’ willingness to as the consumption share of the product in the total consumption of the product category; and consumers’ willingness to pay as the price premium consumers are willing to pay for the product for the authentic regional product may decrease (Landon and Smith, 1998). The model relates consumers’ perceptions of the quality of the protected regional product to their relative attitude towards the product. This relative attitude, in turn, relates to different measures of intentional behaviour: consumers’ willingness to buy, consumers’ willingness to pay for and consumers’ behavioural response to a price premium for the protected regional product. The perceived quality of and consumers’ relative attitude towards these products are hypothesised to mediate the relationship between consumers’ image of regional certification labels and their willingness to buy and pay for protected regional products. The authors also include the effect of consumers’ attitude towards the region of origin to capture their cognitive and affective associations with and beliefs about the region of origin. According to these authors, consumers’ image of regional certification labels can be represented reliably by a two-dimensional construct consisting of a quality warranty dimension and an economic support dimension. Besides, they concluded that consumers of regional products value regional certification labels. This conclusion is based on the finding that consumers have a favourable image of regional certification labels, which significantly influences their willingness to buy and pay for protected regional products, through consumers’ quality perceptions and relative attitude towards the protected regional product. The authors underline that quality warranty dimension enhances the perceived quality of the protected regional product, while the economic support dimension strengthens their attitude towards the protected regional product based on supporting the regional economy (pg 17). They have also other conclusions. One is that the perceived quality is an important determinant of consumers’ willingness to buy and pay for the protected regional product. Furthermore, consumers’ attitudes towards the region of origin influence the perceived quality of the product, albeit to a limited extent. Consumers’ attitudes towards the region of origin also directly influence consumers’ attitudes towards the protected regional product.

Van Ittersum (2001) brings a benefit to the literature by providing explanations with the main goal of understanding of the role of the region of origin as a product cue in decision-making processes and its role in consumers’ goal satisfaction. It is important to underlay the relationship between the region-of-origin cue and consumers’ goals and how they initiate, direct and terminate decision-making processes and behaviour. According to Van Ittersum, marketing products using their region of origin is a viable and valuable strategy. Gaining fundamental insights into

consumers' motives to purchase regional products and the processes underlying the purchase decision of these products, would enable marketers to develop, position and market regional products more effectively. The author provide the information about at what stage of the decision-making process the region of origin is active and which variables of the decision-making process are influenced by the region of origin. For reaching value both for newly introduced regional products, existing regional products that are introduced into new markets or market segments as well as for the analysis of established behaviours for well known regional products There are different stages of the purchase process: i) Need Recognition Stage: the region-of-origin cue triggers consumer goals that initiate and/or direct the subsequent decision-making process. During the need recognition stage, consumers compose a bundle of goals that initiate, direct and terminate a purchase process of a regional product. Regional products have functional value by providing consumers with attributes that match consumer goals such as a desire for high quality and healthiness. Regional products provide social value to consumers based on the product's region of origin. The region of origin refers to a 'social group' to which consumers may want/feel to belong and with which consumers may identify. Based on their ability to arouse affective feelings that match consumers' desire for pleasure and happiness, regional products provide consumers with emotional value. Regional products have ability to satisfy consumers' desire for stimulation, providing consumers with epistemic value (van Ittersum 2001); ii) Prepurchase Search for Information: The likelihood that a regional product enters the decision-making process largely depends on whether it is identified during the pre-purchase search for information. Consumers' interest in the region, reflected by their sense of belonging, stimulates consumers to search for regional information as a means to stay informed about what is happening in the region. Because of their increased search for regional information, the probability and frequency of encountering regional product information increases, which in turn enhances the accessibility of that information. If the link between the product and the regional culture is preserved and regional product information at the right places is provide to consumers, marketers can benefit from consumers' sense of belonging and product category involvement. This increases the probability of identification of the regional product during the pre-purchase search for information; iii) Perception and Evaluation: To establish whether regional products provide the benefits needed to satisfy consumers' goals, consumers use stimuli or cues available. The name of a regional product provides consumers with two stimuli, a region-of-origin cue and a product-category cue and consumers interpret and provide meaning to both cues; iv) Choice: Consumers' intention to purchase a regional product is influenced by consumers' attitude towards the regional product. It is relative to competing alternatives, which in turn is based on consumers' beliefs and expectations about the

functional, social and emotional performance of the regional product. These beliefs and expectations derive from consumers' product specific and image of the region and also their associations with the product category the regional product belongs to.

Author highlights that during first-trial purchases, consumers' intention to purchase regional products is influenced by more than just the perceived regional product quality. Consumers' intention to purchase the regional product is positively influenced by their sense of belonging to the product's region of origin. It increases with consumer regioncentrism, if the product originates from the own region of residence. If the regional product is perceived to be a more significant part of the regional culture and inheritance, the effect of both consumers' sense of belonging and regioncentrism is larger. It appeared that the emotions elicited by the region-of-origin cue had a strong influence on the intention to purchase regional products. There are only limited effects of the perceived novelty and the incongruity between the region and the product on consumers' intention to purchase; ii) Regional Product Loyalty: When the regional product performs in line with consumers' inferred expectations, satisfaction occurs. The perceived satisfaction and the expectations determine consumers' post-purchase attitude towards the regional product. If the regional product continues to satisfy consumers, during some period of time, consumers may develop a strong and favourable attitude towards the regional product. This attitude affects future purchase decisions and consumer behaviour, as consumers may become loyal to the regional product. Consumer loyalty towards a regional product as the consistent repurchase of the regional product prompted by a strong and favourable attitude.

McCluskey and Loureiro researched consumer preferences and willingness to pay for food labeling. According to them, the increasing demand for high-quality and high-status products and a desire for cultural identification have created a growing market for value-added products that carry a strong identification with a particular geographic region. They have conducted several studies. Loureiro and McCluskey (2000) used a hedonic approach to calculate consumers' willingness to pay for fresh meat products that carry the PGI label. According to this research, PGI label is an effective signal of quality only in combination with other indicators or signals of quality, but it may have diminishing marginal returns with respect to quality. Quagrainie, McCluskey, and Loureiro (2003) used a dynamic multiple-indicator multiple-cause modeling approach to estimate the collective reputation of Washington apples as a dynamic latent variable based on price premiums. They had conclusions that for labeled Washington apples would be paid price premium, in a base on a reputation that was built in the past. On the base on empirical studies they did, these

authors concluded that the consumer response to food labeling is that the consumer must perceive high eating quality in order for the food product to command a premium.

1.2.2. GI labels in function of producer protection

Asymmetry of information has also negative impacts on the market in which some producers may be inclined to lower the quality supplied. The producers that wish to continue to supply the high quality goods are exposed to unfair competition from those that have lowered their quality but continue to sell their goods at the same price.

Looking at fair producers, the PDO/PGI mitigates the moral hazard and adverse selection consequences of asymmetric information. The production under this scheme enhances quality, as well as imposes common standards (Sanjuan, 2002).

GIs as an instrument for institutionalising collective reputation has very important role in protecting both the consumer (through addressing information asymmetries and quality) and the producer (by protecting reputation as an asset) (OECD, 2000).

According to Zago and Pick (2004) the welfare impact of GIs affects also producers, in situation of imperfect information and high quality differences. For a producer, the possibility to signal quality and thus reputation means that a GI becomes a commercial asset for the firm, and a valuable offensive marketing tool as in the case of trademarks (Grossman and Shapiro, 1988).

According to the situation on commodity markets, where competition increases, market prices decreases and consumer preferences changes, it has become necessary to find an alternative approach to the production and marketing of agri-food products. GIs gives producers a valuable opportunity for the creation of territorially-differentiated niche markets (Bramley, 2011).

Collective reputation issues in PDO/PGI schemes may be distinguished on two levels: reputation issues concerning the relationship between the firms that belong to the PDO/PGI region and meet the constraints to have the right to label their products as such, and producers of the same product out of the PDO/PGI region, who don't comply with the specific rules and related investments (Galli, 2011).

The “monopoly” formation observed in PDO/PGI supply chains is the result of institutional barriers which limit entry in two ways. Firstly, only producers within the demarcated area qualify for participation and secondly, only those who comply with the code of practice qualify for participation. In this way, PDO/PGI reduce competition with respect to those producers that fall outside the demarcated region or who do not comply with the product specification (Carbone, 1997). PDO/PGI furthermore enable collective reputation and marketing. Enabling the achievement of some economies of scale is an important dimension, as the majority of GIs are artisanal products produced in small scale production. Devising a common marketing strategy which allows these producers to reach a scale of production large enough to justify the investment in the differentiated product image, increases these products chances of success (Barjolle and Chappuis, 2000). By reaching conditions for successful differentiation, and maintaining the image among consumers and preventing imitations of the product, and also owing producers rights, expenses of production can be justified and profit can be achieved (Bramley, 2011). Provision of high quality and prevention of free riding can be achieved in two ways: by setting clear common specifications of production and by providing an effective monitoring scheme, able to trace and punish the attempts of fraud (Winfree and McCluskey, 2005).

PDO/PGI have a further potential income effect through its collective process of value creation. The PDO/PGI group of firms often includes numerous small businesses or industrial agricultural cooperatives, and even industrial operators whose objective is not profit maximisation. (Barjolle and Sylvander, 2000)

1.2.3. GIs as a public policy instrument for fostering rural development

Protected GIs may contribute to rural development. PDOs and PGIs present the main pillar of the European Union’s agricultural product quality policy and are seen as strong development tool for developing rural economies. The EU’s perspective on GIs has been described as “a legal and commercial basis for development of rural areas, the preservation of cultural heritage [and] the promotion of small and medium firms in the rural economies context” (Sylvander and Allaire, 2008 as cited by Huges, 2009, Bramley 2011).

Definition of PDOs/PGIs reflect a strong linkage between a product and its territorial origin in that the product derives its characteristics from the region’s unique environment, including climatic and human factors. The ability of PDOs/PGIs to strongly express locality may lead to

positive rural development dynamics (Pacciani et al., 2001). Typical products often play a central role in the development strategies carried out by local actors in rural areas, though with different points of view, depending on the existence of various interests related to the typical product, that are the expression of the different categories of agents that are directly or indirectly involved in its valorisation (Pacciani et al., 2001). Therefore, the PDO/PGI products may work as a rural development tool which the local community may use to allow remuneration and therefore a reproduction of the resources, included the social, cultural and human capital.

The valorization of typical products may work as a rural development tool which the local community may use, given that collective and shared strategies for the remuneration of the specific resources of the area are activated around the product (Pacciani et al., 2001).

According to Pacciani et al. (2001) the effects of the actions of valorisation of typical products on rural development may have different dimensions. They depends on the kind of product, but mainly of the kind of links the production system of the typical products activates with the rest of the economy and the local society.

Impact of GIs on rural development can be seen in two ways (Bramley, 2011). Firstly, through remuneration of specific assets directly involved in the production process. The link between an origin labelled product and its area of origin allows the creation of rents based on the “qualities” of the product, allowing for the remuneration of the specific assets used in the production process. The GI qualification process itself, by defining product standards and signaling territorial values embedded in the GI product, increases the ability of capturing price premiums. Beside, by preventing the diversion of income from misappropriation, GI enables producers to potentially enjoy larger income flows from their origin based production processes. In this way GIs lead to a more equitable distribution of value for local producers and communities (Zografos, 2008). Secondly, GIs can have impact on rural development through bringing an inclusive territorial benefit to all actors within the region (Bramley, 2011). This relates to the indirect benefits which may flow from establishing a GI for certain regional products Sylvander (2004). The assessment of the impact of GIs on rural development should consider the multi-dimensional nature of the instrument, taking into account also indirect development impacts. Also, GIs can positively impact rural development through diverse aspects including employment, agro-tourism and environmental spin-offs (Révion and Paus, 2006).

The production of PDOs/PGIs products not only represents an economic activity but is also an important cultural expression for local communities, especially because many of the rural areas where these products are producing, are marginal or less developed. By enabling communities to continue producing their traditional products, GIs contribute to the preservation of cultural heritage, a factor which strengthens regional identity and again reinforces the inter linkages in support of rural development (Bramley, 2011).

Impact of PDO/PGI on rural development dynamics is not immediate and it depends on various factors, including the ability of local actors to capture the rents and the strength of the link between the product, the region and the local community (Pacciani et al., 2001). The possibility of GIs to enhance rural development depends on a number of external conditions, such as the nature of the product and its level of elaboration, the characteristics of the production process, the marketing channels allowed by the nature of the product, the impact on landscape and environment, the structure of the supply chain and the role of the product in the local culture (Pacciani et al., 2001).

1.2.4. Preservation of traditional knowledge

GIs products have generally been produced for a long period in the same social and cultural environment, so they incorporate a strong empirical and locally validated experience and know-how by producers, regarding how to manage a sound production process and attain a high specific quality within the particular local environment (FAO, 2009). It can be said that social dimension has many aspects: i) The origin-based product is related to the preservation of natural and cultural heritage, traditions, know how and lifestyle in marginal areas; ii) The collective dimension of the origin-based product strengthens social linkages between local actors; iii) Promotion of an origin-based product increases self-esteem among local actors as their identity and the related way of life; iv) Traditional production very often involves work undertaken by women; v) GIs can contribute to food and livelihood security while the preservation of typical products offers consumers food diversity and a wider choice (FAO, 2009).

According to the definition of PDO/PGI and their protection in TRIPS, and as attributes derive from traditional practices transmitted through time, this IP right could contribute to the preservation of traditional knowledge. GIs are being increasingly considered as part of a wider policy measure aimed at protecting and rewarding indigenous peoples' knowledge (Rangnekar, 2004).

In recognizing the positive aspects of GIs for the protection of indigenous peoples' knowledge, Downes and Laird (1999) focus to the general conflicts between contemporary intellectual property right systems and customary law and traditional cultural property rights. Although indigenous communities may hold concepts similar to 'property rights', the 'informal innovation system' of communities and the cultural exchange systems that are part of the communities raise deeper conflicts between the norms, practices and economics of contemporary IPRs and the cultural rights and customary practices of indigenous communities (Dutfield, 2000; Downes and Laird, 1999, Rangnekar, 2004). These authors underline that traditional knowledge is important to its holders as an integral part of their cultural heritage. As such, its protection is important for ensuring the enjoyment of the right to maintain and take part in cultural life recognized under international human rights instruments (Downes and Laird, 1999).

According to Rangnekar (2004), GIs as an instrument of intellectual property protection have specific features, which in contrast to other IPRs, are considered relatively more amenable to the customary practices of indigenous communities: Those specific features are: i) Knowledge remains in the public domain: As no institution exercises exclusive monopoly control over the knowledge/information embedded in the protected indication (or the good), it remains in the public domain; ii) Rights are (potentially) held in perpetuity: The particular indication is protected as long as the good-place-quality link is maintained and the indication not rendered generic; iii) The scope of protection is consistent with cultural and traditional rights: As GIs are a collective right 'owned' by all producers across the supply chain that observe the specified codes and produce in the demarcated geographical region (Bérard and Marchenay, 1996; Moran, 1993a), the 'holders' of a GI do not have the right to assign the indication, which is provided to holders of trademarks (Article 21, TRIPs Agreement) and patents (Article 28[2], TRIPs Agreement). the product-quality-place link underlying GI-protection automatically prohibits the transfer of the indication to producers outside the demarcated region. The result of protection is to limit the class and/or location of people who may use the protected indication (Rangnekar, 2004).

Moreover, GIs are collective rights and are therefore more appropriate than trade marks for the protection of community held traditional knowledge in that it cannot be assigned as the link with the territory needs to be maintained (Babcock and Clemens, 2004).

GIs do not protect traditional knowledge as such but rather, the collective reputation of an origin based product (Bramley, 2011). GIs cannot prevent the appropriation of traditional knowledge embedded in the GI. By valorizing the products which draw on traditional knowledge in its production, GIs allow for the traditional knowledge to be recognized and for the knowledge holders to benefit from its commercialization. Like that GIs reward producers that utilize traditional knowledge based processes and therefore indirectly encourage the continued use and preservation of the associated traditional knowledge. It is therefore not the traditional knowledge as such which is protected, only its continued existence through the GI's role in enabling "people to translate their longstanding, collective and patrimonial knowledge into livelihood and income" (Berard and Marchenay, 1996). Because of that it is more appropriate to view GIs as a method of preserving rather than protecting traditional knowledge (Bramley, 2011).

It is important to recognize that GIs do not protect the knowledge embodied within the good and/or the associated production process (Dutfield, 2000). Consequently, GI protection is no guarantee against the misappropriation of traditional knowledge and other strategies to protect traditional knowledge must be adopted (Rangnekar, 2004). There are some cases where the impact of GIs on traditional knowledge adversely affected traditional knowledge and where GIs may also in the case of undisclosed traditional knowledge work against the preservation of traditional knowledge.

1.2.5. Environmental protection

EU legislation on geographical indications (Regulation (EC) No 510/2006) does not mention environment protection among the specific objectives. The Green Paper on agricultural product quality underlined that sustainability criteria can also make an important contribution to the quality of the product and in meeting consumer expectations, such as contribution of the product to the economy of a local area or environmental sustainability of farming methods (EU Commission, 2010).

Even if environmental protection is not a primary motivation in GI protection schemes, there is some link to conservation of biodiversity and distinctive cultural landscapes (EU Commission, 2010). So, although environmental protection is not a direct objective of GI protection, it may be an outcome of the GI process. GI can promote environmental and biodiversity conservation

both directly, as production may derive from the use of specific natural resources and indirectly, through the design of a code of practice that accounts for biodiversity considerations and which is codified in the product specification (Larson, 2007). In some cases, farming systems and nature values may vary considerably within a PDO production area (EU Commission, 2010). GI can give rise to “rational land use strategies”, where GIs create limits of quantity of production and like that impact positively on natural resource sustainability and on biodiversity conservation (Guerra, 2004). According to Lybbert et al. (2002) resource commercialization further leads to increases in the price of the harvested product which raises the local communities’ valuation of their resource. In that way, geographical indication increases the value of conserving the resource.

GI product standards should include sustainable production guidelines (Downes and Laird, 1999), in order to avoid problems with fragile ecosystems, such as situation when GIs may lead to a significant increase in demand for the product which could place pressure on fragile eco-systems (Bramley, 2011). PDO/PGI schemes could present synergies when addressing environmental problems as they call for regular local governance and coordination. The requirement or possibility to draft specifications which include minimum sustainable production criteria could foster the introduction of environmental conditionalities. (EU Commission, 2010) A participatory approach is crucial and that economic and conservation considerations cannot be separated (Boisvert, 2006, Bramley, 2011).

1.3. The expected impacts of the GI schemes in terms of welfare effects

Assessing the welfare impact of geographical indications is a critical area of research. A review of the literature indicates that various studies have attempted to answer the question as to whether quality assurance and certification schemes improve social welfare. Different literature studies result with different assumptions regarding consumer preferences, quality differentiation and weights attributed to producer or consumer welfare measures.

The assessment of impacts of GIs should give answers on whether, and to what extent, the existing GI schemes are able to solve the economic issues such are: reduction of information asymmetry, protection of high quality producers’ reputation and safeguarding of traditional knowledge for the development of rural areas. This task can be addressed both from a theoretical and from an empirical perspective. Majority of literature focus on the analysis of welfare effects of quality and GI schemes, in terms of impact on consumers, producers and society as a whole.

Literature review identifies studies on consumers that indicate that preferences and WTP for GI products. They are generally driven by two dimensions: a quality dimension and a support-warranty dimension (van Ittersum et al., 2007, Teuber et al., 2011). The first dimension is connected to the fact that majority of consumers expect GI products to be of a higher quality than non-GI products. The second dimension refers to the fact that consumers prefer domestic over foreign products, which is often referred to as “consumer ethnocentrism.” Consumers express strong preferences for domestic products based on an affinity to their home region and the wish to support domestic producers (Lusk et al., 2006).

Different preference structures were considered in order to investigate how the structure of demand influences the welfare implications for both producers and consumers by Menapace and Moschini (2010). According to the authors by the effect on equilibrium market prices given, the introduction of a *sui generis* scheme affects consumers and producers in different ways. “Consumers, to the extent that they prefer high quality, are clearly better off with lower prices, while the effect on producer surplus depends upon whether or not the investment in reputation occurred before the introduction of the *sui generis* scheme” (Menapace and Moschini, 2010, pg 22). According to them, “only producers with established brands (i.e., those that have invested in reputation before the introduction of the certification scheme) can be affected by the introduction of the *sui generis* scheme” (Menapace and Moschini, 2010, pg 22). This leads to conclusion that the introduction of a *sui generis* scheme has the potential to increase aggregate welfare because it reduces the informational cost of building reputation for high quality in a market affected by asymmetric information problems. “This conclusion provides a rationale for favoring a *sui generis* scheme over a certification mark scheme to provide IP protection for GIs. The welfare gains are more likely to be larger when the introduction of the *sui generis* scheme occurs at an earlier stage” (Menapace and Moschini, 2010, pg 22). It has to be said that the authors distinguish between *ex post* and *ex ante* evaluation of GI certification systems. *Ex ante*, i.e., before any investment in reputation has taken place, producers neither benefit nor lose from the introduction of a GI certification system. On the other hand, *ex-post* analysis explains that producers who have already invested in reputation (e.g., well-known brands) might be harmed by the introduction of a GI certification.

Zago and Pick (2004) researched the welfare impacts of labeling policies of agricultural commodities with specific characteristics, with emphasis on the European Regulation on PDO/PGI.

They develop the idea that PDO/PGI has positive impact by allowing producers to signal their product thanks to a label. They studied the welfare impact of labeling in a context of imperfect information where in absence of label, consumers cannot recognize the high from the low quality. The distribution of benefits among consumers, producers and society is ultimately dependent on the following variables: the type of market structure and the degree of competition, eventual restrictions on resources (i.e. land), the level of administrative costs related to the enforcement, the quality differential between high and low quality products and production costs. Even if the regulation aims at increasing both consumers' and producers' surplus, the result may be welfare decreasing in some circumstances and careful cost benefit analysis is needed. According to the authors, with competition, when fixed cost of certification, which is implicitly shared by producers, is not too high, the welfare effect is positive unless certification costs are too high. Like that high quality producers gain, consumers gain while low quality producers lose. Situation is different in absence of labeling. In that situation, low quality producers benefit, and high producers lose. Reason is the absence of information as consumers evaluate an average quality for the good which is higher than the quality of their product. These authors were also studying the introduction of output restrictions in this context which obviously decrease the welfare impact of labelling. Introducing the output restrictions, increase the profit of high quality producers, of low quality producers and the consumers and has a negative impact on welfare.

Lence et al. (2006) developed a general model that analyses the welfare effects of different marketing arrangements. They focus on the restrictions that are induced by collective arrangements and discuss their implications. The analysis compares the impacts of alternative possibilities from a welfare perspective, taking into account the interaction of producers with the legal environment. According to this, firstly, policy authority chooses the legal environment. Then secondly, producers decide or not to invest collectively in the production of a differentiated good. If they do not invest collectively, then they produce the standard good and get some profit (the opportunity cost of land). If they have decided to collectively invest in the development of a differentiated product, producers produce the good given the law (that is given the existing restriction). The model is developed with general conditions imposed on the production function (decreasing return to scale in input except for land with constant return to scale) and on utility function. The authors explored alternative possibilities such as level of competition rules within the collective arrangement: perfect competition among producers, monopoly, land restriction set up by the group, technical requirements set up by the group, land and technical restrictions set up by the group. Looking from a welfare point of view, in ex-post analysis, given that the differentiated product is produced,

welfare is maximised under competition among farmers. In an ex ante analysis, that is taking into account the decision to invest or not, the authors show that for a range of situations (a range of investment costs) it is socially optimal to allow producers to have some coordination leading to a restriction in the output. The authors ranked the different options in term of likelihood to emerge. When monopoly is authorized, producers form a collective arrangement than when restraints on land and techniques only are authorized. Output restriction is the more efficient from the producers' point of view, then the possibility to restraint two inputs allow to get a higher profit as compared to the possibility to restrict production using only one input. It can be concluded that, some production restriction could be authorized, because, otherwise, the production of the differentiated product would not emerge. The restriction of production through land and technical restraints induces additional cost of productions that are detrimental to the welfare but are in some way the cost to pay to induce more investments (Réquillart, 2007).

On the one hand, according to Zago and Pick 2004 and Lence et al. 2007, though allowing collusion may increase welfare, granting too much market power to producers will reduce it. Hence, in these contributions an optimal level of collusion that maximizes total welfare can be derived. On the other hand, Moschini, Menapace and Pick (2008) show that collusion will not enhance but reduce welfare, since collusion will decrease the high-quality production, which is already suboptimal. They also consider a scenario in which some production factors (e.g., land) are in scarce supply. In such, GI certification can benefit producers due to returns generated by these scarce production factors. In the absence of scarce inputs, producers will not benefit from a GI certification at all. According to these authors the major beneficiaries are consumers. They also show that the competitive market equilibrium is not Pareto efficient, a result well-known whenever information is imperfect and markets are incomplete (Stiglitz, 2000). In GIs the failure of the competitive equilibrium to deliver the first-best outcome is caused by high fixed costs of marketing and promotion. In situation like that government interventions can lead to Pareto improvements (Moschini, Menapace and Pick, 2008). According to this argument, financial support granted by the EU to member countries to promote GI certification labels can contribute to the efficient provision of high-quality agri-food products (Teuber et al., 2011).

1.4. Assessments of the actual results of the PDO/PGI schemes

PDO/PGI schemes are made with intention that consumers, producers and society as a whole should benefit from the protection of PDO/PGI products. Indications on what the critical

variables and possible implications for the main protagonists of the PDO/PGI schemes are, can be seen in the previously reviewed welfare analysis.

Very much cited authors that are dealing with policies about food quality and welfare effects are Zago and Pick. According to them, decisions on the establishment of PDO/PGI schemes should pass a thorough cost benefit analysis before and during being put into place, to avoid potential negative welfare effects (Zago and Pick, 2004). According to them it is important because, with high costs and low quality differences, the total welfare impact of the regulation can be negative, and when high-quality producers can exercise market power, the regulation could be more easily accepted by producers, but it would have a negative effect on consumers (Zago and Pick, 2004).

As there is increased interest for measuring assessments of the results of PDO/PGI scheme, overview of methods for assessing the impact of geographical indication systems were provided by Barjolle et al. (2009). Authors suggested that there isn't a unique established method for it.

The conditions for value creation and the discussion of the policy features. and the identification of the essential factors behind the successful PDO/PGI products were researched by Barjolle and Sylvander (2000).

The analysis of the ex post effects of the PDO/PGI policy requires a various set of criteria in order to be a comprehensive assessment of the policy..The development of a sound impact assessment of the results of the GI schemes is not a straightforward task, although there is an increasing call for it by different authors and policy makers. The contributions of the literature on designations of origin mainly follow a case study approach, often focusing on one specific objective of the scheme or on one or a few PDOs (Belletti et al., 2007, De Roest, 2000, Marescotti et al, 2007, Arfini 2000, Galli, 2010).

In the present section we review a set of contributions from the literature that deal with the assessment of the impacts deriving from the introduction of the European PDO/PGI scheme. Specially, the orientation is towards assessments referring to the rationales of the policy, welfare assessments, methods used for assessing the impacts of GIs, and impacts evaluation

1.4.1. Review of different methods

An overview of the different methods used through out the literature for assessing the impacts of the geographical indication system are given by Barjolle, Paus and Perret (2009). These authors give a review of methods, methodological difficulties and choices, and present some of the results of a European research program titled “Strengthening International Research on Geographical Indications” (SINER-GI), supported by the European Commission.

Impacts are considered as “observed effects of the implement of a Geographical Indication (GI) system or protection scheme in the three dimensions of the sustainable rural development (economic, social and environmental) and partly on human health” (Barjolle et al., 2009, pg3).

According to the authors, there is a major distinction between different evaluation methods based on the objective or subjective approaches used. “Objective methods provide a Figure of the impact differential between two states allowing the comparison between farms, regions or supply chains” (Barjolle et al., 2009, pg 4). It can be done either by looking at the situation of GI products before and after its registration (i.e. diachronic evaluation) or by comparing two similar products, one with and the other one without a GI (i.e. synchronic evaluation). The synchronic method is based on the comparison of indicators which can be measured directly (statistical data, accounts data, field observation) eventually integrated by qualitative data. “Subjective methods are based on the comparison of preferences which measure the level of recognition of positive or negative effects of initiatives by external or internal actors” (Barjolle et al., 2009, pg 4). Subjective method is based on interviews to informed people, such are experts and decision makers, in order to grade initiatives regarding various items in order to evaluate their perception.

The authors provided and elaborated review the literature available on impact assessment. They present a summary of some of the case studies conducted in the frame of the European research program SINER-GI¹. Then, they provide comparison of the potential impacts across the 14 case studies that were included in the project, after having identified criteria and a set of relevant indicators. Following items were identified as relevant, comparable and assessable: i) on the economic level: Market stabilization or increase, Price premium, Value added in the region; ii) on

^{1 1} In the frame of the European research program SINER-GI, a large team of researchers investigated 14 case studies in different countries around the world (at diverse stages between “Origin product” and “recognized GI”, according to the common grid of definition defined at an early stage of the SINER-GI program). It was funded by the European Commission and the Swiss Government

the social level: Local Employment, Empowerment of producers, Cultural value / Tradition; iii) On the environmental level: Local breed / variety, Extensive farming, Natural resources. for each item, a scoring was done, in order to compare them, between the modality 0, which corresponds to a totally non relevant item for the considered GI system, and 6, which corresponds to the most expected effect. 1 means that the impact is almost not expected.

The authors make a cluster analysis of the GIs, which are either already established and just introduced (and for which results are only expected) and distinguish them in terms of the performance, and explain 3 groups of GIs in progress.

For a first group of GI in progress, which they called “enthusiasts”, “the most important expected impacts are the market stabilization or increase, the value added in the region, but also the preservation of local breeds or varieties” (Barjolle et al., 2009, pg 9). For a second group of GI in progress, that they named “socio-environmentalists”, “the expectations on economic issues are less important than the social and the environmental ones” (Barjolle et al., 2009, pg 10). For a third group of GI in progress, that they called “undecided”, “the most important is expected economic impacts” (Barjolle et al., 2009, pg 10).

Expected impacts of GIs are mostly linked and oriented to economic and economic-related issues, but also are important other dimensions. The authors underline that if the economic concerns are the only ones that motive the implementation of the GI protection schemes, there are crucial risks. Those risks are mainly in terms of consequences on small scale farmers that may loose access to market, and like that concentration of market power can finish in the hands of the biggest actors of the GI.. According to the authors it is necessary to consider different relevant dimensions at the same time in order to avoid a problem related to the decision who captures the added value, if it is produced. Beside, as a conclusion the authors highlighted that in some cases, results show that the territorial level defined by the GI is sufficiently coherent to host valuable Sustainable Agriculture and Rural Development (SARD) programs.

A main limitation of the research is in terms of broadness. The research is based on small number of cases - only 12 case studies and 2 control cases, so the representativeness is not reached.

1.4.2. Evaluation of supply chains of PDO/PGIs

An overview of the specific conditions and institutional requirements for the development of PDO and PGI products is given by Barjolle and Sylvander (2000). The authors researched conditions for value creation and the discussion of the policy features. The authors are based on the idea that of value creation is collective process, which as an essential factor, must be supported by a suitable public policy. According to them, the producers are networks of small firms with limited resources and visibility.

The research concentrates on markets, internal resources, systems of firms, and institutions, with the beginning simple idea that a supply chain must fulfil a number of conditions if it is to be successful in a highly competitive global environment. Some of those conditions relate to the product and the market, others refer to the mobilisation of the system's resources. Therefore the assessment of the factors behind the successful PDO/PGI products is the objective of their work

In order to assess the factors behind successful PDO/PGI products, authors adopt two different standpoints. Firstly, they compare the scores calculated for each factor and for each product/factors' system (calculated success). Secondly they ascertain success from four main determinants of market performance: supply chain's turnover, supply chain's growth, product's reputation, price premiums (observed success) (Barjolle , Sylvander, 2000). The authors assume that if calculated success and observed success are correlated, then the criteria for success have been correctly identified. They give precedence to two sets of factors according to theoretical considerations and case study findings: i) factors relating to overall product/market features (supply and demand); ii) factors relating to organization (Barjolle and Sylvander, 2000). Those factors are supposed explain the performances of the PDO-PGI supply chains.

The authors move away from a context of welfare analysis and market efficiency. They refer to the ability of firms to formulate a wider set of relevant objectives and according to them to manage activity. According to authors, for the firm, product specificity (differentiation) and market relevance are the main strategic choices underpinning its performance. Beside, there is interaction between each firm's strategy and the supply chain as a whole (Barjolle, Sylvander, 2000).

According to the authors factors of the success are summarized and assumed into 4 groups: i) Specificity (reflecting the objective difference between the product and its substitutes); ii)

Relevance (reflecting market attractiveness, intensity of consumer demand for the product, and the choice of distribution channel); iii) Motivation of the firms to build a system of product differentiation and designation reservation; and iv) Coordination (reflecting the ability of firms to achieve collective and efficient product and market management, which includes an assessment of the legitimacy and efficiency of the institutional environment) (Barjolle, Sylvander, 2000, pg 12).

Authors underline that profitability is a necessary but not a sufficient condition for PDO-PGI supply chains to survive and thrive. According to them, “profitability is an expectation of the initiators and a more immediate requirement of their partners, and it depends on the balance between the need for cooperation and the spur of competition: appropriation by the different firms of the "PDO-PGI supply chain" concept, coordination among these firms on issues such as product definition, testing and inspection, non- Malthusian supply control, collective promotion of the product”. However for reaching efficiency, “institutions must allow scope for the adaptations necessary to continued existence in a changing and competitive environment”(Barjolle, Sylvander, 2000, pg 13).

Furthermore, the authors have some important conclusions and a number of results that are worth emphasising for analysis of success of PDO-PGI supply chains.. The nature of the product does not predominate, even if it is of great importance. The country of origin is of some (but not overwhelming) importance, because tradition is dependent on country. The number of firms in the supply chain might be thought a constraint compelling them to coordinate their actions, but this is not the case. As an other point very important to underline is the author’s conclusion that it is not possible to identify any single factor that can guarantee a product will be successful. Product specificity is very important, as the Regulation forges an association between quality, characteristics and geographical origin, and the whole tenor of the Regulation is based on such specificity. Market relevance is an important factor, because it determines consumer purchasing behaviour. Coordination is, also very important factor, because it is both a condition for and a result of the understanding between firms. The origin of such coordination is nevertheless still something of a mystery that could only be unravelled by complex historical research. It is not thought of as an exogenous model for the firms, but is seen instead as a process under construction. The coordination is facilitated by existence of a channel captain and it is closely connected with the constraints on distributors. Government funding cannot be considered an important factor: It may be beneficial for the launch and the early stages of a project, but only under certain circumstances. Government backing is most useful when it contributes to a supportive framework but stops short of

doing what the firms are there to do. The last thing as a result, authors highlighted, is that success is based on the capacity of several firms to construct their specific supply chain by : i) collectively setting relevant objectives on the basis of their individual competencies (technology, know-how, strategic management, innovation, etc.) ; and ii) firm and flexible control of the functions (firm control to ensure compliance with the essential rules, and flexible control to ensure that each operator can be involved in the project while developing its own strategy) (Barjolle, Sylvander ,2000).

1.4.3. Evaluation of the effectiveness of the PDO/PGI scheme

An evaluation of the PDO/PGI scheme is provided by London Economics (2008). The evaluation study has two main issues: one is provision of a detailed description of the implementation and usage of the PDO/PGI scheme over the evaluation period 1992-2006; and the other is evaluation of the effectiveness of the PDO/PGI scheme itself.

The analysis of the implementation and usage of the scheme covers the 27 Member States over the period 1992 to 2006. The evaluation of the effectiveness of the scheme is based on publicly available information, research and academic literature, and detailed case studies of 18 PDO/PGI products in 10 Member States.

Speaking about analysis of the effectiveness of the scheme, in order to achieve its objectives, the assessment of the effectiveness of the scheme covers the contribution of the scheme in relation to the following aspects: i) ensuring the quality and diversity of products; ii) increasing the market shares of PDO/PGI products; iii) the returns along the supply chain; iv) prevention of effects which would impact on the normal operation of the market for non-PDO/PGI products; v) increasing economic activity in rural areas (in particular in the absence of the list of generics); vi) establishing cultural value in rural areas.

In this work, the effectiveness of the PDO/PGI scheme with reference to the intervention logic model is analyzed. The approach to this assessment is to collate and analyse the evidence from the programme of research (comprising desk research, review of legislation and literature, data analysis and case studies) to form a judgment on the effectiveness on the scheme across a range of dimensions measured against the relevant desired results, impacts and objectives.

The first dimension on which the effectiveness of the PDO/PGI scheme is assessed is the success in achieving the expected result of ensuring that the quality and diversity of products produced under the umbrella of the scheme is high. Producers and other stakeholders were asked to list the characteristics of their PDO/PGI product that indicate a higher quality compared to other comparable ones. A critical issue is given by the subjective definition of the “comparison” product to judge the level of quality: the results differ depending on the type of comparator chosen, whether it is a generic product or a product with a strong reputation. Responses are collected and used from 157 interviews. In order to evaluate the achievement of the desired outcome of high quality products, two indicators were used: i) Consumption characteristics (i.e. sensorial characteristics including taste, texture, smell, shape, colour and presentation); and ii) Production characteristics (i.e. production methods, quality control, investments in equipment, environmental and animal welfare) (London economics, 2008, pg 185). Then, there are summarized the main consumption and production characteristics mentioned for each PDO/PGI and comparator. Although the responses can be indicative, subjective perceptions and personal judgment make it is difficult to make a clear assessment of whether one product is of a higher quality than another. The authors’ judgment is that the scheme has generally been effective in ensuring a high level of quality in terms of the products that are sold under the PDO and PGI symbols. Beside, the scheme has ensured the continuation of high quality products.

The second dimension on which the effectiveness of the PDO/PGI scheme is assessed is the success of the scheme in achieving the expected result of increasing the market share of certified PDO/PGI products in domestic and export markets. It is not easy to distinguish the effect of other exogenous factors that impact on domestic and export markets, such as the capabilities of firms in implementing PDO/PGI marketing strategies and the impact of collective organizations. However, the conclusion is that the registration as a PDO/PGI in itself does not guarantee that market shares will increase and that PDO/PGI scheme is more effective when a number of additional factors are also present. Those factors can be: the intention of producers of increasing market shares, a real interest from consumers, the existence of alternative forms of promotion (such as a collective trademark with a strong name). If small PDO/PGI products are produced under very stringent specifications and are marketed in niche markets, they may be very profitable despite being produced in small quantities compared to the relevant market. Therefore, the analysis of market shares by itself is not a good indication of the performance of PDO/PGI. According to the authors, the scheme has been instrumental in preventing some products from disappearing, and in this sense it can be said that the market shares would have decreased without the scheme. However, the

authors conclude that registration as a PDO/PGI in itself does not guarantee that market shares will increase and the PDO/PGI scheme is more effective when a number of additional factors are also present. Those factors necessary for the effectiveness of the scheme are: intention (of producers) of increasing market shares; interest from consumers to recognise and value the reputation of the name and/or origin of the product, and there is an increased demand for products with denomination of origin; quantity of PDO/PGI products.

The third dimension on which the effectiveness of the PDO/PGI scheme is assessed are returns along the supply chain. The authors explain that they cannot say yet anything yet as to how the benefit of increased sales (in terms of turnover, price margin and profit or return) is distributed over the actors in the supply chain. The indicators are estimated using primary data collected by the experts for the range of products covered by the case studies. In the field work survey, 139 stakeholders were asked to provide their views on how prices, profits and revenues are distributed along the supply chain for unbranded, PDO/PGI, and products with trademarks. The results vary depending on the case study it is looked at and it is not really known whether the farmers benefit from the scheme or not.

The fourth aspect of the effectiveness of the PDO/PGI scheme is prevention of effects impacting normal market operations of non-PDO/PGI products. The authors focus on any problem that the PDO/PGI scheme, may create for the normal operation of non- PDO/PGI product markets, placing a generic product on the market, price changes, and preference for a certain product which has been created and eliminated other products from the market and on the impact of the absence of a list of generics. They highlighted that whilst the PDO/PGI scheme should benefit the supply chain of the protected product names and the related areas of production, this should not be at the expense of non-PDO/PGI product supply chain members, areas and markets, and consumers. Such negative spill-over effects could arise, for example, if PDO/PGI producers had privileged access to raw materials used also in the production of non PDO/PGI products.

The fifth aspect of the effectiveness of the scheme is ensuring an increased diversity of products. One of the expected results of the PDO/PGI scheme is ensuring an increased diversity of products. Diversification is expected to broaden and expand the range of products that are offered to consumers in Europe, thus enabling a better 'fit' between supply and consumer demand on the food markets. Diversity may also be indirectly fostered by the scheme, through non- PDO/PGI registered producers. Faced with a prohibition from using the protected product name, such producers may

innovate and/or diversify, launch new varieties or improve the quality of their products in response. The authors rely on three indicators of diversity: the number of products preserved, number of products introduced and innovation in the industry. Again, the analysis is based on the responses of producers and producers' groups interviewed in the case studies, therefore it may not necessarily be representative of the entire population.

Furthermore, sixth measure of the effectiveness of the scheme in terms of achieving its objectives is the extent to which it has succeeded in increasing or retaining economic activities in rural areas. According to the authors, as global trend is migration from rural to urban areas. By potentially stimulating local production, the PDO/PGI scheme can contribute to the broader EU policy objective of sustainable rural development. Indeed, if more added-value production remains in rural areas, whole communities can benefit from: the maintenance of economic activities; improved job opportunities; spin-offs for other rural activities such as tourism

There are a number of ways in which the PDO/PGI scheme can contribute to higher economic value and economic development in a region. Some of them are: larger sales volumes, higher prices and higher profits achieved by producers of PDO and PGI Products; Direct spending effects from the higher level economic activity of PDO/PGI producers, including the additional employment, or the employment which was safeguarded and the direct additional spending in the local area by the PDO/PGI employees; technological and marketing spillovers and other types of "spillovers". The authors draw almost exclusively on answers from case studies as publicly available data are inadequate for the purpose of the analysis. The case studies undertaken as part of the present evaluation provide qualitative evidence of improvement in conditions for development, benefit to the regional economy and employment growth based on the perception of respondents or the experts. Based on the evidence and analysis in the previous sub-section, they concluded that the effect of the PDO/PGI scheme along the indicators chosen varies, from strong to weak.

Whilst the establishment of cultural values in rural areas is not an explicit objective of the scheme in itself, according to the authors it represents an intermediate step in achieving the wider objectives of the scheme. Establishing cultural value is an indirect way to increase the value of specialist regional products and raise the income of farmers, producers and the wider rural community. It can also create an incentive for residents and businesses to remain in the rural area rather than migrating to urban centres. Cultural events linked to the PDO/PGI products; local associations linked to the PDO/PGI products; social or environmental benefit linked to the

PDO/PGI scheme; public profile of the area (i.e. the perception of the area by the public at large) are all indicators drawn from the answers of the participants.

The final main recommendations addressed to the EU Commission concerns the need to improve the availability of administrative and statistical data on the PDO/PGI scheme, the call for promotion of the scheme and for active communication campaigns in order to raise consumer knowledge of the PDO/PGI symbols and meaning.

1.4.3.1.Measuring the actual performance of the PDO/PGI products in relation to the objectives of the European Regulation

Contribution to assessment of PDO/PGI schemes by building an approach to measuring the actual performance of the PDO/PGI products in relation to the objectives of the European Regulation 510/2006 was provided by authors Galli et al. (2010).

These authors use a multi-criteria, ex-post analysis that measures the performance of different products with respect to multiple criteria in order to move forward the common acquis reached so far. This framework allows: i) an overall evaluation of the coherence and feasibility of the multiple objectives assigned to PDOs/PGIs, ii) a ranking of the performance of PDO/PGI products overall on different objectives and, at the same time, analysis of the role of each dimension, iii) definition of a set of suitable and informative indicators that can help to evaluate the effectiveness of a wide range of PDOs/PGIs with respect to the regulation's objectives, and iv) testing of an approach that can account for the views of different actors involved in PDO/PGI schemes who may have different priorities (or weights) with regard to the importance of different objectives in evaluating performance. The framework provides operational advice and insights for policy makers and chain stakeholders (Galli et al., 2011).

Multi-Criteria method allows us to carry out an objective comparison among PDO/PGI products, based on the set of indicators identified, which are both qualitative and quantitative in nature (Galli et al., 2011). Multi-criteria analysis can be used for both ex-ante analysis of proposed actions and ex-post retrospective analysis on how decisions have worked out in practice. Authors highlighted that a certain degree of subjectiveness is left to the researcher in the selection of the indicators, with particular reference to the qualitative variables (i.e. scales and scores) and to the degree of importance assigned to the indicators.

Authors explain the development of multi-criteria analysis, in several steps. The first step is definition of the objectives to be achieved through a specific policy decision. The objectives are then associated with a set of corresponding indicators that reflect the performance of the unit of analysis with respect to each specific objective. When suitable indicators for each objective are identified, an information card for each PDO/PGI product is constructed. The info cards represent the data base as they contain detailed information on the main characteristics of each product. The indicators chosen are measured for each PDO/PGI product to be used to compare to what extent they achieve the objectives in relative terms. Indicators can be expressed in quantitative and qualitative terms as well as through different types of scales (continuous measures, binary terms, discrete variables, and ordinal scales). When information cards are completed, a subset of the indicators for each objective is reported into the performance matrix, which is first key output of the multi-criteria analysis and is the basis for comparing the values measured for each indicator across products. The performance matrix consists of rows that refer to each PDO/PGI product and columns representing indicators for each objective. The intersections between rows and columns indicate the performance of the particular product on a specific indicator.

Furthermore, the authors explain that the MCA yields a ranking of the PDOs/PGIs is based on the objectives as measured by the indicators. As there are multiple objectives, it is necessary weighting of the objectives. Varying numerical weights can be assigned to each objective in different scenarios to reflect the different importance placed on them by stakeholders . Confronting the different rankings can be useful in revealing the existence of trade-offs between different objectives and in gaining an understanding of the stability of the performance rankings. In an ex post analysis, different ranking according to different weights might provide useful insights into the model of governance and the strategic choices implemented in the supply chain of the different PDO/PGI products

As multi-criteria analysis includes many diverse logical frameworks and computational methodologies, the authors decide to choose among the outranking methods that represent a specific branch of multi-criteria analysis based on pair-wise comparisons, which rely on “dominance criteria” to discriminate between options. The authors use a particular version of outranking methods named Preference Ranking Organization Method for Enrichment Evaluations (PROMETHEE), which calculates positive and negative preference flows for each product analyzed. Furthermore, the authors explain that the net flow of a product, and consequently its

ranking, is the result of a balance between the corresponding positive and negative flows. A positive flow represents the degree to which, on average, one product outperforms the other products in the pair-wise comparisons. The larger the positive flow the higher the ranking of the product. A negative flow represents the degree to which, on average, the other products outperform the product considered in the pair wise comparisons. Rankings are influenced by the weights allocated to the criteria (Galli et al., 2010).

Furthermore, they use graphical representation provided through the Graphical Analysis for Interactive Assistance (GAIA) plane. GAIA makes use of the multivariate data method of Principal Component Analysis (PCA) (Galli et al., 2010).

According the authors identification of the objectives and the choice of the corresponding indicators is a crucial step of the multi-criteria analysis because they are the reference points for the performance evaluation. They have identified five objectives: Enhancing producers' bargaining power; Promoting differentiation of production; Providing reliable and relevant information to consumers on product origin; Enhancing market performance.; Promoting local development.

Following this method the authors develop a comparative evaluation of the performance of PDO cheeses in Italy. During the evaluation they take into consideration different objectives of the schemes, indicators that can help to evaluate the effectiveness of a wide number of PDOs/PGIs with respect to the regulation's objectives, and the fact that different actors involved in PDO/PGI schemes may have different priorities) with regard to the importance of different objectives in evaluating the performance of schemes.

1.5. Critical findings and further extensions

From the literature presented it can be concluded that protection of products with geographical indications can benefit both producers and consumers. Furthermore, it can be concluded that registration of GIs is a powerful tool to create and distribute value.

Geographical indications can be seen as distinctive signs, which play an important economic role in interlinking different informational resources and also in lowering search costs for consumers. As an information asymmetries between consumers and producers exists, it is disadvantage for consumers for making optimal consumption decisions, but also for producers that

wish to sell high quality products. Moreover, these asymmetries are connected to quality and credence attributes of a good. On the other side, producers respond by maintaining a certain minimum level of quality, product labelling and providing guarantees. With distinctive signs, such as PDO/PGIs, the goal of maintaining high level of quality, and ensure that consumers are not misled by the deceptive use of distinctive signs can be achieved.

According to the literature, consumption share of a PDO/PGI products increases if consumers' attitude towards these products is more favourable. Furthermore, a positive attitude of consumers towards GIs increases the price premium that are consumers willing to pay for the PDO/PGI product, in respect to alternative products. This willingness to pay is strictly connected with perceived quality of PDO/PGI products. Very often perceived quality and willingness to buy and to pay for these products is affected by consumers' attitude, image and believes towards region of origin.

A special quality linked to the territory which is acknowledged by consumers in the country and outside, is very important for this research. Reason is that research is based on analysis of demand side (consumers), in two countries, where one is country of origin and the other is foreign country, where these products are not very famous. With established standards and certification misleading of the consumers because of the asymmetric information should be avoid.

Further remark for the future research is based on the fact that there are very few researches on PDO/PGI products from Serbia. As two products that are used as case studies in this research are from Serbia, it was very hard to find Serbian articles or articles about other PDO/PGIs products from Serbia. Beside, as the literature underline the ability of GI production systems to create or reinforce positive effects on rural development, which are very welcome in marginal areas, and Serbia is a country where high percentage of population live in rural areas and as primary occupation works in agriculture, some more studies would be of benefit.

The literature review presented also provides interesting methods and strong results and shows that the assessment of effects of GI system or protection scheme has become an important research program. Behind the apparent diversity of studies, clear methodological choices can be identified according to their objective/subjective approach, diachronic/synchronic evaluation and to their reference point.

It can be seen that there are any methodological difficulties, such as the choice of a reference point for the synchronic approach, the collection of reliable data, the choice between objective or subjective methods, the sampling procedure adopted in the subjective method, and the separation of causes as many factors work together. It should be taken into account that the methods have their limits.

References:

- Akerlof, G. A. (1970): The Market for Lemons: Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics* 84, 488-500.
- Allaire G., Sylvander B. (1996) : Qualité spécifique et innovation territoriale, *Cahiers d'Economie et Sociologie Rurales*, n° 44 pp. 30-59
- Arfini, F. (2000): The value of typical products: The case of Prosciutto di Parma and Parmigiano Reggiano cheese, in B. Sylvander, D. Barjolle, F. Arfini, eds., "The Socio-economics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects, *Actes et Communication*"s, 17(1), pp. 77-97.
- Arfini, F., Capelli, M. G. (2009): The resilient character of PDO/PGI products in dynamic food markets. Paper prepared for presentation at 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Greece, 3-9 September, 2009.
- Arfini, F., Zanetti, C.M. (1998): Typical products and local development: The case of Parma area, in F. Arfini and C. Mora, eds., "Typical and Traditional Products: Rural Effects and Agro-industrial Problems, *Proceedings of the 52nd Seminar of the European Association of Agricultural Economists*", June 19-21, 1997, Parma, Italy. Parma: Università di Parma. pg. 11-40.
- Babcock B., Clemens, R. (2004): Geographical indications and property rights: Protecting value added agricultural products. *MATRIC Briefing paper 04-MBP 7*.
- Barjolle D, Paus M, Perret A. (2009): Impacts of Geographical Indications : Review of Methods and Empirical Evidences, *Contributed Paper prepared for presentation at the International Association of Agricultural Economists Conference, Beijing, China, August 16-22, 2009*
- Barjolle, D., Revillon, S., Sylvander, B. (2007): Creation et distribution de valeur économique dans les filières de fromages AOP. *Economies et Sociétés, série Systèmes agroalimentaires*, Paris, AG no. 29, 9/2007
- Barjolle, D., Chappuis, J.M. (2000): Transaction costs and artisanal food products. *Proceedings of the Annual Conference of ISNIE (International Society for New Institutional Economics), Tuebingen (D) 22-24 September.* .
- Barjolle, D., Sylvander, B. (2000): Some factors of success for origin labeled products in agri-food chains in Europe: market, internal resources and institutions. In Sylvander B., Barjolle D. and Arfini F. (eds.), *The Socioeconomics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects. Proceedings of the 67th EAAE Seminar (Le Mans, 28-30 October, 1999), Actes et Communications n. 17- 1, INRA, Paris, pp.77-98.???*

- Barjolle, D., Sylvander, B. (2000): PDO and PGI Products: Market, Supply Chains and Institutions. Final Report, FAIR 1-CT95-0306. June 2000. Brussels: European Commission.
- Belletti, A., Marescotti, A. (1998): The reorganisation of trade channels of a typical product: The Tuscan extravirgin olive-oil, in Arfini, F. and Mora, C.eds., “Typical and Traditional Products: Rural Effects and Agroindustrial Problems”, Proceedings of the 52nd Seminar of the European Association of Agricultural Economists, June 19-21, 1997, Parma, Italy. Parma: Università di Parma. pp. 271-285.
- Belletti, G. (1999): Origin labelled products, reputation and heterogeneity of firms. In: The socio-economics of origin labelled products in agro-food supply chains: spatial, institutional and co-ordination aspects. Eds: Sylvander B, Barjolle D, Arfini F. (2000) : Series Actes et Communications, 17. INRA, Paris.
- Belletti, G. (2000): Origin labelled products, reputation and heterogeneity of firms, in Sylvander, B., Barjolle, D., Arfini, F. eds., “The Socio-economics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects, Actes et Communications”, 17(1), pp. 239-59.
- Belletti, G., Burgassi, T., Manco, E., Marescotti, A., Pacciani, A., Scaramuzzi, S. (2009): The Roles of Geographical Indications in the Internationalisation Process of Agri-food Products, In International Marketing and Trade of Quality Food Products, eds. Maurizio Canavari, Nicola Cantore, Alessandra Castellini,
- Belletti, G., Marescotti, A. (2007). Costi e benefici delle denominazioni geografiche (DOP e IGP). *Agriregionieuropa*, anno 3, numero 8, marzo
- Belletti, G., Marescotti, A., Paus, M., Reviron, S., Deppeler, A., Stamm, H., Thévenod-Mottet, E. (2011): The Effects of Protecting Geographical Indications : Ways and Means of their Evaluation, Swiss Federal Institute of Intellectual Property, Publikation No 7, available at <https://www.ige.ch/>
- Bérard, L., Marchenay, P. (1996): Tradition, regulation and intellectual property: local agricultural products and foodstuffs in France, in S.B. Brush and D. Stabinsky, eds., “Valuing Local Knowledge: Indigenous Peoples and Intellectual Property Rights”. Covelo, CA: Island Press, pp. 230-43. ICTSD-UNCTAD Project on IPRs and Sustainable Development
- Boisvert, V. (2006): From the conservation of genetic diversity to the promotion of quality foodstuff: Can the French model of AOC be exported? CAPRI Working Paper no. 49. , available at <http://www.capri.cgiar.org/pdf/CAPRIWP49.pdf>.

- Bramley, C. (2011): A review of the socio-economic impact of geographical indications: considerations for the developing world, Paper prepared for presentation at the WIPO Worldwide Symposium on Geographical Indications June 22-24, 2011, Lima, Peru.
 - Bramley, C., Biénabe, E., Kirsten, J. (2009): The Economics of Geographical Indications: Towards a Conceptual Framework for Geographical Indication Research in Developing Countries, Economics of Intellectual Property. Suggestions for Further Research in Developing Countries and Countries with Economies in Transition, ed. WIPO, 109-141. Geneva: WIPO.
 - Bramley, C., Kirsten, J.F. (2007): Exploring the Economic Rationale for Protecting Geographical Indications in Agriculture. *Agrekon*, Vol. 46, Issue 1, pp. 69-93.
 - Carbone, A. (1997): Differenziazione di un prodotto protetto da denominazione di origine: il caso del Chianti Classico, *Rivista di Politica Agraria* n.2
 - Carbone, A. (2003): Le dominazioni di origine tra legislazione e mercato: il caso del Pecorino romano, *QA – Rivista dell'Associazione Rossi-Doria*, Associazione Rossi-Doria, issue 1, May
 - Carbone, A., Gaito, M., Senni, S. (2006): Consumers' Attitude Toward Ethical Food: Evidence from Social Farming in Italy, Paper prepared for presentation at the 98th EAAE Seminar 'Marketing Dynamics within the Global Trading System: New Perspectives', Chania, Crete, Greece, 29 June – 2 July, 2006
 - Carbone, A., Galli, F., Sorrentino, A. (2009): Coordination Mechanisms along the Supply Chain: a Key-Factor for Competitiveness Paper prepared for presentation at the 113th EAAE Seminar "A resilient European food industry and food chain in a challenging world", Chania, Crete, Greece, September 3 - 6, 2009
- Carbone, A., Sorrentino, A. (2006): The European Policy for Food Quality and the Fischler's Reform, Paper prepared for presentation at the 99th EAAE Seminar 'Trust and Risk in Business Networks', Bonn, Germany, February 8-10, 2006
- Chen, M. (2007): Consumer attitudes and purchase intentions in relation to organic foods in Taiwan: Moderating effects of food-related personality traits, *Food Quality and Preference*, Vol. 18, No. 7, pp. 1008-1021 available at <http://www.sciencedirect.com/science/article/pii/S095032930700050X>
 - Crespi, J. M. (2007): Generic Advertising and Product Differentiation Revisited. *Journal of Agricultural & Food Industrial Organization* 5(1): 691-701.
 - Crespi, J.M., Marette, S. (2003): Some Economic Implications of Public Labeling, *Journal of Food Distribution Research* 34(3): 83-94.

- Crespi, J.M., Marette, S. (2002): Generic Advertising and Product Differentiation. *American Journal of Agricultural Economics* 84(3): 691-701.
- de Roest, K. Dufour, M.(2000): The interrelationships between the PDO product's specification, its link to the terrior and its technological development, in Sylvander, B., Barjolle,D., Arfini, F. eds., *The Socio-economics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects*, Actes et Communications, 17(1), pp. 295-307.
- de Roest, K.,(2000): The dynamics of the Parmigiano-Reggiano production system", in Sylvander, B., Barjolle, D., Arfini, F.eds., *The Socio-economics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects*, Actes et Communications, 17(1), pp. 271-86.
- de Rosa, M., di Napoli,G. Gargano, N.(2000): The asymmetric distribution of the benefits from the PDO between farmers and food producers, in Sylvander,B.,. Barjolle, D , Arfini, F. eds., *The Socio-economics of Origin Labelled Products in Agri-food Supply Chains: Spatial, Institutional and Co-ordination Aspects*, Actes e Communications, 17(2), pp. 383-86.
- Dekhili, S., Sirieix, L. and Cohen, E. (2011). How consumers choose olive oil: The importance of origin cues. *Food Quality and Preference*, 22: 757-762
- Downes, D.. Laird, S. A (with contributions from Dutfield, G. and Wynberg, R.), 1999: *Innovative Mechanisms for Sharing Benefits of Biodiversity and Related Knowledge: Case Studies on Geographical Indications and Trademarks*, Prepared for UNCTAD Biotrade Initiative
- Dutfield, G. (2000): *Intellectual property rights, trade and biodiversity*,. Earthscan, London.
- Escudero, S. (2001): *International protection of geographical indications and developing countries*, TRADE working papers no. 10, South Centre, Geneva. Available at: <http://www.southcentre.org>
- EU Commission (2010): *Impact assessment on geographical indications - Accompanying document to the proposal for a Regulation of the European Parliament and of the Council on agricultural product quality schemes*, Brussels, available at http://ec.europa.eu/agriculture/quality/policy/quality-package-2010/ia-gi_en.pdf
- European Commission (2008): *Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI). Final Report*, London Economics.
- European Commission (2007). *European Policy for Quality Agricultural Products. Fact Sheet* available at: http://ec.europa.eu/agriculture/publi/fact/quality/2007_en.pdf.
- European Commission (2008): *Green Paper on agricultural product quality: product standards, farming requirements and quality schemes*. COM(2008) 641 final, Brussels, 15.10.2008.

- European Commission (2009): Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the regions on agricultural product quality policy. COM (2009) 234 final, Brussels, 28.5.2009.
- European Commission (2010): Proposal for a Regulation of the European Parliament and of the Council on agricultural product quality schemes. COM(2010) 733 final, Brussels, 10.12.2010
- European Commission DG for Agriculture and Rural Development (2007): The Common Agricultural Policy Explained. European Communities. Brussels: European Commission
- European Council Regulation (1992): EEC No 2081/92 of 14 July 1992 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs, European Fair Trade Association, 2003: www.eftafairtrade.org, August.
- FAO (2009): Linking people, places and products, A guide for promoting quality linked to geographical origin and sustainable geographical indications, by Vandecandelaere E., Arfini F., Belletti G., Marescotti A., FAO and SINER-GI, ISBN 978-92-5-106374-3
- Fishman, A., Finkelshtain, I., Simhon, A., Yacouel, N. (2008): The Economics of Collective Brands, Discussion Papers 46056, Hebrew University of Jerusalem, Department of Agricultural Economics and Management, available at <http://ageconsearch.umn.edu/bitstream/46056/2/simhon-collective.pdf>
- Fotopoulos, C., Krystallis, A. (2001): Quality labels as a marketing advantage; The case of the 'PDO Zagora' apples in the Greek market, European Journal of Marketing 37, no. 10(2003): 1350-1374.
- Galli, F. (2011): Evaluating the Performance of Protected Designations of Origin and Protected Geographical Indications: a Multi-criteria Approach, PhD thesis, University of Tuscia, Viterbo, Italy
- Galli, F., Carbone, A., Caswell, J., Sorrentino, A. (2010): A Multi-Criteria Analysis for the Assessment of the Performance of Italian PDO Cheeses, Societa Italiana di economia agrarie XLVII Convegno di Studi "L'agricoltura oltre le crisi", Campobasso, 22-25 settembre 2010
- Galli, F., Carbone, A., Caswell, J., Sorrentino, A. (2011): A Multi-Criteria Approach to Assessing PDOs/PGIs: An Italian Pilot Study, Int. J. Food System Dynamics 2 (3), 2011, 219-236
- Galli, F., Carbone, A., Caswell, J.A., Sorrentino, A., (2010). A Multi-Criteria Approach to Assessing PDOs/PGIs: An Italian Pilot Study. Paper prepared for presentation at the 119th EAAE seminar, Sustainability in the Food Sector: Rethinking the Relationship between the Agro-Food System and the Natural, Social, Economic and Institutional Environments, 30 June – 2 July, 2010. Capri, Naples, Italy

- Galtier, F., Belletti, G., Marescotti, A. (2008): Are Geographical Indications a way to decommodify the coffee market?, Communication presented at the 12th congress of the European Association of Agricultural Economists EAAE, Ghent (Belgium), 26–29 August, available at <http://purl.umh.edu/43834>
- Grolleau, G., Caswell, J.A., (2006): Interaction Between Food Attributes in Markets: The Case of Environmental Labeling. *Journal of Agricultural and Resource Economics*, Western Agricultural Economics Association, Vol. 31, Issue 03, pp. 471-484.
- Grossman, G. & C. Shapiro (1988). Counterfeit-product trade. *The American Economic Review*, March, 59-75.
- Grunert, K.G. and Wills, J. (2007). A review of European research on consumer response to nutrition information on food labels. *Journal of Public Health*, 15: 385-399.
- Guera JL (2004). Geographical indications and biodiversity: Bridges joining distant territories. February 2004. Available at: <http://www.iprsonline.org/ictsd/docs/GeogIndicationsLarsonYear8-2.pdf>
- Hughes, J. (2009): Coffee and chocolate: Can we help developing country farmers through geographical indications?, Report prepared for the International Intellectual Property Institute, Washington DC.
- Krystallis, A., Chrysoschoidis, G. (2006): Does the Country- of - Origin (COO) of Food Products Influence Consumer Evaluations? An Empirical Examination of Ham and Cheese, Paper prepared for presentation at the 98th EAAE Seminar ‘Marketing Dynamics within the Global Trading System: New Perspectives’, Chania, Crete, Greece as in: 29 June – 2 July, 2006
- Landon, S., Smith, C. E. (1998): Quality expectations, reputation, and price, available at http://mpra.ub.uni-muenchen.de/9774/1/MPRA_paper_9774.pdf
- Lantz, G. (1998.): The country of origin effect and social identity: The ways an individual’s national identity affects product preferences, PhD thesis, The University of Manitoba,
- Laroche, M., Papadopoulos, N., Heslop, L.A., Mourali, M. (2003): The influence of country image structure on consumer evaluations of foreign products, available at http://morgana.unimore.it/vecchi_patrizia/CO%20updating%202009/Laroche%20et%20al.%202005%20IMR.pdf
- Larson, J. (2007): Relevance of Geographical Indications and Designations of Origin for the Sustainable use of Genetic Resources, Global Facilitation Unit for Underutilized Species, Rome, Italy. Available at http://www.underutilizedspecies.org/Documents/PUBLICATIONS/gi_larson_lr.pdf

- Lence, S. H., et al. (2006): Collective Marketing Arrangements for Geographically Differentiated Agricultural Products: Welfare Impacts and Policy Implications, vol. 06-MWP 9.
- Lence, S., Marette, S., Hayes, D., Foster. W.(2007): Collective Marketing Arrangements for Geographically Differentiated Agricultural Products: Welfare Impacts and Policy Implications. American Journal of Agricultural Economics 89(4): 947-963
- London Economics (2008): Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI), Final Report, November 2008,.Available at <http://ec.europa.eu/agriculture/eval/reports/pdopgi/>
- Loureiro, M. L., McCluskey, J. J. (2000): Assessing Consumers Response to Protected Geographical Identification Labeling, Agribusiness 16(3):309–320
- Loureiro, M.L. and Umberger, W.J. (2007). A choice experiment model for beef: What US consumer responses tell us about relative preferences for food safety, country-of-origin labelling and traceability. Food Policy, 32: 496-514.
- Loureiro, M.L., Umberger, W.. (2003): Estimating Consumer Willingness to Pay for Country-of-Origin Labeling. Journal of Agricultural and Resource Economics, 28(2): 287- 301.
- Lusk, J.L., Briggeman, B. C. (2009): Food Values. American Journal of Agricultural Economics, American Agricultural Economics Association, Vol. 91, Issue 1, pp. 184-196.
- Lusk, J.L., Brown, J., Mark, T., Proseku, J., Thompson, R., Welsh, J. (2006): Consumer Behaviour, Public Policy, and Country-of-Origin Labeling. Review of Agricultural Economics 28(2): 284-292.
- Lybbert T (2002). Commercialising Argan oil in Southwestern Morocco: Pitfalls on the pathway to sustainable development. In: Pagiola S, Bishop J and Wunder S (eds): Buying biodiversity: Financing conservation for sustainable development, World Bank
- Marescotti, A. (2003): Typical products and rural development: Who benefits from PDO/PGI recognition?, 83rd EAAE Seminar Food Quality Products in the Advent of the 21st Century: Production, Demand and Public Policy 2003, Chania, Greece, 4-7 Septmeber, 2003
- Marescotti, A. (2010): Il ruolo del disciplinare di produzione nella costruzione dei legami tra prodotti DOP e IGP e sviluppo rurale. Agriregionieuropa, Anno 6, n. 20, Marzo 2010
- McCluskey, J., Loureiro, M. (2003): Consumer Preferences and Willingness to Pay for Food Labeling: A Discussion of Empirical Studies, Journal of Food Distribution Research 34(3)
- Menapace L., Moschini, G. (2010): Quality Certification by Geographical Indications, Trademarks and Firm Reputation. Paper Presented at the AAEE Annual Meeting, Denver. Colorado, July 25-27, 2010.

- Menapace, L., Moschini, G.C. (2009). Quality certification by geographical indications, trademarks and firm reputation. Iowa State University, WP n.09024, Department of Economics, nov. 2009.
- Moran, W., 1993a: “Rural Space as intellectual property”. *Political Geography* 12(3), pp. 263-77.
- Moschini, G., Menapace, L., Pick, D..(2008): Geographical Indications and the Provision of Quality. *American Journal of Agricultural Economics* 90(3): 794-812.
- Nelson, P. (1970): Information and consumer behaviour, *Journal of Political Economy*, 78 (March-April).
- OECD, (2000): Appellations of origin and geographical indications in OECD Member Countries: economic and legal implications, Working Party on Agricultural Policies and Markets of the Committee for Agriculture Joint
- OECD, European Commission, Joint Research Centre (2008): Handbook on Constructing Composite Indicators: Methodology and User Guide, by Nardo, M., Saisana, M., Saltelli, A., Tarantola, S. (EC/JRC), Hoffman, A. and Giovannini, E. (OECD), OECD publication Code: 302008251E1.
- Pacciani, A., Belletti, G., Marescotti, A., Scaramuzzi, S. (2001): The role of typical products in fostering rural development and the effects of Regulation 2081/92. Paper prepared for presentation at the 73rd Seminar EAAE, “Policy experiences with rural development in a diversified Europe”, Ancona, 28-30 June 2001.
- Quagrainie, K.K, McCluskey,J.J., Loureiro, M.L. (2003): A Latent Structure Approach to Measuring Reputation, *Southern Economic Journal* 67(4):966-977
- Rahman, S. (2000), Country of origin effect in a developing country: does it really matter?, available at <http://anzmac.info/conference/2001/anzmac/AUTHORS/pdfs/Rahman1.pdf>
- Rangnekar, D. (2003): Geographical Indications: A Review of Proposals at the TRIPs Council – Extending Article 23 to Products other than Wines and Spirits”. UNCTAD-ICTSD Capacity Building Project on IPRs and Sustainable Development, Geneva. Available at: <http://www.ictsd.org/iprsonline/unctadictsd/description.htm>
- Rangnekar, D. (2004):The Socio-Economics of Geographical Indications, UNCTAD-ICTSD Project on IPRs and Sustainable Development, available at <http://ictsd.org/downloads/2008/07/a.pdf>
- Réquillart, V. (2007): On the Economics of Geographical Indications in the EU, Paper to be presented at the workshop Geographical Indications, Country of Origin and Collective Brands: Firm Strategies and Public Policies, Toulouse, June 14-15, 2007

- Resano, H., Sanjuan, A.I. and Albisu, L.M. (2007). Consumers' acceptability of cured ham in Spain and the influence of information. *Food Quality and Preference*, 18: 1064-1076
- Reviron S., Paus M. (2006): Special report: Impact analysis methods. WP2 Social and Economic Issues. SINER-GI project. European Commission – Sixth framework program, February 2006
- Reviron, S., Thevenod-Mottet, E., EL Benni, N. (2009): Geographical indications: creation and distribution of economic value in developing countries. NCCR Working Paper no 14
- Roth, M, Romero, J. (1992): Matching product category and country image perceptions: A framework for managing country-of –origin effects, available at <http://www.palgrave-journals.com/jibs/journal/v23/n3/pdf/8490276a.pdf>
- Sanjuan, A. (2002): Second report on the link between OLP and consumers and citizens (WP4), DOLPHINS - WP4 Reports, Universidad Publica de Navarra, Spain, available at <http://www.origin-food.org/pdf/wp4/wp4-anne/wp4-a12.pdf>
- Shimp, T., Sharma S. (1997): Consumer ethnocentrism: Construction and validation of the CETSCALE, *Journal of Marketing Research* Vol. XXIV, available at <http://iba8010kelly.alliant.wikispaces.net/file/view/Session+3+Marketing-2.pdf>
- Solomon, M., Bamossy, G., Askegaard, S. and Hogg, M.K. (2006). *Consumer behaviour. A European perspective*. Harlow: Prentice Hall.
- Stiglitz, J. E. (2000): The Contributions of the Economics of Information to Twentieth Century Economics. *The Quarterly Journal of Economics* 115(4): 1441-1478
- Sylvander, B., Allaire, G. (2008): Strengthening international research on geographical indications: from research foundation to consistent policy, Paper presented at SINER-GI meeting June 2008
- Sylvander, B. (2004): Development of origin labeled products: Humanity, innovation and sustainability. Dolphins WP7 Report, January.
- Sylvander, B., Allaire, G., Belletti, G., Marescotti, A., Barjolle, D., Thévenod-Mottet, E., Tregear, A. (2006): *Qualité, origine et globalisation: Justifications générales et contextes nationaux, le cas des indications géographiques*, *Revue Canadienne Des Sciences Régionales*, vol 29, pp 43-54
- Teuber R., Anders S., Langinier C. (2011): *The Economics of Geographical Indications : Welfare Implications*, *Cahier de recherche/Working paper* 2011-6
- Teuber, R. (2009): Producers' and Consumers' Expectations towards Geographical Indications - Empirical Evidence for Hessian Apple Wine, Paper prepared for presentation at the

113th EAAE Seminar “A resilient European food industry and food chain in a challenging world”, Chania, Crete, Greece, date as in: September 3 - 6, 2009

- Teuber, R. (2011): Consumers’ and Producers’ Expectations towards Geographical Indications – Empirical Evidence for a German Case Study. *British Food Journal*, vol 113.7
- Tregear A., Arfini F., Belletti G., Marescotti A. (2004): The impact of territorial product qualification processes on the rural development potential of small-scale food productions. XI World Congress of Rural Sociology, Trondheim, Norway
- TRIPs - Agreement on Trade-Related Intellectual Property Rights, Article 22: Geographical Indications. Available at http://www.wto.org/english/tratop_e/trips_e/t_agm3b_e.htm
- UNDP (2007): Geographical indications as trade related intellectual property. UNDP discussion paper, Available at <http://www.snapundp.org/elibrary/Publications/GeographicalIndications.pdf>. Last accessed on 27 April 2011.
- Van der Lans, I. A., Van Ittersum, K., De Cicco, A., Loseby, M. (2001): The Role of the Region of Origin and EU Certificates of Origin in Consumer Evaluation of Food Products. *European Review of Agricultural Economics*, Vol. 28, pp. 451–477
- van Ittersum K. (2001): The Role of Region of Origin in Consumer Decision-Making and Choice, summary of the thesis, available at <http://www.origin-food.org/pdf/db/ittersumk.pdf>
- van Ittersum K., Candel J.M., Torell F. (2000), The market for PDO/PGI protected regional products : consumer's attitudes and behaviour, in Sylvander B., Barjolle D. and Arfini F. (2000)
- van Ittersum, K., Meulenberghz, T., van Trijp, H., Candel, M. (2007): Consumers’ Appreciation of Regional Certification Labels: A Pan-European Study. *Journal of Agricultural Economics* 58(1): 1-23.
- Verbeke, W. (2005). Agriculture and the food industry in the information age. *European Review of Agricultural Economics*, 32: 347-368.
- Verbeke, W., Pieniak, Z., Guerrero, L., Hersleth, M. (2012): Consumers’ Awareness and Attitudinal Determinants of European Union Quality Label Use on Traditional Foods, *Bio-based and Applied Economics* 1(2): 213-229, 2012
- Winfree, J., McCluskey, J. (2005): Collective Reputation and Quality. *American Journal of Agricultural Economics* (87)1: 206-213. WIPO. 2007. WIPO Magazine. Communications and Public Outreach Division. Issue 4.
- Zago, A. (1999): Quality and Self-Regulation in Agricultural Markets: How do Producer Organizations Make the Rules? *European Review of Agricultural Economics* 26(2): 199-218. 23
- Zago, A.M., Pick, D. (2004): Labelling Policies in Food Markets: Private Incentives, Public Intervention and Welfare Effects. *Journal of Agricultural and Resource Economics* 29(1): 150-165.

- Zografos, D. (2008). Geographical Indications and Socio-economic Development, IQSensato Working paper no 3.

2. OVERVIEW OF DESIGNATIONS OF ORIGIN IN EUROPE

2.1. Introduction

This chapter outlines the development of the European Food Quality Policy considering the regulatory measures included in the policy as well as the economic incentives provided. Special focus is given to the policy for Protected Designation of Origin and Protected Geographical Indication. Furthermore, the Chapter provides a description of the actual application of these schemes by Countries and by Sector and a discussion of their economic importance and impact.

Bigger part of the chapter provides a synthetic description of the most relevant stages of the Agricultural Product Quality policy development in European Union. Revision of all phases since uniform system of designations of origin is given, and geographical indications at the community level have been established. There is also explanation of economic support and funding of high quality production practices. The last subparagraph examines Geographical indication policy, focusing on aspects of PDOs and PGIs, highlighting the objectives and procedures required for the functioning of the schemes, with the detailed description of the Regulation 510/2006. This part will not be focused on Traditional Specialties Guaranteed, as this represents quite a different kind of scheme.

Last part of the chapter depicts the situation in EU countries regarding products with registered geographical indications. The total number of registrations is analyzed, drawn from an official community database (DOOR - Database of Origin & Registration) by crossing the production sector, the country of origin, and the year of registrations since 1996 (when the first products were actually registered) up to 2012. It also briefly describes situation and number of PDO/PGI products in some EU countries (France, Italy, Portugal, Spain, and Greece, and some new EU member states). In conclusion, an overview of the economic consistency of PDO/PGI in terms of volumes and values is provided.

Structure of the chapter is following: The Development of the EU Policy for Agricultural Product Quality; European quality policy funding; Regulation 510/2006 on PDO/PGI schemes: focus on the objectives, main features, and novelties; and Overview of the situation in EU countries regarding products with registered geographical indications.

2.2. The Development of the EU Policy for Agricultural Product Quality

Premise

To understand the reasons why the quality issue has acquired such an important role within CAP of today it is necessary to re-run (its historical path and especially the context in which it was created. After the Second World War the rural poverty in Europe was immense. Also, the degree of self-sufficiency in agricultural products was very low, and the farms were small scale and low-tech. Officially, the starting point of this history goes back to the Treaty of Rome - the founding document of the European Economic Community, signed in March 1957. Among other objectives, the Treaty sets out in Article 39, which agricultural policy should aim at achievement of self-sufficiency in food production, stability of markets, income support to workers in the agricultural sector and affordable prices for consumers. The policy instruments included several rather protectionist market policies, such as guaranteed minimum prices, import tariffs and export subsidies. In addition, support income to farmers coupled with production and, to a lower extent, structural adjustment of farms became other cornerstones of the CAP. These aims were to be achieved through a free internal market with stable high domestic prices.

The insulation of internal markets from world markets could only be achieved by restricting imports. In the past, the main instruments for achieving this goal were variable import levies that bridged the gap between fluctuating world prices and fixed domestic prices. In addition, variable export subsidies were used to enable excess supplies to be disposed of on world markets, and intervention purchases were used to remove further excess supplies from the internal market. This system of high internal prices led to overproduction and the associated level of public spending became a problem and the European Community first, and then the European Union starting from 1993, had to react.

Some partial adjustments have followed, since the early eighties onward, due to the structural excess production determined by the incentives, the financial constraints (also due to the EU expansion from 15 to 27 countries) and the loss of centrality of the CAP in the process of European integration.

The Mac Sharry reform in 1992 was the first reform that demonstrated the shift from market price support to income support of the CAP. Main objective was to reduce budget spending,

because it was explicitly necessary to reduce intervention prices. In the short time period objectives were introduction of set aside payments and, most importantly, the partial decoupling of financial support for farmers (i.e. not linked to size of production, but to the type of production). In that way, objectives shifted towards a bigger attention to higher quality food products and environmentally friendly production practices.

In order to make CAP more acceptable and to satisfy new consumers needs, whose attention was oriented towards food safety and quality, three regulations were provided: Reg. 2081/1991 on Organic Farming, Reg. 2081/1992 on Protected Designations of Origin and Geographical Indications, (PDO/PGI) and Reg. 2082/1992 on Traditional Specialties Guaranteed (TSG). However, while Organic Farming and Integrated Pest Management (the latter explicitly recognized with Reg. 2078/1992) were enforced right away, a slower pace distinguished the application of other Regulations, particularly 2081/1992 (Canali, 2010). These started operating only in 1996. Reg. 2081/1992 is important for several reasons. One of the objectives of the Regulation was harmonization of different national laws on geographical indications. Before Reg. 2081/1992, in different EU members, such Italy, Spain, France, different national laws about geographical indications existed. These different laws were confusing for consumers and were disturbing competition between producers. By unifying these different laws under one regulation, registration should have provided information to those involved in trade and to consumers.

Agenda 2000, a strategic document containing a broad reflection on the CAP overall direction and objectives, confirmed the interest for quality standards in the new perspective of “multifunctional agriculture”. Since in that period BSE crisis was in a spotlight, major concern was given to food safety issues, which led to the development of the HACCP (Hazard Analysis and Critical Control Points) standards, traceability and the establishment of the European Food Safety Authority (EFSA).

The instruments relevant for high quality food products were not substantially modified, until the 2003 Mid Term Review (or Fischler Reform), in which specific support measures were made, available to farmers willing to engage in high quality production. (Carbone et al., 2005).

In 2006, the European Commission launched two new Regulations. One was launched in order to update the definition of Indications of Origin (with Reg. 510/2006 on PDO/PGI) and other to give definition of Traditional Specialty Guaranteed (with Reg. 509/2006 on TSG). These new

Regulations substituted the previous ones, from 1992, and regulated most relevant aspects related to the definition and protection of Designations of Origin. The major innovations with respect to Reg 2081/92, are given by: i) an extension of the protection to geographical indications of third countries, where these are protected in their country of origin; and ii) a simplification of the bureaucratic procedures for the registration of new designations and the monitoring practices by the third party certification bodies.

In 2008, through the “Green Paper on agricultural product quality: product standards, farming requirements and quality schemes” the EU Commission decided to launch a reflection on how to ensure the most suitable policy and regulatory framework to protect and promote quality of agricultural products, without creating additional costs or burdens.

The purpose of the Green Paper aim was to provoke debate and written contributions from all interested parties and stakeholders, that were invited to respond in order to 'Better regulation', policy development and to provide the basis for the Commission's reflections in shaping a policy options paper range. The main topics that were put in discussion were marketing standards and production requirements; support for the EU's main quality schemes (geographical indications and organic farming); and certification schemes. There are also emphasized the difficulties faced by users of geographical indications when exporting their PDO/PGI products (such as the lack of protection in third countries, relations with trademarks and translation issues), the necessity for the indication of PGI/PDO ingredients used in processed products/prepared foods and the simplification and harmonization of EU systems for protection of geographical indications.

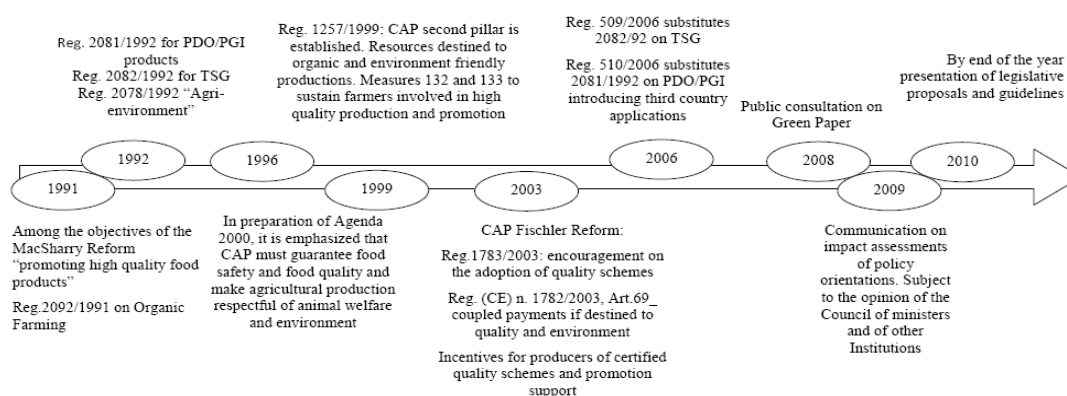
In May 2009, on the basis of the consultation relating to the Green Paper and on the basis of the discussion held at High Level Conference, organized on the same issue by the Czech presidency in March 2009, DG - Agri of the European Commission disclosed a “Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on agricultural product quality policy”. In the Communication, the Commission defines strategic orientations to improve, in the medium term, communication between farmers, buyers and consumers with regard to agricultural product quality, in order to harmonize rules of the enlarged European Union on the quality of these products and to improve and simplify existing schemes and labels.

As a result of three years of extensive consultation and participation of stakeholders and in order to have more coherent agricultural policy, in December 2010 EU Commission adopted so-called “Quality Package”. The Quality Package propose for the first time a comprehensive policy on certification schemes, value-adding terms for agricultural product qualities, and product standards, covering the different facets of quality, from the compliance with minimum standards to the production of highly specific products. The Package comprises: a new 'Agricultural Product Quality Schemes Regulation', bringing coherence and clarity to the EU schemes; reinforcing the scheme for protected designations of origin and geographical indications (PDOs and PGIs); overhauling the traditional specialties guaranteed scheme (TSGs), and laying down a new framework for the development of Optional Quality Terms, such as feeding method and production method; a new general base-line Marketing Standard for all agricultural products, and a specific power to adopt place-of-farming and other sector rules for marketing product; as well as new Guidelines of best practices on voluntary certification schemes and on the labelling of products, using PDO-PGI ingredients (EU Commission).

Considering future plans, the Commission announced its intention to study the problems small-scale producers, when participating in EU quality schemes, are facing more thoroughly, as well as so called “mountain producers” are facing when marketing their products. The legislative proposals from the “Quality package” have been forwarded to the European Parliament and the Council, for discussion and adoption, which was expected by 2012, but have not been issued so far (EU Commission).

Figure: 2.1. EU Quality Policy

Figure 3.1 - Timeline EU Quality Policy



Source: Francesca Galli (2010) on the base of <http://ec.europa.eu/agriculture/quality/>

2.3. European quality policy funding

European Union Quality Policy have been seen and funded differently during its development. Starting with Mac Sharry reform, accompanying measures provided explicit income support for producers who were engaged in organic production practices. It lasted until the Mid Term Review in 2003, when the introduction of specific measures in the Rural Development policy context, indicated the growing awareness on the importance of differentiation strategies of agricultural products, based on qualitative characteristics and production techniques. With Reg.1783/2003, new measures were introduced to support farmers who intended to move from conventional practices to certified quality production practices. This support consisted of an annual financing (max three thousand Euro per firm) aiming at covering the fixed costs, linked to the participation to quality schemes (Carbone and Sorrentino, 2005). Provision of financial support was also granted to those who carried out information and promotion projects, covering up to 70% of the total cost.

Regulation 1698/2005 on rural development support by the European Agricultural Fund for Rural Development unified the previous measures. Under rural development support measures, in Article 20, under letter c, there were written measures aimed at improving the quality of agricultural production and products by (i) helping farmers to adapt to demanding standards based on Community legislation; (ii) supporting farmers participating in food quality schemes; and (iii) supporting producer groups for information and promotion activities for products under food quality schemes. Regulation 1974/2006 gives detailed rules for the application of Council Regulation (EC) № 1698/2005, on support for rural development by the European Agricultural Fund for Rural Development (EAFRD). In this regulation following measures are proposed: support to meeting standards, based on Community legislation and covering costs incurred and foregone income, imposed to farmers who have to apply standards in the fields of the environmental protection, public health, animal and plant health, animal welfare and occupational safety; support for the participation of farmers in food quality schemes; support for marketing and promotion activities.

In addition to the measures included in the rural development program, Reg.1782/2003 on support schemes for farmers (First Pillar) provides a measure directly addressing quality productions. Article 69 allows member states to destine up to 10% of resources assigned to a specific sector to promote superior quality standards in those sectors (arable crops, beef and veal and sheep and goat sectors).

2.4. Regulation 510/2006 on PDO/PGI schemes: focus on the objectives and content

Regulation 510/2006 provides a precise definition for PDO and PGI; establishes the rules defining what must be included in the specification of the product; establishes the rules regarding the application procedure and the rules for objecting to an application; gives description of the protection offered by the Regulation; and sets out how the protection afforded must be enforced (London Economics, 2008).

2.4.1. Objectives of the regulation

The Commission identifies a set of objectives, thus motivating the introduction of PDO/PGI schemes. Objectives are the following:

1. Contributing to the diversification of agricultural production by
 - Promoting products with certain characteristics
 - Supporting rural economies
 - Improving incomes of farmers
 - Retaining rural populations
2. Enhancing the credibility of products having certain characteristics, sought by consumers, and provision of clear information regarding the origin of products.
3. Creating a system of protection on an EU-wide basis, ensuring fair competition between producers of products bearing geographical indications and setting new, clear, harmonized rules for different agricultural products, foodstuff and alcoholic beverage sectors.

Table 2.1. : Objectives of the PDO/PGI schemes as indicated by the recitals of Reg. 510/06

Regulation 510/2006 – Recitals	Key concept
<i>“The diversification of agricultural production should be encouraged so as to achieve a better balance between supply and demand on the markets”</i>	- diversification of agricultural production
<i>...”The promotion of products having certain characteristics can be of considerable benefit to the rural economy, particularly in less-favoured or remote areas, by improving the incomes of farmers and by retaining the rural population in these areas.”</i>	-promotion of rural economy
<i>“A constantly increasing number of consumers attach greater importance to the quality of foodstuffs in their diet rather than to quantity. This quest for specific products generates a demand for agricultural products or foodstuffs with an identifiable geographical origin”</i>	- The consumer should, in order to be able to make the best choices, be given clear and succinct information regarding the product origin
<i>“In view of their specific nature, additional special provisions should be adopted for agricultural products and foodstuffs from a defined geographical area requiring producers to use the appropriate Community symbols or indications on packaging”</i>	- to make this category of products and the guarantees attached to them better known to consumers - to permit easier identification of these products on the market so as to facilitate checks.
<i>“Provision should be made for a Community approach to designations of origin and geographical indications. A framework of Community rules on a system of protection permits the development of geographical indications and designations of origin since, by providing a more uniform approach, such a framework ensures fair competition between the producers of products bearing such indications and enhances the credibility of the products in the consumer's eyes”</i>	- Establishment of a community uniform framework of PDOs and PGIs
<i>“The protection afforded by this Regulation, subject to registration, should be open to the geographical indications of third countries where these are protected in their country of origin.”</i>	- Possibility to have fair competition from the point of view of non EU countries

Source: author according EU Commission

2.4.2. The main features of the Regulation 510/2006

PDO and PGI – definitions: The definitions of PDO and PGI are given in Article 2 of Regulation 510/2006.

“Designation of origin” [PDO] means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff:

- *Originating in that region, specific place or country;*
- *The quality or characteristics of which are essentially or exclusively due to a particular geographical environment with its inherent natural and human factors; and*
- *The production, processing and preparation of products which take place in the defined geographical area.*

“Geographical indication” [PGI] means the name of a region, a specific place or, in exceptional cases, a country, used to describe an agricultural product or a foodstuff:

- *Originating in that region, specific place or country;*
- *Which possesses a specific quality, reputation or other characteristics attributable to that geographical origin; and*
- *The production and/or processing and/or preparation which take place in the defined geographical area.*

For a product name to be protected as a PDO there must be an objective and exclusive link between the features of the product and its geographical origin. All stages of the production process must take place in the defined geographical area. Exceptions to this are allowed under Article 2.3 of Regulation 510/2006 and formerly under Article 2.4 of Regulation 2081/92.

According to Regulation 510/2006, designations of origin for products using raw materials coming from an area larger than or different from the defined geographical area of production, may be allowed provided the following three conditions are met, namely that: a) the production area of the raw materials is defined; b) special conditions exist for the production of the raw materials; and c) there are inspection arrangements to ensure that these conditions are adhered in accordance with Article 2.3. This provision only applies when the name has been protected in the Member State or country of origin before May, 1st 2004.

For a PGI product, “the link with the geographical area does not need to be “essential or exclusive” but has to be causal. In this sense, it is sufficient that the features or the reputation of the product are “attributable” to the geographic origin. Furthermore, not all stages of production have to take place in the defined area (in fact, it is sufficient that only one stage of production takes place in the defined area)” (London economics, pg. 6).

Product specification: The product specification required by the Regulation sets out the conditions that producers must respect. The specification has to contain all the technical information regarding the product and it is the reference point for the control that producers using registered names are complying with the rules.

Product specification is the determining issue in obtaining registration, which is specified in Article 4 of Regulation № 510/2006 and have to include:

- The product name;
- A description of the product, including raw materials and “physical, chemical, microbiological or taste characteristics”;
- The definition of the geographical area;
- Evidence that the product in the market bearing the PDO/PGI originates in the defined geographic area;
- A description of how the product is obtained, including relevant information on production, processing and packaging methods;
- Details of the link between the geographical area and the product’s quality, reputation or characteristics;
- Names and addresses of bodies verifying the compliance with the
- specification;
- Any specific labelling requirements; and,
- Any requirements set by Community or national provisions.

In the case of a PDO, the details must include (according to Article 7(2) of Regulation 1898/2006):

- Details of the geographical area, including natural and human factors, relevant to the link;
- Details of the quality or characteristics of the agricultural product or foodstuff essentially or exclusively due to the geographical environment; and,
- A description of the causal interaction between the factors referring to the two points above.

In the case of a PGI, the details of the link must include (Article 7(3) of Regulation 1898/2006):

- Details of the geographical area relevant to the link;
- Details of the specific quality, reputation or other characteristics of the agricultural product or foodstuff attributable to the geographical origin; and
- A description of the causal interaction between the details referred to in the previous two points.

The link between the product and the area has to be stronger for a PDO than for PGI. Article 7(2) states that, for PDOs, the characteristics of the product must be “essentially or exclusively due to the geographical environment”, whereas Article 7(3) states that for PGIs the characteristics need only to be “attributable to the geographical origin”.

Application: Groups of producers or, under certain conditions, individuals can apply to register a product name on a voluntary basis. Applications are made to the relevant national authorities who assess the application. The rules for the application process are set in articles 5 and 6 of Regulation № 510/2006.

The Regulation states that only a “group” is entitled to apply for registration. A group is defined as “any association, irrespective of its legal form or composition, of producers or processors working with the same agricultural product or foodstuff”. However, it should be noted that the group is not limited to producers, and that other interested parties may participate in a group (Article 5 of Regulation 510/2006). A single person may be treated as a group if the producer is the only producer in the defined area willing to submit an application and the area’s characteristics differ appreciably from neighbouring areas or the characteristics of the product are different from those produced in neighbouring areas (Article 2 of Regulation № 1898/2006).

Applications to the relevant authorities in the Member States must provide a product specification, including a concise definition of the geographical area, and a description of the causal link between the product and the geographical area.

The Member State authorities shall scrutinize applications to check that they meet the conditions of the Regulation. This includes initiating a national objection procedure with adequate publication/consultation and a reasonable period for complaints to be lodged. The Member State authorities also ensure that any favorable decision (and the product specification itself) is made public and any person with a legitimate interest has the right to appeal.

If the Member State authorities decide that the requirements of the Regulation are met, they forward a ‘Single Document’ presenting all the main points of the application to the Commission. If not, the Member State authorities reject the application.

The Commission has twelve months to scrutinize any Single Document received from a Member State to check if the application is justified and meets the conditions proposed in the Regulation. If the Commission decides that the conditions are met, it publishes the Single Document or the summary in the Official Journal of the European Union. Otherwise, the Commission rejects the application.

Within six months of the publication of the application in the Official Journal of the European Union, any Member State or third country, and any natural or legal person with a legitimate interest and established or resident in a Member State other than the Member State from which the application originated or in a third country may lodge an objection. (Article 7 of Regulation, № 510/2006).

The Commission checks the admissibility of objections submitted to it. If the Commission receives no objections that are considered to be admissible it will register the name by publishing the registration in the Official Journal of the European Union series L.

Protection: The protection of product name through the PDO/PGI scheme is quite wide, giving producers who meet the specification exclusive rights to use the registered name for their products in the EU. The rules on the protection given by the Regulation are laid down in Article 13 of Regulation 510/2006.

Registered names are protected by Article 13(1) of Regulation 510/2006 against:

- Direct or indirect commercial use of a registered name on a non-registered product, if the registered and non-registered products are comparable, or if the non-registered product exploits the reputation of the protected name;
- Misuse, imitation or evocation of the protected name on a non-registered product, extending to expressions such as “style”, “type”, “method”, “as produced in”, “imitation” or similar;

- False or misleading indication about the provenance, origin, nature or qualities of products on packaging, advertising material or documents relating to the product that might give a false impression as to their origin.

The protection covers all practices that refer to a PDO or PGI in such a way as to mislead the consumer over the true origin of the product.

However, in exceptional cases, the exclusive right to use the name does not prevent the possibility of registering homonymous names provided that this does not mislead the public into believing that products originate from another territory (Article 3(3) of Regulation 510/2006).

Trademarks - The coexistence rule: When a trademark conflicts with a name which is registered as a PDO/PGI, the trademark may continue to be used provided a) the trademark has been registered, applied for or established by use in good faith before either the date of protection of the PDO/PGI in the country of origin or before January, 1st, 1996; and b) no grounds for its invalidity or revocation exists as specified by the First Council Directive 89/1004/EEC of December, 21st, 1988 to approximate the laws of the Member States relating to trade marks or Council Regulation (EC) № 40/94 of 20 December 1993 on the Community trademark. The rules concerning the coexistence of registered and non-registered products with the same name, referring to a region in a Member State are laid down in Regulation 510/2006 (Article 13(4)).

The Commission may allow the coexistence of a registered and non-registered name if all of the following conditions are met: a) the non-registered name has been in use for at least 25 years before 24 July 1993; b) it is shown that the purpose of the non-registered name is not to benefit from the reputation of the registered name; and, c) that the consumer could not be misled as to the true origin of the product. The names may co-exist for a maximum period of 15 years after which the non-registered name must cease to be used (Article 13(4)).

Control of compliance: According to Article 11(1) of Regulation 510/2006, control of compliance with the product specifications before products are placed on the market is ensured by the operating as a product certification body.

When the authorities verify compliance with the specifications, they must guarantee objectivity and impartiality, and have qualified staff and resources necessary to carry out their responsibilities (Article 11(4) of Regulation 510/2006).

Enforcement: Enforcement of the exclusive name rights given to registered PDO/PGI producers is carried out by Member State authorities, acting within rules laid down at EU level (Article 10 of Regulation 510/2006).

According to Article 10(1) of Regulation 510/2006, Member States designate competent authorities responsible for ensuring that the obligations established in Regulation 510/2006 are met. The obligations refer to the enforcement of the Regulation in the market in that Member State. Member States ensure that any producer complying with the Regulation is entitled to be covered by a system of official controls (Article 10(2) of Regulation 510/2006).

Cancellation of a registration: A registration can be cancelled under two circumstances:

- The Commission may take the view that compliance with the conditions of the specification for the product covered by the protected name is no longer ensured.
- Or, a legal or natural person with a legitimate interest may request cancellation of the registration and provides reasons for such a request.

Any request for cancellation received by the Commission is to be published in the Official Journal of the European Union and objections to the proposed cancellation are admissible only if the party objecting to the cancellation can show continued commercial reliance on the registered name. Any cancellation of a registration is to be published by the Commission in the Official Journal of the European Union.

Institutions involved in the PGI/PDO scheme: Regulation 510/2006 designates the European Commission as the institution responsible for receiving and scrutinizing the applications forwarded by the Member States. Decisions on applications, as well as on cancellations of registrations are taken under the Comitology procedures by the Standing Committee on Protected Geographical Indications and Protected Designations of Origin, or the Council if the Commission wishes to adopt a decision different from that of the Standing Committee.

The European Commission is the institution responsible for maintaining the register of Protected Designations of Origin and Protected Geographical Indications ('the Register'), and a public list of the authorities and bodies of the Member States responsible for the control and verification system required by Articles 10 and 11 of Regulation 510/2006.

For specific implementing measures, Regulation 510/2006 delegates powers under the Comitology rules to the European Commission and the Standing Committee on Protected Geographical Indications and Protected Designations of Origin.

Pursuant to Articles 10 and 11, Member States are obliged to set up the necessary control bodies to ensure compliance with EU rules. Enforcement of the scheme is carried out by authorities designated by the Member States, acting within the rules laid down at EU level.

2.4.3. Main novelties introduced by Regulation 510/06

After the PDO/PGI scheme was first introduced, in 1992 United States of America and Australia formally complained to the World Trade Organization (WTO) in 1999, against the EU regulation of geographical indications (GIs) for agricultural products and foodstuffs. The main argument was that EU regulation discriminated against non-EU GIs and did not provide sufficient protection to pre-existing trademarks that conflicted with EU-designated GIs. As a consequence of the subsequent quarrels, the most important change in the PDO/PGI Regulation permits direct applications from third country producers.

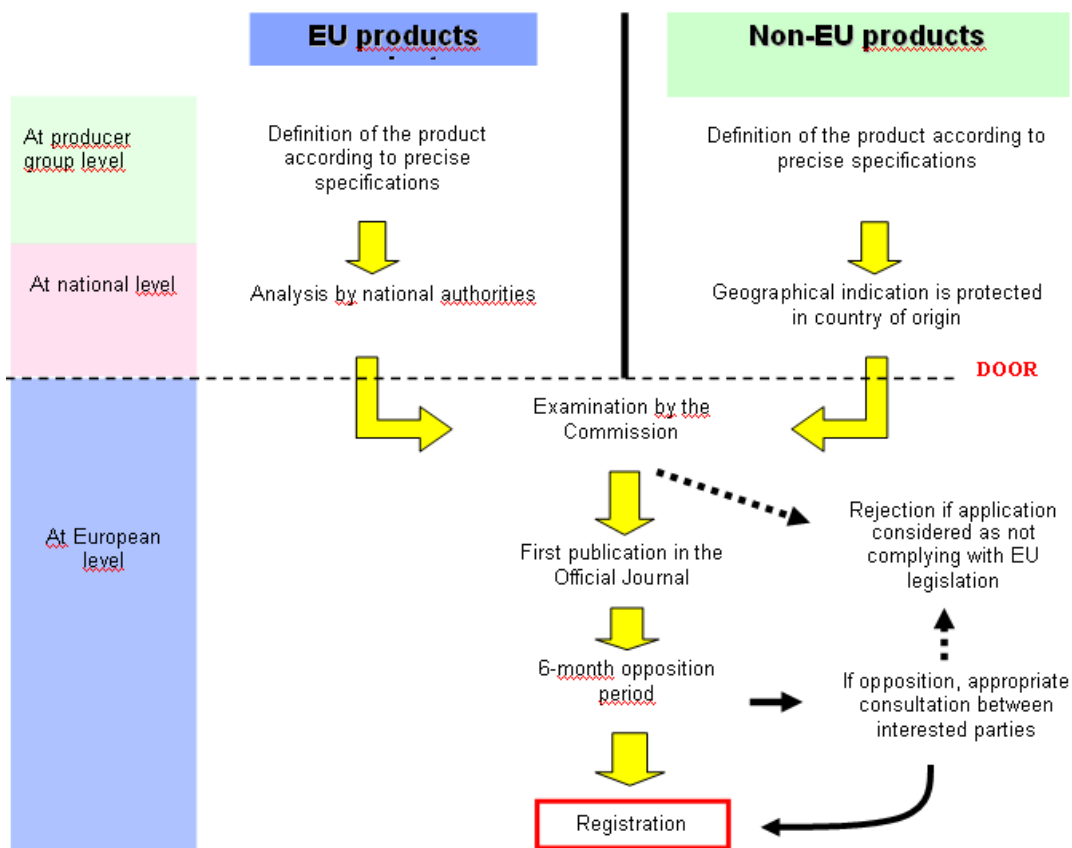
One more important innovation introduced by Regulation 510/2006 relates to the application process, which has been simplified. Under the Regulation 2081/92, applicants submitted requests for the registration of a product name to the relevant Member State authorities. The authorities checked the requests before forwarding the whole application to the Commission. The Commission would then verify that the application satisfied the requirements for registration through a formal examination. Under Regulation 510/2006, Member States examine the applications using the rules set at EU level. The Commission only scrutinizes the main elements of the application to enquire whether it satisfies the conditions of the regulations and that the approach is uniform across the EU Member States. Besides that, Commission may now receive applications directly from producers in third countries, as well as from national authorities of third countries. Previously, producers from

non-EU countries had to apply through their national authorities who may not always have been able or willing to process the application. Application process is explained in Figure 2.2.

Other significant difference is labelling of PDO and PGI products, which has changed since May 1st 2009, by the Article 20 of Regulation 510/2006. It requires that the labelling of products marketed under a registered name should include either the Community indications of geographic origin or the Community symbols. One more relevant change introduced by the new Regulation 510/2006 was the provision of specific rules in relation to the control of compliance and enforcement activities. Control of compliance with the product specifications before products are placed on the market, according to Article 11(1), is ensured by the authorities and/or a control body operating as a product certification body. When the authorities verify compliance with the specifications, they must guarantee objectivity and impartiality, and have qualified staff and resources necessary to carry out their responsibilities (Article 11(4) of Regulation 510/2006).

Enforcement of the exclusive name rights given to registered PDO/PGI producers is carried out by Member State authorities, acting within rules laid down at EU level (Article 10 of Regulation 510/2006). Member States designate competent authorities responsible for providing obligations which refer to the enforcement of the Regulation application in the market. Member States ensure that any producer complying with the Regulation is entitled to be covered by a system of official controls.

Figure 2.2.: Registration procedure



Source: EU Commission

2.5. Overview of the situation in EU countries regarding products with registered geographical indications

Most updated figures shows that nowadays quite a large number of PDOs and PGIs are recognized under the European law. About 1000 registered products existed in January 2013. Since the first implementation of the Regulation in 1996 there has been a large increase in their numbers: Besides that, a high number of applications for registration have been submitted. There are 189 applications that have not been registered until January 2013. On the average, it takes about three years from the time of the original submission of an application to the final registration.

By January 2013 France has 192 registered PDO and PGI products. For many years it was ranked first for its number of registrations and since 2002 it became second after Italy. Actually, France has traditionally been considered, somehow, as the world leader in this field and the place of birth of the concept of *Terroir* that is deeply embedded in French culture and culinary traditions.

Terroir is a complex and sound word, hard to translate, as it refers to a place (as combinations of physical attributes, such as soil, climate living species and so on), and traditions, know-how, landscape and more. The idea is that each terroir is a unique blend of all these elements that influences product quality in its objective and subjective attributes.

Up to 2002, France was the country with the highest number of registered products. Hence, in France the protection of origin for food products has a long tradition. It is worth recalling that Roquefort cheese is called after the place of production since the 14th century! Since the very beginning of 20th Century the responsibility for the registration of origin labels was regarded as a task for the state (cit. source). In 1919 a law on origin labelling followed. In 1935 the "Appellation d' Origine Contrôlée" for wine and spirits was introduced by law, and an institution was founded to determine the respective production rules. This institution later changed to the "Institut National des Appellations d' Origine" (INAO). In 2005, roughly 18% of the cheese produced in France had an origin registration, and the turn over of registered origin milk products is estimated to account for 2 Billion Euros (Becker, 2006).

If we take a glance at the cheese sector, by January 2013 there were 21 types of PDO/PGI registered cheese in France. Beside there are 5 products of animal origin, and 6 registered products in sector of oils and fats.

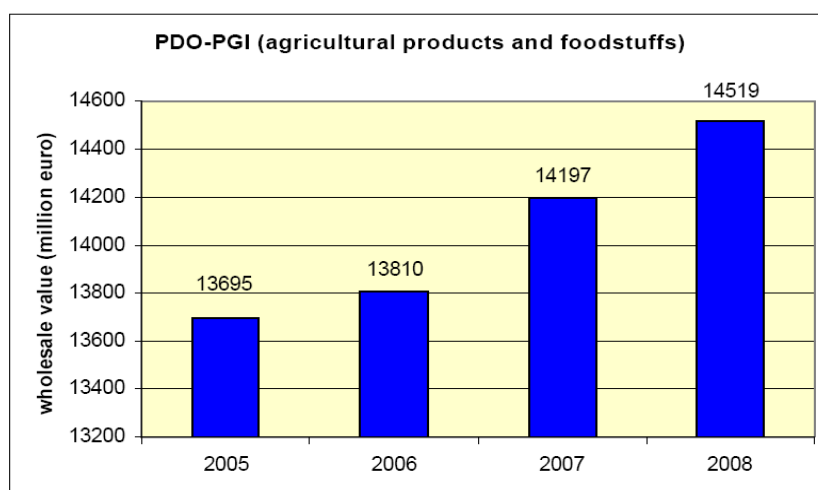
Italy is also a Country where the tradition of origin labeled food is quite well established, especially in some areas, though it is not as long as in the case of France. Before year 1992 there were 26 certified cheese and 2 ham products (Becker and Staus, 2008). In January 2013 there were 157 registered PDO/PGI Italian products. Among sectors, by January 2013 there were 44 registered PDO/PGI types of cheese, 43 products registered in PDO/PGI oils and fats sector, and 36 products in sector of meat products.

In Portugal, Spain, and Greece the number of products registered is lower than in Italy and France, but still higher than in the other European Union countries. For example, in January 2013, there were 158 registered PDO/PGI products from Spain, 118 products from Portugal, and 97 products from Greece. In Germany there are 89 registered PDO/PGI products, in Austria 14, Belgium 8.

New Member States in Eastern Europe have registered only a few products, although the number of applications from these countries is high, as it can be a great opportunity for them to enter EU food market. Hungary has 12 registered PDO/PGI products, Bulgaria only 1 registered product, Romania also 1 product, and Estonia and Latvia do not have any registered PDO/PGI product.

In EU the PDO-PGI products had a wholesale turnover of more than 14 billion Euros in 2008, and in respect of previous years it is increasing. As it can be seen from the figure, value of wholesale has been increasing through years, as it was 13695 million Euros in 2005, up to 14519 million Euros in 2008. The sector that contributes the most is the sector of cheese, followed by meat and meat products, beer, and other products.

Figure 2.3.: Wholesale value of agricultural products and foodstuffs (excluding wines and spirit drinks; includes beers and other beverages) sold under PDO and PGI designations



Source : <http://ec.europa.eu/agriculture/quality/schemes/>

Table 2.2. : Wholesale value of agricultural products and foodstuffs (excluding wines and spirit drinks; includes beers and other beverages) sold under PDO and PGI designations, by sectors

<i>million euro</i>	2005	2006	2007	2008	<i>average</i>
cheese	5259	5258	5464	5625	5401
meat and meat products	3431	3411	3573	3731	3537
beer	2301	2407	2361	2366	2359
fruit and vegetables	770	764	900	870	826
bakery products	749	726	738	742	739
fish products	528	529	464	439	490
olive oil	204	220	198	228	213
other products	453	495	500	518	491
Total	13695	13810	14197	14519	14055

Source : <http://ec.europa.eu/agriculture/quality/schemes/>

References

- Barjolle, D., Sylvander, B. (2000): PDO and PGI Products: Market, Supply chains and Institutions, EU Commission, Final report, 1 - CT 95 – 0306, available at <http://www.origin-food.org/pdf/pdo-pgi.pdf>
- Barjolle, D., Paus, M., Perret, A. (2009): Impacts of Geographical Indications - Review of Methods and Empirical Evidences, Contributed Paper prepared for presentation at the International Association of Agricultural Economists Conference, Beijing, China, August 16-22, 2009
- Becker, T., Staus, A. (2008): European food quality policy: the importance of geographical indications, organic certification and food quality insurance schemes in European countries, Paper prepared for presentation at the 12th EAAE Congress People, Food and Environments: Global Trends and European Strategies', Gent (Belgium), 26-29 August 2008, available at <http://ageconsearch.umn.edu/bitstream/44455/2/431.pdf>
- Carbone A., Sorrentino A. (2006): The European Policy for Food Quality and the Fischler's Reform, Paper prepared for presentation at the 99th EAAE Seminar 'Trust and Risk in Business Networks', Bonn, Germany, February 8-10, 2006
- Carbone, A., Sorrentino, A. (2005) : La politica europea per la qualità e la nuova PAC. La Questione Agraria n.4, Franco Angeli
- Carina Folkeson: Geographical Indications and Rural Development in the EU, School of Economics and Management, Lund University, available at: <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=1334511&fileId=1647280>
- Commission Regulation (EC) No 1974/2006 of 15 December 2006 laying down detailed rules for the application of Council Regulation (EC) No 1698/2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), Official Journal of the European Union, L 368, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R1974:en:NOT>
- Council Regulation (EC) No 1698/2005 of 20 September 2005 on support for rural development by the European Agricultural Fund for Rural Development (EAFRD), Official Journal of the European Union, L277, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32005R1698:en:NOT>
- Council Regulation (EC) No 1782/2003 of 29 September 2003 establishing common rules for direct support schemes under the common agricultural policy and establishing certain support schemes for farmers and amending Regulations (EEC) No 2019/93, (EC) No 1452/2001, (EC)

No 1453/2001, (EC) No 1454/2001, (EC) 1868/94, (EC) No 1251/1999, (EC) No 1254/1999, (EC) No 1673/2000, (EEC) No 2358/71 and (EC) No 2529/2001, Official Journal of the European Union L 270, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:270:0001:0001:EN:PDF>

- Council Regulation (EC) No 1783/2003 of 29 September 2003 amending Regulation (EC) No 1257/1999 on support for rural development from the European Agricultural Guidance and Guarantee Fund (EAGGF), Official Journal of the European Union, L 270, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:270:0070:0077:EN:PDF>
- Council Regulation (EC) No 509/2006 of 20 March 2006 on agricultural products and foodstuffs as traditional specialties guaranteed, Official Journal of the European Union, L 93, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2006:093:0001:0011:EN:PDF>
- Council Regulation (EC) No 510/2006 of 20 March 2006 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs, Official Journal of the European Union
- Council Regulation (EEC) No 2078/92 of 30 June 1992 on agricultural production methods compatible with the requirements of the protection of the environment and the maintenance of the countryside, Official Journal of the European Union, L 215, available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31992R2078:EN:HTML>
- Council Regulation (EEC) No 2081/92 of 14 July 1992 on the protection of geographical indications and designations of origin for agricultural products and foodstuffs, Official Journal of the European Union, L208, available at http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&numdoc=31992R2081&model=guichett&lg=en
- EU Commission (1998): Agenda 2000, CH-87-98-001-EN-C, available at : http://ec.europa.eu/agriculture/cap-history/agenda-2000/index_en.htm
- EU Commission (2008): Green Paper, available at: http://ec.europa.eu/internal_market/copyright/docs/copyright-infso/greenpaper_en.pdf
- EU Commission (2010): Impact assessment on geographical indications, Accompanying document to the Proposal for a Regulation of the European Parliament and of the Council on agricultural product quality schemes, Brussels, Ref. 2010/AGRI/010, available at http://ec.europa.eu/agriculture/quality/policy/quality-package-2010/ia-gi_en.pdf
- Galli, F. (2011): Evaluating the performance of Protected designations of origin and Protected geographical indications – a multi-criteria approach, PhD Thesis, University of Viterbo, Italy

- <http://ec.europa.eu/agriculture/quality/>
- http://ec.europa.eu/agriculture/quality/certification/index_en.htm
- http://ec.europa.eu/agriculture/quality/documents-links/index_en.htm
- http://ec.europa.eu/agriculture/quality/policy/index_en.htm
- http://ec.europa.eu/agriculture/quality/reports/index_en.htm
- http://ec.europa.eu/agriculture/quality/schemes/index_en.htm
- http://ec.europa.eu/agriculture/quality/schemes/legislation/index_en.htm
- London Economics (2008): Evaluation of the CAP policy on protected designations of origin (PDO) and protected geographical indications (PGI) - Final report on agricultural product quality: product standards, farming requirements and quality schemes, Brussels
- Vandecandelaere, E., Arfini, F., Belletti, G., Marescotti, A. (2009): Linking people, Places and Products: A guide for promoting quality linked to geographical origin and sustainable geographical indications, FAO
- Wijnands, J.H.M., van der Meulen, B.M.J., Poppe, K.J. (2006): Competitiveness of the European Food Industry - An economic and legal assessment 2007, EU Commission
- www.ec.europa.eu
- www.eur-lex.europa.eu

3. THE AGRICULTURAL BUSINESS IN SERBIA

3.1. Introduction

This chapter presents a description, basis and more relevant information about agricultural situation in the Republic of Serbia. The situation is explained with statistical data and descriptive analysis of the given data. The point of the chapter is to give a relevant presentation of agriculture state in Serbia.

The first subchapter gives information about the share of agriculture in GDP, added value, and employed population in agriculture. Second subchapter provides data about agricultural production and the third one gives information about trade, import and export of Serbian agricultural products. As a conclusion, based on given data, in the last subparagraph the SWOT analysis of Serbian agriculture is given. The chapter also describes phases in adaptation of Serbian Laws and regulations to CAP, with emphasis on Quality policies and Law about protected designation of origin.

Structure of the chapter is as follows: Overview of agriculture in Serbia, with emphasis on Production and Trade in agricultural and food products, SWOT analysis of agriculture and food/processing industry in Serbia and explanation of changes in agricultural policy and adaptation to CAP; and Quality policy in agricultural and food sector in Serbia.

3.2. Overview of agriculture in Serbia

The agricultural production is an important sector of Serbian economy. Agriculture greatly contributes to the overall values of its society, much more than it is the case in many other European countries. The great importance of agriculture and food industry is reflected in its share in the Gross Domestic Product (GDP) of the Republic of Serbia, which presents about 20% of GDP. In recent years this share got a little lower, but it is still high. The share of primary production has decreased, and share of food industry has increased as well. This trend is not caused by decreasing agricultural production, but by development of other sectors. It is shown in table № 3.3.

In addition, the agricultural sector employs, directly and indirectly, a large part of the total population of the country. It directly provides livelihood to people engaged in agricultural activities. Around 20% of total workforce is employed in agricultural sector, which presents 8% of total

population. This percentage is slowly decreasing in respect of previous years, but it is still high. Table No 3.1. shows number of employed people in agricultural sector in Serbia.

Table 3.1.: Employed in agriculture, forestry and fishing sector (from age 15 to 65 years old)

year	%
2008	20.7
2009	19.8
2010	18.5
2011	18.5

Source: Republic office for statistics

Indirectly, it provides income for individuals employed in the agribusiness chain that includes many activities, like production and transport processes that do not take place exclusively in the field of agriculture, but have the purpose of its support, such as production of fertilizers, agricultural machinery, equipment for packaging and transport of agricultural products, distribution and retail, and together with the primary agricultural production make one third of the workforce of the country. Agricultural production in Serbia is far more than an economic sector that provides food security for the citizens of the country and the raw materials for the food industry. About 44% of the country's population lives in rural areas and find their most basic income in agriculture or in industries closely related to agriculture.

Agriculture in Serbia has great economic potential, as the basis of national economy and holder of rural development. Nowadays it is taking on a new, multifunctional character. The overall development of the rural areas of the country, aided by the strengthening the economic diversification of agricultural production and development of the activities more or less related to agriculture (rural tourism, the old crafts, conservation and exploitation of cultural heritage...), leads to the transformation of this sector into an attractive environment for living, working and prosperity of all of its inhabitants.

In the Republic of Serbia there is 5.200.000 hectares considered as an agricultural land, which is 0.68 ha per capita, which is above the standards of European countries. 85% of these lands are privately owned lands and 15% belong to cooperatives or public institutions. 83% of Serbian agricultural lands are arable (MAFWM, 2012).

Agriculture's contribution to total national value added is high. In 2006 it was 9.4%, and dropped in last few years, so in 2009 it was 8.0 % When compared with other EU countries (in 2006 contribution of agriculture in Italy was 2%, in France 1.4%, Germany 0.6%...) it can be seen that agriculture in Serbia has greater significance

Table 3.2.: GDP and added value from agriculture in Serbia

	2006	2007	2008	2009
GDP (MIL. EURO)	23304,9	28467,9	32668,2	28883,4
GDP/CAPITA (EURO)	3144,4	3856,6	4444,5	3945,4
ADDED VALUE (AGRICULTURE) %	9,4	8,6	8,9	8,0

Source: Republic office for statistics

Table 3.3. : Share of agriculture and food industry in Serbia

year	Agricultural production	Food industry	Other
2002.-2004.	14,5 %	5,7 %	79,9 %
2005.	13,5 %	5,4 %	81,1 %
2006.	12,6 %	5,3 %	82,1 %
2007.-2009.	11,1 %	5,9 %	82,9 %

Source: Republic office for statistics

3.2.1. Production

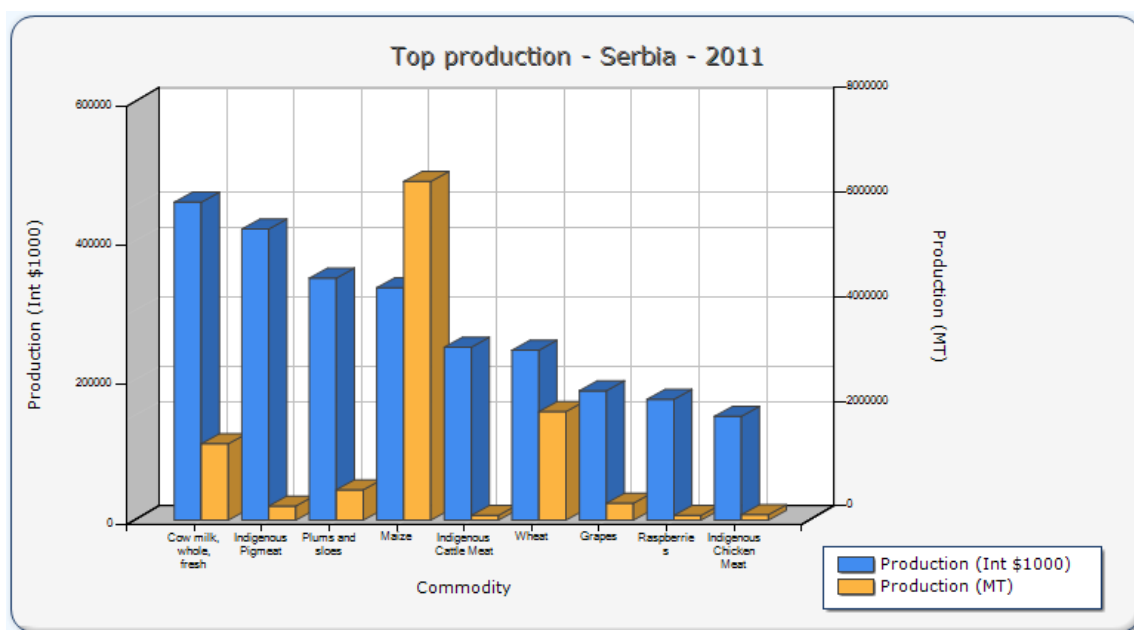
Most of the agricultural land in Serbia is used for cereal crop production. This production (wheat, barley, rye, oats, maize, millet and sorghum) takes up about 60% of the total seeded areas. Maize is predominantly present, with more than 1.2 million seeded hectares. When it comes to maize production, Serbia ranks № 5 in Europe – after France, Ukraine, Romania and Italy. The second most important cereal is wheat, with a throughput ranging between 2 and 2.5 million tons per year and a cultivation area of over 650.000 hectares of land, yielding in average 3.5 t/hectare. Sunflower cultivation areas extend over 170.000 hectare of land yielding a production of 300.000 ton/year and 1.7 ton/hectare (MAFWM, 2012).

In Serbia, vegetables are grown on about 281.000 ha, which is 9% of the total area of cropped land. In 2010 vegetable production was 2.18 million tones, which resembles the 2009 production level. Vegetable production structure is dominated by potatoes (41%). Potatoes cultivations cover the area of approximately 100.000 hectare for a total production of 800000 ton/year. After potatoes, the most produced vegetables are cabbages and kale (15%), followed by melons and watermelons (9%), tomatoes (9%), peppers (7%) and onions (7%) (MAFWM, 2012).

Vineyard and orchards account for 5% and 4% respectively. Considerable yields are also coming from the fruit sector, especially apples and plums, although there has been a recent decrease both in local consumptions and in export. Other important fruit production is production of raspberries, with an overall production of 50.000 - 70.000 ton/year, which ranks Serbia as the second production country in the world. Raspberry takes a value of 62% of the total fruit export. Viticulture is quite spread over the whole country with an average production of 380.000 tons of table grapes and wine grapes (MAFWM, 2012).

Livestock husbandry, according to the analysis of the structure of value of agriculture of Serbia, presents 32% of the total value of agricultural production in 2010. This is significantly less favourable compared to the EU Member States (30% of crop and 70% of animal farming production) (MAFWM, 2012).

Figure: 3.1.: Republic of Serbia - production



Source: faostat.fao.org

Food processing industry is presently the most attractive sector for investors wanting to invest or draw up collaborations with local firms. In fact, although Serbia has remarkable natural resources and a sound, traditional production background, the industry still lacks modern technology and strongly needs implementation.

The food, beverages and tobacco industry forms a large part of the economy, generating RSD 449.9 billion, which represents 34.7% of manufacturing output, 51.2% of which generated by

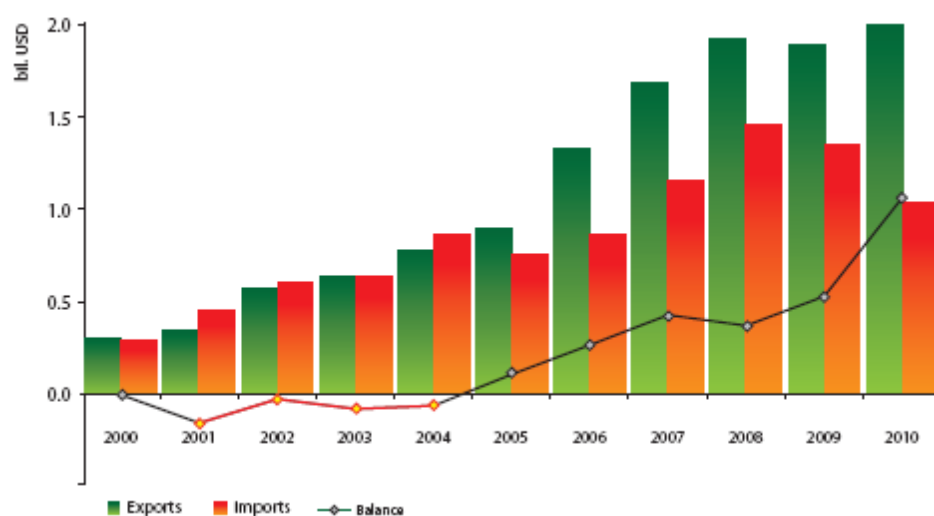
large enterprises and 32.2% - by medium-scale enterprises (FAO). Important subsectors include vegetables and fruits processing, wine production, the flour and cereals industry, meat and dairy processing (MAFWM, 2012).

3.2.2. Trade in agricultural and food products

Agriculture is the sector with a positive foreign trade balance, which is the pillar of development of the foreign trade of Serbia. Agriculture plays a significant role in the overall foreign trade, with 21% share in total export and 6 - 8% share in import. The most important trade partner for Serbia is the European Union. Since 2001 Serbia has enjoyed a preferential status for exporting agricultural products into the EU countries, based on unilateral Autonomous Trade Measures. Imported agricultural products from Serbia are not subject to any custom duties imposed by the EU, which means that preferential access is provided to unrestricted quantities of products, except for sugar, baby beef and wines, where preferential tariff quotas are applied. Accepting Stabilization and Association Agreement with the EU (2008) and application of Interim Agreement on Trade and Trade-related Matters, concluded between the Republic of Serbia and the European Union (in early 2009) led to gradual liberalization of trade in agricultural products for imports from the European Union. Average import protection in agriculture for imports from the European Union will be reduced, from the original 23.2% for agriculture on the whole, to only 3.2% at the end of transitional period. In terms of average annual volume of imports, 75% of trade will be fully liberalized. In about 15% of trade the tariff rates will be reduced to 10% to 20% of applicable MFN rates, and 12% will continue to be subject to MFN rates after the end of the transitional period. After three years of applying the Interim Agreement on Trade and Trade-related Matters with the European Union, Serbia still has a surplus in agricultural products trade. Serbia is the only country in the region that has signed the Free Trade Agreements with the Russian Federation, Belarus and Kazakhstan. Moreover, the Republic of Serbia also signed the Free Trade Agreement with the Republic of Turkey (applied since September, 1st, 2010), which provides preferential access to Turkish market to a number of products by way of preferential tariff quotas. The Free Trade Agreements with the EFTA countries (applied during 2010 and 2011) provide access to agricultural markets of signatories under preferential treatment for a large number of products. In the previous period the EU was the final destination for about 48% of the total exports of agricultural and food products of the country. Serbia is a member of Central European Free Trade Agreement (CEFTA) since May, 1st, 2007, with seven other countries. CEFTA is a trade agreement between non-EU countries in Central and South-East Europe. The CEFTA signatories absorbed about 43% of

agricultural export of Serbia, and only 7% to 9% of export was placed on the markets of other countries. At the same time, the largest volume of import in Serbian agriculture originates from the European Union. The highest value of trade, in the amount of about USD 3.3 billion, was reached in 2010, where the surplus realized was about USD 1.2 billion, more than imports value for the same year. Serbia exports agricultural and food products to nearly 125 countries of the world, and imports from 130 countries (MAFWM, 2012).

Figure 3.2.: Republic of Serbia - foreign trade in agriculture



Source: Republic office for statistics

Table 3.4.: Share of agriculture in Serbia in export and import

Share of agriculture	2009	2010
export	23.3	22.9
import	6.2	6.0

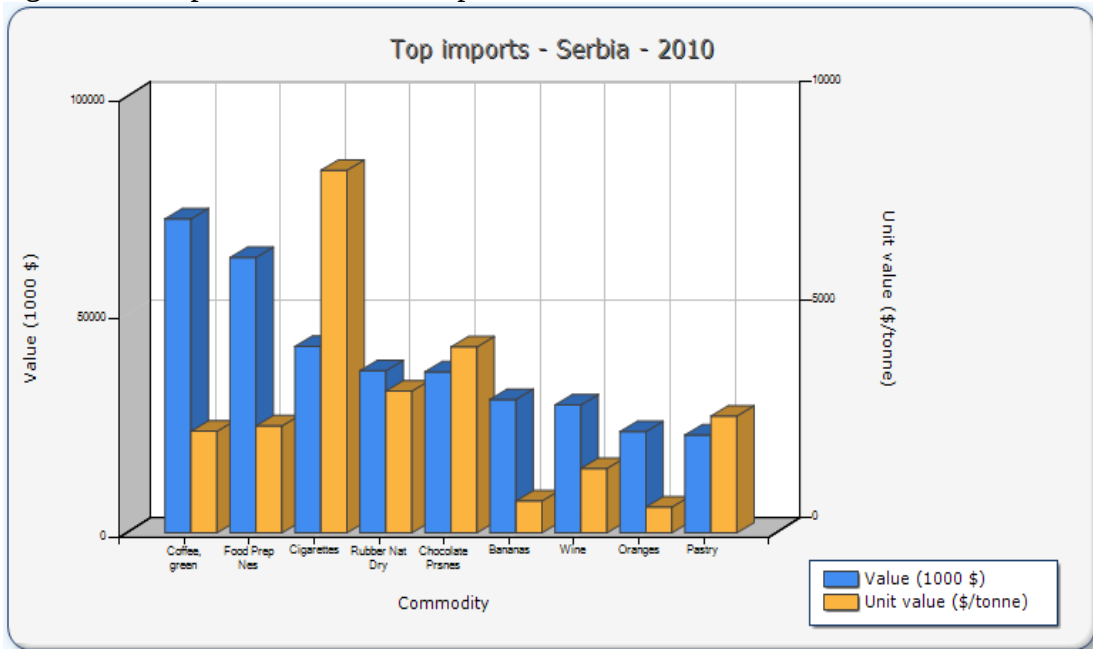
Source: Republic office for statistics

According statistical data, data of Ministry of Agriculture and FAO, the most important agricultural products exported by Serbia are: maize, yellow; frozen raspberries with no sugar added; sugar, white; soybean oil, crude; sunflower oil, edible; sunflower oil, crude; wheat flour. By value of exports, most important partners of Serbia are Bosnia and Herzegovina, Montenegro, Macedonia, Germany, Austria, Italy, Hungary, Russian Federation, France and Greece (MAFWM, 2012).

According the same data sources, the most important agricultural products imported into Serbia are: coffee, with caffeine, unroasted; bananas, fresh; food products, not elsewhere mentioned, other; oranges, sweet, fresh; cigarettes; solid residues, from soybeans; chewing gums

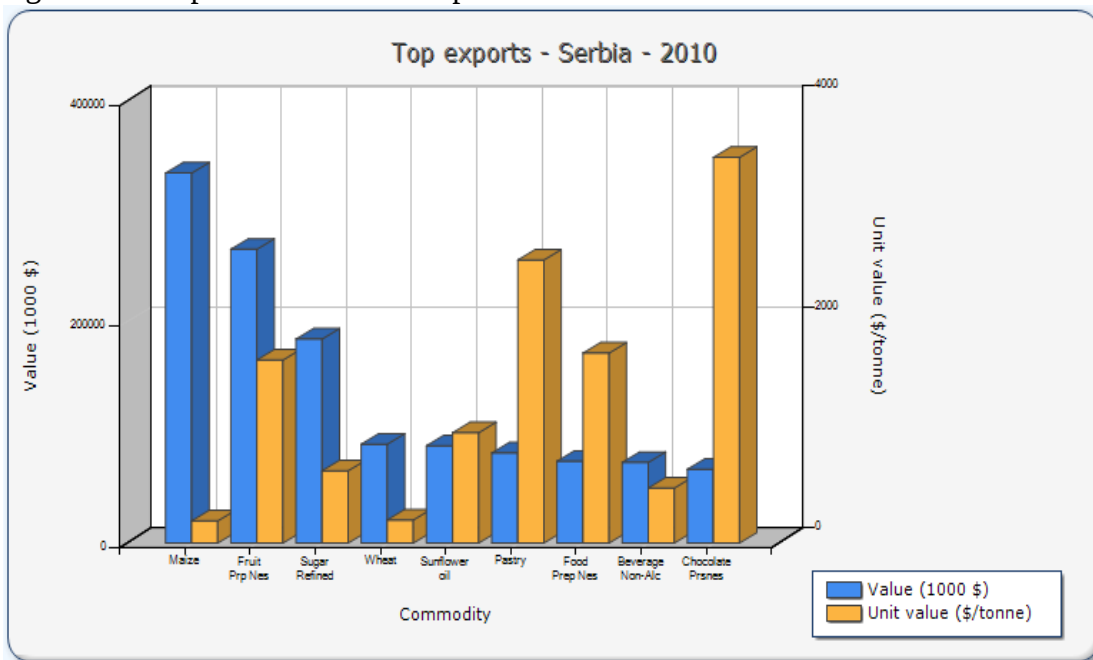
and hard candies, sugar free; palm oil; tomatoes; food products. By value of imports, most important partners of Serbia are Germany, Macedonia, Brazil, Croatia, Italy, the Netherlands, Bosnia and Herzegovina, Ecuador, Hungary and Poland (MAFWM, 2012).

Figure 3.3.: Republic of Serbia - Import



Source: faostat.fao.org

Figure 3.4.: Republic of Serbia - export



Source: faostat.fao.org

3.2.3. SWOT analysis of agriculture and food/processing industry in Serbia

SWOT analysis is a method that provides information about all the internal and external factors of the sector's environment and analyse corresponding strengths, weaknesses, opportunities and threats (Djurković, 2012)². SWOT analysis in this chapter is used to identify strengths, weaknesses, opportunities and threats of the analysed agricultural sector and food industry in Serbia. Based on these four dimensions actual position of the sector can be viewed, and possibilities for acting in the future can be seen. It is provided simply on a base of data previously explained, and on a base of literature, with emphasis on work of Novkovic "SWOT analysis of agriculture in Serbia".

Strengths of agriculture of Serbia are:

- Good natural conditions for production (soil, climate, water resources), as the arable land participates in over 80% in the agricultural land; Relatively unpolluted environment; All of that has impact on good quality of products
- Important GDP contribution, about 20% of GDP
- Market Access and market potential, as it has around 21% in share of Serbian export; and also new Trade agreements
- Relatively qualified and educated labor, as around 20% of employed people works in agriculture; Educational, scientific and research institutions and agricultural extension service centers, which can contribute to improving conditions, production and labour
- Excellent conditions for multi-functional agriculture (good natural resources for development of tourism, hotel management, energy production from renewable sources); and its' support of Ministry of Agriculture

Weaknesses are:

- Small and unorganized estates and parcels of farms; Extensive production in structure and yields; Inappropriate solution for the use of the state-owned land; Aged farmers and rural devastation
- Animal husbandry represents only 30% of total value of agricultural production
- Bad economic conditions for using water potentials for irrigation
- Insufficient support to the development of agriculture by the state; Lack of investments in the sector modernization and as a consequence old technologies are used

² SWOT analysis is explained in Chapter 4 (Research methodology)

- Agricultural cooperatives are not well organized
- Only a few brands are internationally recognized
- Besides some larger companies, many processors are still of small to medium size in international range

Opportunities (Developing capabilities) are:

- Intensifying of plant production, by changing of structure of production, and increasing the inputs in present agricultural production lines; Better usage of land, by two or more sowing during a year
- Developing the animal production
- Improvement of processing technology for agricultural products
- Development of multi-functional production and diversification: development of agricultural-ecological tourism (agro tourism, tourist events in rural areas, spa tourism, fishing and hunting tourism), catering (on farms, fresh and healthy food, home-made food), and energy production from renewable sources (harvest residues, Aeolian energy, etc); Development of ecological production, medical and aromatic herbs production; Organic production
- Increase of competitiveness with the development of cooperatives, SME (small and middle sized enterprises) and cluster-integration
- Increase of export possibilities, by increase of product quality which will increase market demand and alignment to EU policies and standards; Opening of new markets - SEE Free Trade Area, Autonomous Trade Measures granted by the EU, FTA with Russia
- Improving institutions for support of agriculture (financing, organization, management, educational support)
- A great number of investments and acquisition opportunities in agribusiness

Threats are:

- Placement limitations (low domestic payment demand) and low purchasing power of Serbian consumers
- Export limitations (export quotes, non-custom barriers, no export stimulations)
- Insufficient possibilities of the state to support agricultural development
- Lack of or insufficient legal regulations
- Lack of cooperation between producers
- Difficult access to new technologies

3.2.4. Changes in agricultural policy and adaptation to CAP

Agricultural and rural policy should be adapted to CAP, but gradually and in accordance with Serbian national interest and level of competitiveness of its producers. In order to be able to function as a member of such a complex system consisting of 27 EU countries so far, Serbia has to be able to implement all that is required for agriculture, and industry in general, of other member countries. It means that if Serbia wishes to sell its products to the EU citizens, then those products have to be at least the same quality, health safety and hygiene, as the products produced by the farmers in the EU. In fact, Serbian products must carry even higher quality distinctions than those produced in the EU, otherwise, there will be no motive for EU citizens to buy Serbian products. This again means that Serbian products must be manufactured in accordance with the procedures of production which are mandatory for producers in the EU.

The demands for increasing the budget for the agriculture of Serbia have been heard many times. This increase is often based on emulating the European Union and there is an inevitable remark that the EU allocates a half of its budget to agriculture whereas the Republic of Serbia allocates much less, in relative terms, of course. When compared, the agricultural budget of the Republic of Serbia in 2010 made about 3% of the national budget (Dragin et al, 2010).

According to Tomić and Ševarlić (2010), three periods of harmonization of Serbian agricultural policy with the EU CAP can be distinguished.

The first period lasted from 2000 to 2003, when agriculture of Serbia relied on grants coming from the EU Member States, as well as the USA and Japan, in inputs for agricultural production (diesel fuel, mineral fertilizers, machinery, soybean meal, etc.) and food for the population (edible oil) for the purpose of resolving acute agricultural production and food-safety needs in Serbia.

During that period, Serbia was only the “observer“ of changes in the EU CAP, which was in the function of improving the elements of competitive agricultural sector, production of quality and healthy food, diversification of agriculture, rural development, and preservation of the environment. That support to agriculture was present through two CAP pillars: support to the market through the system of guaranteed prices and support to agricultural regions through rural development. The first Law on Organic Agriculture along with other bylaws pointing to the commitment of Serbia to enhancing of the development of organic agriculture was enacted during that period.

The second period is the stage of initial agricultural-political reforms in the period from 2004 to 2008 when agricultural policy of Serbia was in the initial stage of harmonization with the EU CAP. That reflected in introduction of the Register of agricultural holdings and application of subsidies (per hectare of land and head of cattle) and other forms of incentives to registered agricultural holdings. Much more attention was given not only to strengthening of competitiveness of production but also to enhancing quality and health correctness/safety of food, with simultaneous rational and sustainable use of natural resources and preservation of natural and cultural heritage of rural communities.

For a number of years now, the negotiations for Serbia to become a member of the WTO again have been in progress, but significant changes in agricultural and foreign trade policy remain implemented until the final accession. Serbia will have to accept the Common Agricultural Policy.

During the second period of harmonization with the process of European integrations, Serbia signed (2006) and started implementing the Central European Free Trade Association – CEFTA on January 1st, 2007.

The new Law on Organic Production and Organic Products was enacted in that period. Based on that Law, new bylaws were enacted later for the purpose of harmonization with changes in the EU, which regulate comprehensively the issues related to organic agriculture in Serbia.

The third period of more intensive harmonization of Serbia with European integration processes dates back to 2008. For that purpose, Serbia signed the Stabilisation and Association Agreement and Interim Trade Agreement with the EU on April 29th, 2008, which was ratified by the Parliament on September 9th, 2009. Serbia started implementing unilaterally the Interim Trade Agreement of the EU with Serbia, which aim is to create free trade zone within the period of six years, on February 1st, 2009 and the EU started implementing it only on February 1st, 2010. In that document, agriculture and trade with agricultural-food products were granted an important place and a six-year dynamics of reduction of customs tariffs defined the interim period during which Serbian agricultural producers should adapt to the conditions of exceptionally sharp competition at the EU market. The system of annual quotas for export of Serbian products to the EU market was approved as follows: 8,700 t of beef, 180,000 t of sugar, 63,000 hl of wine, 15 t of trout and 60 t of carp. At that time geographic origin marks were also regulated for certain products.

The great number of laws in the field of agriculture, rural development, and health safety of food was enacted in that period for the purpose of harmonization of legislation of Serbia and the EU. The most significant from the aspect of agricultural-political aspect was the Law on Agriculture and Rural Development and the most significant from the aspect of health safety of food was the Food Safety Law.

3.3. Quality policy in agricultural and food sector in Serbia

Demand for agricultural and food products is characterized by consumers looking for authentic, high quality and safe products. In order to be as competitive as possible, it is necessary to work on creating the confidence that buying food and beverages from Serbia means buying high quality products, selected from a plentiful offer that reflects diversity of traditions and regions in the country. It is clear that gaining such a reputation requires many years of hard work, investments, innovations and special attention paid to quality.

In order to enter and survive on EU market, the primary goal of agricultural quality policy is to develop and implement “quality schemes”, such as organic agriculture, agricultural and food products with geographical indications, integrated production, as well as to implement market standards.

Law on Food Safety (“Official Gazette RS” № 41/09) represents one of the main agricultural laws in Serbia. It governs all aspects of production, circulation, control and consumption of food, general conditions for ensuring safety of food and feed, rights and responsibilities of persons performing food and feed businesses, early warning system, hygiene and quality of food and feed. The purpose of the law is to ensure high level of protection of customers' life and health and their basics interests, while ensuring efficient functioning of food trade. The adoption of the law was necessary for the purpose of harmonization with EU regulations, and compliance with the Agreement on sanitary and phytosanitary measures of WTO.

The most important new concepts introduced by the law are: implementation of the traceability of food; registration of all businesses concerning food in one unified Central Register; full division of competences between the Ministry of Agriculture and the Ministry of Health, which will enable that both quality and safety of food are controlled on the same food sample, and that one

facility is controlled by one inspection; performance of controls in accordance with the risk assessment; establishment of the national reference laboratories; introduction of internal controls in accordance with the good manufacturing practice, good hygiene practice or HACCP depending on the type of food businesses.

Geographical indications and designations of origin are not used and applied to a satisfactory degree in the Republic of Serbia until now. The Law on protected designations of origin exists from 2010 (“Official Gazette RS” № 18/2010). It is written completely in accordance to EU regulation 510/2006. The Law governs procedures and steps in the certification process on the territory of Republic of Serbia, precise institutions, registers and rights, as well as application procedure in EU Member states, all harmonized with EU Regulation.

There are three regimes for protecting geographical status, for wines, for alcoholic beverages and for agricultural and food products, and two instruments: protection of designation of origin (PDO) and protection of geographical indication (PGI). In Serbia until now (2012), there were 43 agricultural and food products that have been registered for designation of origin or geographical indication (www.zis.gov.rs). All of these products are registered in Republic of Serbia Intellectual Property Office.

References

- Djurković, M. (2012): SWOT analysis of Serbia's raspberry sector in the competitive marketplace, Master thesis, available at <http://brage.bibsys.no/umb/retrieve/3638/Djurkovic%20Marina%202012.pdf>
- Dragin, S., Milosevic, M., Stegic, M., Milovanovic, M., Ivkov, I. (2010): Serbian agribusiness on the road map to the EU Accession, in Tomić, D., Ševarlić, M. (2010): Agriculture in late transition Experience of Serbia, Monography, Serbian Association of Agricultural Economists, Chamber of Economy of Vojvodina
- Government of the Republic of Serbia (2011): Needs of the Republic of Serbia for International Assistance In the Period 2011-2013, Belgrade, February 2011
- http://ec.europa.eu/agriculture/analysis/external/applicant/serbia_en.pdf
- MAFWM (Ministry of Agriculture, Forestry and Water Management) available at :www.minpolj.rs
- Milojević, I., Cvijanović, D., Cvijanović G. (2011): Quality of agricultural-food products as a factor of the Republic of Serbia's competitiveness in international market, African Journal of Biotechnology Vol. 10(41), pp. 7949-7952, 3 August, 2011 Available at <http://www.academicjournals.org/AJB> ISSN 1684–5315 © 2011 Academic Journals
- Ministarstvo poljoprivrede, šumarstva i vodoprivrede Republike Srbije (2009): Nacrt strategije ruralnog razvoja 2010–2013, Belgrade 2009 (Ministry of Agriculture, forestry and Water Management of Serbia: National Strategy of Rural Development 2010-2013 Draft)
- Nacionalni program za poljoprivredu od 2010. do 2013. Godine, Službeni glasnik Republike Srbije, broj 83/10 od 9. novembra 2010. godine (National Program for Agriculture 2010-2013, Official Gazette no 83/10)
- Novkovic, N., Mutavdzic, B. (2010): The role of macro-management in increasing the competitiveness of Serbian agribusiness, Agriculture in late transition Experience of Serbia, Monography, Serbian Association of Agricultural Economists, Chamber of Economy of Vojvodina
- Novkovic, N.: SWOT analysis of agriculture in the Republic of Serbia, available at http://portal.zzbaco.com/mojo_baco/Data/Sites/1/docs/mono/EAAE/Plenarni/07%20PL%20Novkovic_Nebojsa.pdf
- Tomić, D., Ševarlić, M. (2010): Agriculture in late transition Experience of Serbia, Monography, Serbian Association of Agricultural Economists, Chamber of Economy of Vojvodina, available at:

http://portal.zzbaco.com/moj_baco/Data/Sites/1/docs/NovaPub/011%20COMPLETE%20MONOGRAPH%20PDF.pdf

- www.faostat.fao.org
- www.usda.gov
- www.webrzs.stat.gov.rs
- www.zis.gov.rs
- Zakon o bezbednosti hrane, Sl. Glasnik RS, br 41/2009 (Food quality Law, Official Gazette 41-2009)
- Zakon o oznakama geografskog porekla, "Sl. glasnik RS", br. 18/2010, (Law about geographical indications, Official gazette 18/2010)

4. RESEARCH METHODOLOGY

4.1. Introduction

This chapter explains research methodologies and methods used in order to meet research objectives. First part of the chapter explains research methodologies and procedures used to collect data both for analysis of supply and demand side. It describes all steps that were done during the field research for primary data about case studies collection, in order to provide situation of the supply side. Second part of the chapter provides short explanation of SWOT analysis, as it was used in other chapters. The third part gives explanation of techniques for data collection from consumers. The last part of the chapter explains cluster analysis, as this method was used for data collected from consumers' analysis, in order to provide demand side analysis.

Structure of the chapter is: Introduction; Research objectives and method; Field Research with explanation of Primary data for case studies collection; SWOT Analysis; Technique and data collection from consumers; Consumer questionnaire design with explanations of Questionnaire for Serbian and Italian consumers; Data collection; Analysis of the results - Cluster Analysis with Introduction, Purpose of cluster analysis, The technique of cluster analysis(Distance measures, Hierarchical cluster analysis, Non-hierarchical cluster analysis, Two – step clustering method); Practical implementation of cluster analysis in this research.

4.2. Research objectives and method

The objective of the research was to analyse potential of two Serbian products, with geographical indication, in the market. Another objective was to understand who are consumers of these products and if they would pay for these products. These questions were explored in cases of two Serbian PDO products – Futog cabbage and Petrovac sausage, on two markets – in Serbia and in Italy. Aspects that were analysed are Serbian and Italian consumers' behavior and attitudes towards PDO/PGI products; exploring the food consumers' preferences related to the geographically determined food; their attitudes towards the quality guarantee labeled food and if they are willing to pay for it.

Furthermore, one additional aspect of the research was to explore consumers' attitude for non EU, in this case Serbian PDO/PGI products, in Italy, where these products are not familiar, and

even not frequently present in the habitual diet. Italy was chosen as potential for expansion of markets of Serbian products for following reasons:

- a) Commercial relations between Serbia and Italy already exist;
- b) Italy is not far away from Serbia, and transport of the products would not be difficult;
- c) Many citizens from other EU and non-EU countries live in Italy, even from Eastern European countries including Serbia, and they may be interested in finding products similar to their home country products, and
- d) Italian habitual diet is different from Serbian, and maybe potential for demand of different food products can exist, as those products can be seen as “exotic” and “ethnic”.

Research was divided into two parts. Both supply and demand side were analysed. Supply side analysis was a qualitative analysis. Field research was conducted with open interviews, in order to find case studies, to collect data about them, to get information from authorities and producers, in order to have enough information to continue research with consumers. Demand side analysis was a quantitative analysis. Consumer surveys were conducted, in order to assess future perspectives for two products. On the basis of data collected from consumers in Serbia and Italy, collected data were analysed quantitatively, by using cluster analysis.

4.3.. Field Research

The research design is a plan and overall logic or framework for conducting the study and collecting data. It is defined as the specific methods and procedures used to acquire the information needed (Smith and Albaum, 2012).

Field research design was characterized with following operational steps:

1. Literature review, EU law regulations, Serbian Law regulations, Manifestations, Fairs, Exhibitions.
2. Selection of wanted data and preparation of surveys (for government and producers)
3. Ministry of Agriculture data collection and interviews
4. Data basis of PDO/PGI products projects in Serbia research
5. Selection of the set of PDO/PGI products
6. Field research and interviews with producers of these products in order to select 2 products for deeper analysis
7. Selection of two PDO Serbian products - Futog cabbage and Petrovac sausage

8. Field visits and producers' interviews in order to collect data about selected products
9. Selection of data, analyse and description of case studies
10. Questionnaires preparing
11. Conducting questionnaire in Serbia
12. Conducting questionnaire in Italy

Before starting a field research for collecting new data, secondary sources of existing data were explored first. Secondary data are type of information that has already been collected and is usually available in published or electronic form (Curtis, 2008).

The analysis of secondary data is an important step of the process determining the given problem. Before starting research process, which means selecting case studies, getting information about them, designing consumers' survey, selecting questions and collecting data, and at the end, analysing collected data, secondary data collection has to be first. The major sources of external secondary information that were used include: literature based on books, periodicals and professional journals, governmental publications, trade associations periodicals, university research papers etc. A literary search as researching secondary sources of information was conducted on: the internet, the library, and among government records.

After the literature search, the next step was to interview experts, in order to gain more information. For this purpose it was necessary to take part in scientific forums, organized by Ministry of Agriculture, Forestry and Water Management and Faculty of Agriculture from Novi Sad, Serbia, where it was possible to consult experts, who were interested in the determination of the research problem from various angles. Besides, visits of Food fairs with exposure of traditional and geographical designated food products and shops for these products were useful for getting more information, for food producers, who are producing food related to a certain geographical area, were also there.

In order to getting to know the EU's regulation and supporting system, apart from literature using, conversations with supervisors and advisors, working for the Ministry of Agriculture and Rural Development, were conducted. Moreover, lecturers and foreign ministry members at international seminars were consulted, and comparative analysis about the adaptations of the EU's regulation in different countries was done, in order to understand process and differences before going in field. Special emphasize was put on the overview of each country's quality policy.

4.3.1. Primary data for case studies collection

For conversation and collecting data from Ministry an informal questionnaire was created. The questions were mainly open ones. To collect data and answers on the questions in questionnaire were used personal interviews with the staff employed in sectors for Rural Development and Agricultural Policies of Ministry of Agriculture of Serbia. These interviews and conversations were taken in period from August to December 2011, in Serbia. By them we got information about Law in Serbia, weaknesses, support system from Ministry and Government. Beside, existing projects and data base of Serbian PDO/PGI products were collected. During conversations all projects and elaborates of Serbian PDO/PGI products were examined, and thus chosen several.

After deeper examination, and conversations with some producers and people responsible for every cooperative or organization of these PDO/PGI Serbian products, interest was narrowed and two products were chosen as case studies for the research. These two products were chosen because of two reasons. Firstly, possibility to get more information about them from producers was higher. Secondly, both products are from the Province of Vojvodina, near town of Novi Sad.

Next phase of the field research was to meet, get to know and speak with producers of two chosen products. In order to get more information and to understand how the new Serbian PDO and PGI scheme is adopted and functioning, and if it has impacts on rural area in which Futog cabbage and Petrovac sausage are produced, interviews with producers of both products were done. Information has been collected by informal, personal, face to face interviews, with open questions, with producers, and also using their own production statistics. Data was taken in period September-December 2011. Before starting interviews some indicators, that we thought would be important to clarify position of the producers and current situation of Futog cabbage and Petrovac sausage production, were chosen. Indicators that were identified are:

- a) Production (product production, land area, animal production, crop production)
- b) Sales, marketing and distribution
- c) Incentives to take-up the scheme (reasons given by firms for taking-up the scheme, incentives, barriers for using/expanding production)
- d) Producer's understanding of application procedure and producer understanding of objection procedure

- e) Connections with other associations, cultural manifestations and further possibility to contribute to diversification of economic activities and rural development

4.4. SWOT Analysis

SWOT analysis is a strategic planned method used to evaluate the Strengths, Weaknesses/Limitations, Opportunities, and Threats involved in a project or in a business venture, territory, network, politics, product development logistic etc. The SWOT headings provide a rational framework for qualitative aspect of strategy, position and direction of a company, product, project or person. The overall evaluation of strengths, weaknesses, opportunities, and threats is called SWOT analysis. SWOT analysis consists of an analysis of the external (opportunities and threats) and actual internal (strengths and weaknesses) environments. (Kotler, 2002). SWOT analysis is a basic, straightforward model that provides direction and serves as a basis for the development of marketing plans, strategy formulation and it is an important step in planning, and its value is often underestimated despite the simplicity in creation.

According to Kotler (2002), by analyzing External Environment it should be considered to monitor key macroenvironment forces (demographic, economic, technological, political-legal, and social-cultural) and microenvironment actors (customers, competitors, distributors, and suppliers). Then, for each trend or development, the associated marketing opportunities and threats have to be identified. A marketing opportunity is an area of a buyer's need in which a company can perform profitably. Opportunities can be classified according to their attractiveness and their success probability. It is important that strengths do not only match the key success requirements for operating in the target market, but also exceed those of the competitors'. An environmental threat is a challenge posed by an unfavorable external trend or development that would lead, in the absence of defensive marketing action, to deterioration in sales or profit. Threats should be classified according to seriousness and probability of occurrence.

According the same author, Internal Environment Analysis is to discern attractive opportunities and to have the competencies to succeed in these opportunities. Thus, it concerns internal strengths and weaknesses in marketing, financial, manufacturing, and organizational competencies. All weaknesses do not have to be corrected, nor should all of its strengths be goaled. It is important to assess relationships as part of the internal environmental audit.

Stacey (1993) describes SWOT analysis as “a list of an organization's strengths and weaknesses as indicated by an analysis of its resources and capabilities, plus a list of the threats and opportunities that an analysis of its environment ideates. Strategic logic obviously requires that the future pattern of actions to be taken should match strengths with opportunities, ward off threats, and seek to overcome weaknesses” (pg.52).

As a framework, SWOT analysis is highly commended for its simplicity and value in focusing attention on key issues which affect objects’ development and growth. It therefore has the potential to become a significant tool in identifying the factors which are most likely to influence a organizations’ strategy and success. (Pickton, Wright, 1998) SWOT analysis may be used in any decision-making situation when a desired end-state (objective) has been defined.

The purpose of the SWOT analysis is to highlight the main opportunities and threats, and to simultaneously identify the key aspects of system ability to ensure power and mark shortcomings in dealing with the changes in surroundings. The results of such a situational analysis are the basis for the formulation of the development strategy for product or a business (Novković, 2003).

Figure 4.1.: SWOT analysis matrix

Positive	Internal environment		Negative or potentially negative
	Strengths	Weaknesses	
	Opportunities	Threats	
	External environment		

In this thesis SWOT analysis was used firstly to identify the key aspects of system ability to ensure power and mark shortcomings in dealing with the changes in a surroundings, which are characterized by agriculture in Republic of Serbia, and secondly to identify current position of two products: Futog cabbage and Petrovac sausage.

For analysis of current position of two products - Futog cabbage and Petrovac sausage, we identified advantages and disadvantages of producers of these products from different aspects, such as: the way of the production, traditional knowledge, mechanization and technology level, scale of

production, land resources, costs, supply chain, logistics, and social relations. The same aspects were used for identification of opportunities and threats. Producers of the products refer on individuals and organizations (cooperative and association) that produce Futog cabbage and Petrovac sausage. Analysis was done for both products separately, on the basis of data collected from interviews with producers.

As the SWOT analysis is aimed to facilitate the understanding of the objectives and to improve the strategy, and also to understand the priorities between alternative actions in the achievement of objectives, in the thesis, we wanted to provide clear Figure of current position of two products, in order to be able to develop future strategies at market positioning. On the basis of SWOT analysis, producers of both products can develop their competitive advantages, through a detailed analysis of the present situation and the future expectations, and they can have better possibilities of achieving higher position in the markets.

4.5. Technique and data collection from consumers

In order to collect data from the consumers, the decision was made to use the survey technique, as surveys are perhaps the most common method of primary data collection (Curtis, 2008). Common modes of research communication include interviews conducted face-to-face, by mail, by telephone, by email, or over the Internet. (Smith and Albaum, 2012). Interviews can be placed on a continuum of structure, from “unstructured” to highly “structured” (Harrell, Bradley, 2009). As the choice of which survey method to use depends on many factors, including the number of respondents the surveyor desires, the time frame in which the data must be collected, the characteristics of the population to be surveyed, and, the budget, in this research on-line questionnaire and face to face questionnaire were used.

Advantages that characterize the use of the Internet in survey research are: i) the possibility to reach a huge population at a relatively low cost, ii) the possibility to minimize the intrusiveness of the interviewer and his or her instruments, iii) some software allows the surveyor to ensure that respondents have to answer all the questions, iv) they may be completed faster than mail surveys, and v) results can be analysed immediately. Disadvantages to take into account when using the Internet for data collection are: i) the quality of the samples, verifying the eligibility of the respondents, ii) the contexts in which questionnaires are completed, iii) population of interest must have Internet access and contacting the population of interest may be more difficult than with other methods, iv) surveyor must have some Internet skills, v) possibility not to be completed, or that

some information are not given (Lavrakas, 2008, Curtis, 2008). When taking disadvantages of the internet surveys into consideration, face to face surveys have some advantages, such as they can be an effective way to get surveys completed, and a very specific population can be targeted. On the negative side, face to face interviews are costly to conduct, and some individuals may be put off by being approached for a survey or may not be willing to reveal some information about themselves to a stranger (Curtis, 2008).

“The questionnaire is the main instrument for collecting data in survey research” (Lavrakas, 2008). “A questionnaire is a formalized set of questions for obtaining information from respondents” (Malhotra, 2004 pg 176). The objective of the questionnaire is to translate the researcher’s information needs into a set of specific questions that respondents are willing and able to answer. It is the main mean of collecting quantitative primary data. It enables quantitative data to be collected in a standardized way so that the data are internally consistent and coherent for analysis and ensures standardization and comparability of the data across interviewers, increases speed and accuracy of recording, and facilitates data processing (Malhotra, 2004).

4.5.1. Design of consumer questionnaire

Questionnaire creation has been done in accordance to literature. In the questionnaire construction, the information needed are specified, so that questions are asked in a clear way for respondent, the language used and the context of the questions is familiar to the respondents, as one questionnaire is made in Serbian, other in Italian language, simple, ordinary words that match the vocabulary level of the respondent are used, as well as words with only one meaning, for information of a personal or highly sensitive nature could be difficult to obtain from respondents. Examples of sensitive topics, such as money, family life, could make the respondents embarrassed to answer, because accurate responses may threaten their prestige or self-image. In order to increase the likelihood of obtaining sensitive information, these topics are placed at the end of the questionnaire.

Both questionnaires are composed of three main parts: the cover letter (or introduction), the instructions, and the main body. At the end, they are finished thanks to the respondents and their valuable collaboration.

Generally, in the questionnaires structured questions were used, such as multiple-choice questions or scales. In multiple-choice questions, choices of answers are provided, and respondents are asked to select one or more of the alternatives given. Likert scale was used, as one of the most widely used itemized scales. “The Likert scale is a special type of the more general class of summated rating scales, constructed from multiple ordered-category rating items “(Lavrakas, 2008, pg 429). As Likert response sets may include four or more points, though five categories are traditional, in the questionnaire we used five categories. The end-points of a Likert scale are typically “strongly disagree” and “strongly agree.” In questionnaire typical wording labels for the five categories were used, for being neutral, as well as, both soft and strong opinions *Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree*. Five categories were chosen for frequencies of actions: *never, rarely, sometimes, often, and very frequently*. The respondents are asked to indicate their degree of agreement, by choosing one of five response categories.

4.5.1.1. Questionnaire for Serbian consumers

The scheme proposed is an attempt to conceptualize the main objects and aims of the research with special reference to the part of the field work focused on opportunities in Serbian markets for the two Serbian typical products on which the thesis is focused. Questionnaire was provided in Serbian language. Copies of survey both in Serbian, and translation in English language can be find in appendix at the end of the thesis.

Scheme 4.1. presents the logic that was followed while questionnaire was designed. The first box in the scheme represents/describes the object of the research, highlighting its main features with a special focus on what we consider important in the light of the research aims. Questionnaire consists of seven parts.

Short description of the aspects that are explored is below:

1. Consumers attitude towards specific product item: By these questions the possibility to get information if respondents like and eat acid cabbage/smoked sausages and reasons why they do or not is gained.
2. Consumers attitude about labelling, food quality: By some questions information about consumers habits regarding importance of labels while purchasing food is gained. Also information how much importance persons give to food quality is got. It was assumed that

consumers preferences for quality would impact on their interest in buying and paying higher price for PDO products;

3. Consumers knowledge and trust toward PDO/PGI scheme: As PDO/PGI scheme is new for Serbian consumers, the level of their awareness of the scheme is obtained, as well as its' role and value. The main idea of these questions was that persons, who have knowledge about the scheme and have already bought some of PDO products, could show higher interest for two PDO products that were chosen;

4. Consumers interest and attitude regarding typical products: these group of questions gave information about consumers valorization, interests, opinions towards typical food products. Interests about typical products can influenced on buying behavior regarding Futog cabbage and Petrovac sausage;

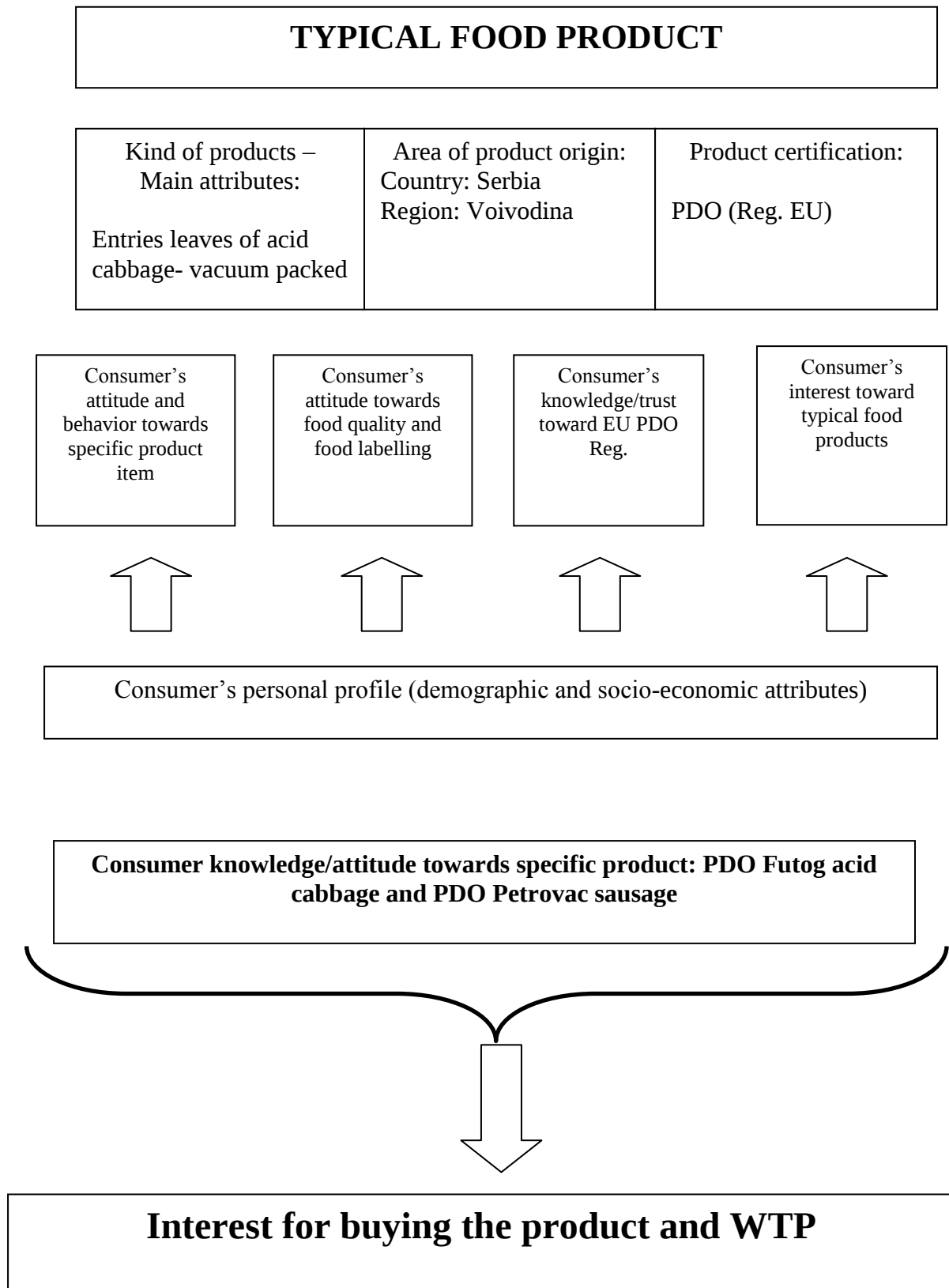
5. Consumers knowledge about Futog cabbage, and attitudes towards it, interest for buying the product and willingness to pay for it: By these questions it was possible to see whether consumers recognize the name of Futog cabbage, have they eaten it, and how often, and regarding to their knowledge, taste and experience, whether they would buy Futog cabbage, and whether they would pay any higher price for it, and also if they would, how much, in respect to other similar products, it could be;

6. Consumers knowledge about Petrovac sausage, and attitudes towards it, interest for buying the product and willingness to pay for it: This group of questions provided information about level of consumers knowledge about Petrovac sausage, whether they have eaten it, and how often, and regarding their knowledge, taste and experience whether they would buy Futog cabbage, and whether they would pay any higher price for it, and also if they would, how much would they pay, in respect to other similar products;

7. Consumer's personal profile (demographic and socio-economic attributes such as gender, age, education level, place of origin, and place of living, income): consumers socio-economic profile influence on all previously mentioned questions, on their interests, awareness, willingness to buy and to pay, and according to that it influence also on interest for Futog cabbage and Petrovac sausage. Besides that, respondent's personal data can help in defining market targets/segmentation in further steps (in the draw of the conceptual scheme 4.1. - the arrows indicate the search of a relationship).

As it is shown on the scheme 4.1. all these aspects (groups of questions in questionnaire) explained before, influence on consumers interest for buying Futog cabbage and/or Petrovac sausage, and willingness to pay more for them.

Figure 4.2.: Questionnaire for Serbian consumers



4.5.1.2. Questionnaire for Italian consumers

Questionnaire for Italian consumers differs from questionnaire used for Serbian market. There are several reasons for it. Firstly, cross-cultural differences between Serbian and Italian consumers exist, in terms of interests, habits, diet habits, culture and buying power. Secondly, as two Serbian products are not familiar on Italian market, there is a short explanation in the questionnaire. The scheme proposed is an attempt to conceptualize the main objects and aims of the research with special reference to the part of the field work focused on opportunities in new European markets for the two typical Serbian products on which the thesis is focused. Questionnaire was provided in Italian language. Copies of survey both in Italian, and translation in English language can be find in appendix.

The scheme 4.2. explains logic that was followed for the design of the questionnaire. The first box in the scheme number 4.2. describes the object of the research, highlighting its main features, with a special focus on what we consider important in terms of the research aims, while having in mind the new market target. This brief description presented in the scheme helped in defining the main area to be explored with surveys, which are consumer's thoughts, attitude, knowledge, and inclinations towards the main features that contribute to the conceptualization of the product. The questionnaire is divided into six distinct parts. Hereafter a short description of the aspects to be explored within each area is provided:

1) Consumer's attitude, interest and behavior towards typical/new products. Questions are designed in order to see consumers interest on typical product and ethnic food and attitude towards trying new foods. This section has a purpose to give information about respondents, such as whether they go to ethnic restaurants, if they like try/buy local food when traveling, if they go to fairs - farmers' markets-product tasting. It was a presumption that consumers who have higher level of interest for typical products, those who eat in ethnic restaurants more often, and those who like to try new food, have interest in attending food markets and fairs, could show higher level of interest for two Serbian PDO products, and willingness to try them out and pay for them.

2) Consumer's knowledge/attitude towards specific product item: By these questions possibility to get information whether respondents like and eat acid cabbage/smoked sausages and reasons why they appreciate it, was gained.

3) Consumer's knowledge/attitude/ towards east European countries and their food: In this section questions about respondents knowledge and attitude about foreign – Eastern European typical products are provided, as well as questions about their visits and associations of Eastern European countries. The idea was to get more information whether persons have visited some Eastern European countries and tried their typical food, in order to have some previous knowledge of these cultures. According to the literature success in international market is predicted on sound knowledge of national culture, consumers' perceptions and behavior that influence consumer decision making and impact acceptance of products. (Hyllegard et al., 2005). It was supposed that if persons have been in these countries, and tried out their food, they could show some positive associations, perceptions and interests for purchasing the two products from Serbia. In the questionnaire, consumers were also asked to write associations for some Eastern European countries, as attitude theory explains how countries are seen in the mind of the consumers, what beliefs and emotions towards a country they have, how this information affects their reactions towards a country (Roth and Diamantopoulos, 2009), and thus according to products.

4) Consumer's knowledge and trust toward EU PDO Reg.: This group of questions was made in order to get information about level of awareness and trust into PDO scheme. It was supposed that high level of awareness and trust would influence consumers' interest for foreign PDO products.

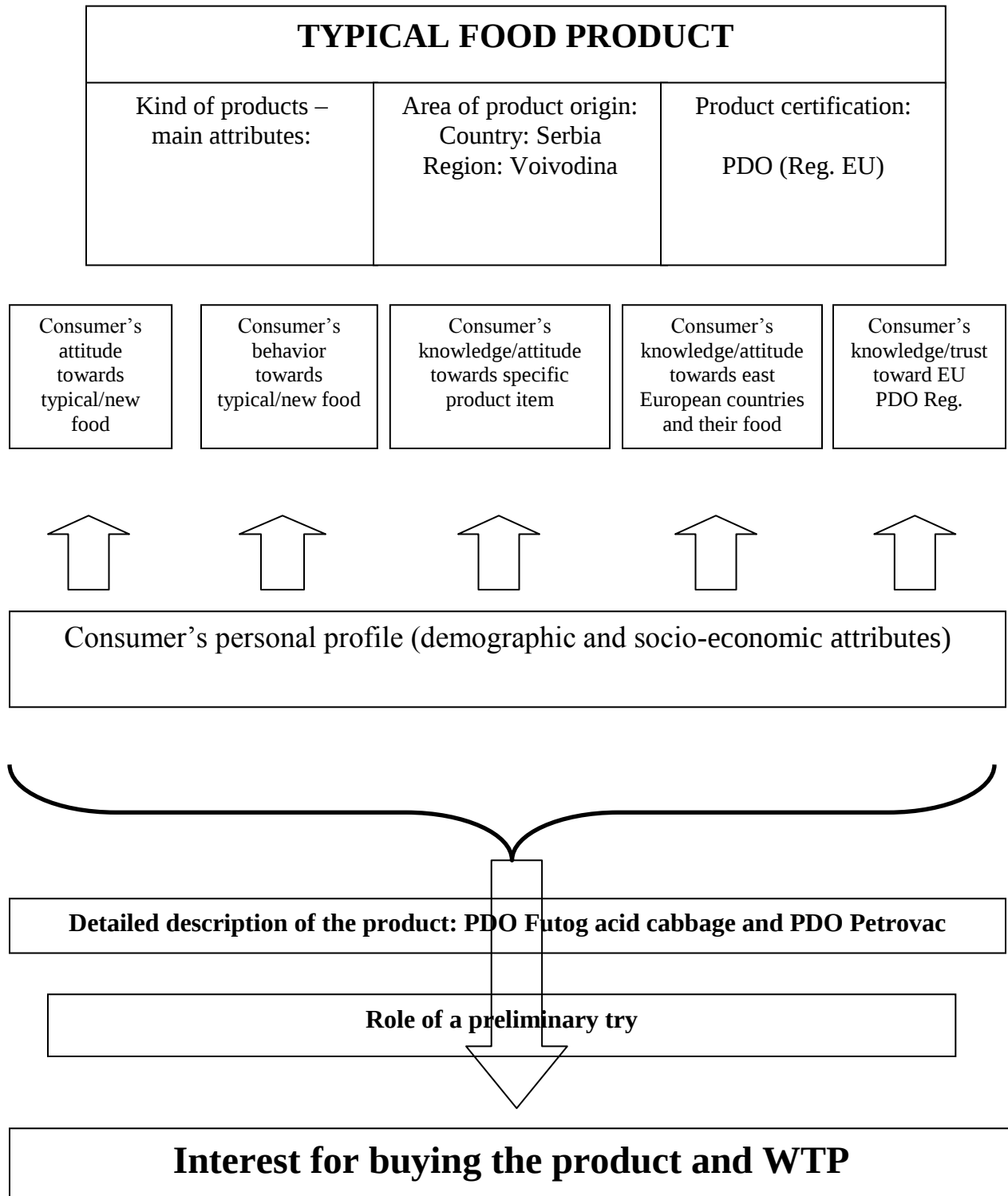
5) Two PDO Serbian products – Futog cabbage and Petrovac sausage, explanations and interest for buying the product and willingness to pay for it: As two products are not known on Italian market a short description of products, along with photos, was provided. It was a presumption that interest and willingness to pay for them is interest to try them out, as they are new, and respondents have never eaten them before.

All the information and findings that have been classified in the above mentioned 5 areas correlate to Consumer's demographic and socio-economic profile. More specifically we assume that consumer's profile may determine its attitude and behavior towards the product under study, so it is worth looking for and test the presence of statistical relationships. Furthermore, to collect respondent's personal data can help in defining market targets/segmentation in further steps (in the drawing of the conceptual scheme - the arrows indicate the search of a relationship).

6) Consumer's personal profile (demographic and socio-economic attributes, such as gender, age, education level, place of origin, and place of living): socio-economic profile of the consumer influence on consumers' attitudes (Anic, 2010, from Chaney and Gamble, 2008). These characteristics have influence on all previously described groups of questions (on the interests and behavior regarding typical food, awareness about regulation, and interests towards other countries/food). According to that it also influences on interest for Futog cabbage and Petrovac sausage and willingness to try them out and to pay for them. Besides that, respondent's personal data can help in defining market targets/segmentation in further steps (in the drawing of the conceptual scheme - the arrows indicate the search of a relationship).

The scheme shows that all aspects that were explained have influence on interest for buying, one or both Serbian PDO products, and also on the level of the price that is consumer willing to pay for the product.

Figure 4.3. : Questionnaire for Italian consumers



Before administering questionnaires to the sample of respondents, several pretests (pilot tests) were carried out, in order to verify that they are working properly.

4.5.2. Data collection

For creating surveys it was decided to use online survey site Survey Monkey (www.surveymonkey.com). Decision to use this site was because it provides:

- services to host and analyse surveys,
- services to contact respondents via email,
- possibility to print survey and to collect data by face to face interviews,
- possibility to add manually face to face collected data, and
- user-friendly interface.

First one, survey for Serbian consumers, was conducted in Serbia, in period from end of July to October 2012. The same questionnaire was provided online via e-mails and Facebook, and also by personal interviews in the marketplace. Online questionnaire was provided to many respondents, no matter which part of Serbia they live in. Personal interviews were conducted at the entrance in two local supermarkets and at three big markets in Novi Sad, Serbia. It was decided to conduct personal interviews because the opinion was that people, who are buying food for the family in supermarkets, could be more reliable part of the sample, as they are making decisions what to buy or not, having their own reasons. However, the fact that when people shop they might not have sufficient time or patience to participate in a survey was taken into consideration. The time period in the day for administering the questionnaire was chosen to be out of rush hours due to the importance assigned to respondents not being in a hurry. It was in different parts of the days, sometimes early in the morning, at markets, and sometimes in the afternoon or evening in supermarkets. This was specifically in consideration to the respondents chosen at the entrance of the two supermarkets, so that they would be less in a hurry and more obliging when answering the questions.

In Italy, an online questionnaire was conducted, started from beginning of September 2012 to November 2012. It was conducted via e-mail contacts and Facebook. In order to do similar research as it was done in Serbia, the decision was to do face to face personal interviews in Italy as well. In period from September, 15th, to October, 15th, 2012, personal interviews with potential Italian consumers, in Italy, were also done. Questionnaires were conducted in area of city of Viterbo. Respondents were interviewed in front of the two big supermarkets and also on the small market in the center of the city. In the same way as in Serbia, personal surveys were done in different days and different hours, but the majority of them were taken during weekend, especially Saturday, when majority of people were going to do shopping for their households. At the market in the centre of the city, as it was a kind of artisan market, and food market, surveys were conducted in the afternoon, when most of the people went out for a walk.

Collected data were analysed for all samples, both for Italy and Serbia, by calculating frequencies, in order to have explanation of the samples.

It should be mentioned that before starting cluster analysis variables were chosen. Variables are questions from the questionnaire. Data got from questionnaires were transformed into numerical values from 1 to 5. As questionnaire was prepared in order to make cluster analysis, responses were logically transformed into values. For the Likert scale questions, where responses were from 1 to 5, in order to give opinion, and level of agreement, where 1 was I do not agree at all and 5 I totally agree – the same values were used for cluster analysis. For questions where respondents should have responded have they ever done something, never got value 1; rarely (or once) – 2; sometimes (or several times) – 3; often - 4; and frequently – 5. For statements regarding willingness to pay - if respondent is not willing to pay any higher price – it was assigned value 1; if he is willing to pay 5% more -2; 10% - value 3; if the respondent is willing to pay 20% more (in questionnaire for Serbia) or 15% more (in questionnaire for Italy) – value 4; and if the respondent is willing to pay 30% more (in questionnaire for Serbia) or 20% more (in questionnaire for Italy) – value 5.

Demographical and socio-economic variables were not taken into cluster analysis process. The decision not to do cluster analysis with demographic variables was made because

we wanted to have different segments of consumers on the base on their attitudes, habits and opinions regarding specific product items, typical products, new products, labelling, food quality, recognition of PDO/PGI regulation, knowledge about east European countries and their food, and interests for two products – Futog cabbage and Petrovac sausage.. We did not want to have different segments of the market on the base of their socio-economic and demographic characteristics. Demographic and socio-economic variables were used in order to give more complete profile of the clusters.

It has to be mentioned that in this cluster analysis for Italian sample, dummy variables were used. Dummy variables Indicator variables (also known as Indicator variables) are used when we wish to incorporate a categorical explanatory variable into our analysis. They are just variables that can take on the values 0 or 1, where a 1 indicates that a subject possesses a characteristic or is a member of an indicated group, while a 0 indicates the converse.

Two dummy variables were created. Dummies indicate if something is present or not, indicated by the values 1 (present) or 0 (not present). Before starting cluster analysis some of the variables were merged into two dummy variables, called d1 and d2. Into dummy variable d1, the following variables were merged: I ate Prague ham (typical ham from Check Republic); I ate Szegedi salami (typical Hungarian salami); I ate Futog cabbage (typical acid cabbage from Serbia); I ate Petrovac sausage (typical dried sausage from Serbia); I drunk Slivovitz (typical alcoholic drink from Balkans). Into dummy variable d2, the following variables were merged: I have been in Check Republic; I have been in Hungary; I have been in Bulgaria; I have been in Romania; I have been in Croatia; I have been in Serbia.

As those variables were in range from 1 to 5, where 1 is total disagreement, or in this case where one have never been in some of the offered countries, or have never tried some of the food, and 5 means that they go in those countries or eat that food often, dummy were used in a following way. If it is the case that one has never been in some of the countries mentioned in survey, the variable takes the value 0, and if it is the case that one has been in any of those countries - 1. The same is for the food offered in the survey. If it is the case that one has never tried neither of that food, variable d1 takes value 0, if they have tried any, the variable takes

value 1. For these variables the frequencies are calculated and presented. For calculating frequencies, if it is the case that one has never tried any of the food products, or have never been in any of the countries, it takes value 1; if they have tried any of the food offered or have been in one of the countries, it takes the value 2, etc.

4.6. Analysis of the results - Cluster Analysis

4.6.1. Introduction

This chapter deals with the description of the methodologies employed under this research, in order to analyse and present data collected from surveys. As a statistical method for data analysis and interpretation, a cluster analysis was used.

Cluster analysis is the multivariate statistical method of partitioning a sample, defined over several variables into homogeneous groups. Cluster analysis is a major technique frequently used in social sciences for organizing large amount of information into manageable and meaningful piles. It is a so-called data reduction tool that creates groups, and eventually subgroups, that are more manageable than individual detailed data. It examines the full complement of inter-relationships between variables. In cluster analysis, there is no need of prior knowledge (nor hypothesis) about which elements belong to which clusters. The grouping or clusters are defined in subsequent stages, through the analysis of the data (Burns, Burns, 2008). The basic criteria on which the groups are built is the (1) minimization of the variability within clusters and (2) maximization of variability between clusters. In other words, this is a class of statistical multivariate techniques used to classify cases into groups that are relatively homogeneous within themselves and heterogeneous between each other, on the basis of a set of variables subjectively defined by the researcher. These groups are called clusters (Mooi, Sarstedt, 2011).

Decision for choosing cluster analysis was made because we were interested to find out which type of consumers could be an interesting market target for the two products, and to trace their profile, associate as a whole set of characteristics. Market segmentation or consumer profiling strategies, with cluster analysis as statistical procedure, have been often used in

agribusiness marketing analyses of such products as organic produce and locally produced foods and similar products (Evans, 2007). It has to be said that two samples, Italian and Serbian, were treated separately.

In a present research, both the hierarchical and the non-hierarchical (k-means) techniques were used at different stages, as well as two step clustering method. As a first step, in order to determine how many natural groups exist in the sample, hierarchical cluster analysis was done. Looking at a dendrogram was helpful, in order to display the distance level at which there was a combination of objects and clusters. As a second step, in order to form the clusters actually, the k-means was used, a non hierarchical clustering procedure. In order to control results that are considering cluster numbers, two-step cluster analysis was also done. All analysis was done in statistical software package - SPSS program, version 17.0. Once, clusters are formed, they can be interpreted, in terms of the variables used in building them. In the research, as a result of the cluster analysis, it was possible to identify groups of consumers according to their preferences, as consumers with similar behavior characteristics are clustered.

4.6.2. Purpose of cluster analysis

Cluster analysis is a convenient method for identifying homogenous groups of objects called clusters. Objects (or cases, observations) in a specific cluster share many characteristics, and are very dissimilar to objects not belonging to that cluster (Mooi , Sarstedt 2011, pg 238). Items in each cluster are similar in some ways to each other and dissimilar to those in other clusters.

Cluster analysis is thus a tool of discovery revealing associations and structure in data which, though not previously evident, are sensible and useful when discovered. Importantly, it also enables new cases to be assigned to classes for identification and diagnostic purposes; or find exemplars to represent classes.

For example in marketing research and business applications, cluster analysis is a useful tool that enables to trace a customer “type” that can represent a homogeneous market segment.

Identifying the particular needs in that market allows products to be designed with greater precision and direct appeal within the segment.

Cluster analysis makes no distinction between dependent and independent variables. The entire set of interdependent relationships is examined. Cluster analysis reduces the number of observations or cases by grouping them into a smaller set of clusters (Burns, Burns, 2008).

4.6.3. The technique of cluster analysis

Because usually the number of groups or clusters that will emerge in the sample is not known and because an optimum solution is needed, a two-stage sequence of analysis was done as follows:

First, a hierarchical cluster analysis was carried out, using Ward's method, applying squared Euclidean Distance as the distance (or similarity) measure. This helped to determine the number of clusters we should work with. Second, non-hierarchical, k-means, cluster analysis was carried out, with number of clusters defined after hierarchical cluster analysis. At the end, two step cluster analysis was conducted, in order to check the previous results (number of clusters).

As the main aim of cluster analysis is to form groups (clusters) in such a way that two objects from the same cluster are more similar than two objects from different clusters (Rezanková, 2009). Respondents from surveys were considered as the objects. The similarity was investigated on the basis of variables.

4.6.3.1. Distance measures

In hierarchical cluster analysis there is a need to have some way of measuring the distance between observations. Distance can be measured in a variety of ways. As in this research Squared Euclidean distance was used, it will be explained.

Squared Euclidean distance: The most straightforward and generally accepted way of computing distances between objects in a multi-dimensional space is to compute Euclidean distances, an extension of Pythagoras' theorem. If there is two- or three-dimensional space, this measure is the actual geometric distance between objects in the space (i.e. as if measured with a ruler). The squared Euclidean distance is used more often than the simple Euclidean distance in order to place progressively greater weight on objects that are further apart. (Burns, Burns, 2008, pg. 557)

The distance measures can be extended to more than two variables. For example, the Euclidean distance between an observation $(X_{1i}; X_{2i}; \dots; X_{ki})$ and another $(X_{1j}; X_{2j}; \dots; X_{kj})$ is

$$D(i, j) = \sqrt{(x_{1i} - x_{1j})^2 + (x_{2i} - x_{2j})^2 + \dots + (x_{ki} - x_{kj})^2}$$

Having selected how the distance was measured, it was necessary to choose the clustering algorithm, i.e. the rules that govern between which points' distances are measured to determine cluster membership. As there are many methods available, the criteria used differ, and hence different classifications may be obtained for the same data. Although cluster analysis may provide an objective method for the clustering of cases, there can be subjectivity in the choice of method. SPSS provides five clustering algorithms, the most commonly used one being Ward's method, and it was used.

Ward's method: This method is distinct from other methods because it uses an analysis of variance approach to evaluate the distances between clusters. In general, this method is very efficient. Ward method divides the respondents into cluster, based on their homogeneity. The clusters are built so that the heterogeneity of the group should be as small as possible (Backhaus et al., 2000). Cluster membership is assessed by calculating the total sum of squared deviations from the mean of the cluster. The criterion for fusion is that it should produce the smallest possible increase in the error sum of squares (Burns, Burns 2008, www.statsoft.com).

Ward's method says that the distance between two clusters, A and B, is how much the sum of squares will increase when we merge them (Tibshirani, 2009, pg3).

$$\Delta(A, B) = \sum_{i \in A \cup B} \|\vec{x}_i - \vec{m}_{A \cup B}\|^2 - \sum_{i \in A} \|\vec{x}_i - \vec{m}_A\|^2 - \sum_{i \in B} \|\vec{x}_i - \vec{m}_B\|^2 = \frac{n_A n_B}{n_A + n_B} \|\vec{m}_A - \vec{m}_B\|^2$$

Here $\vec{m}_j$ is the center of cluster j , and n_j is the number of points in it Δ is called the merging cost of combining the clusters A and B .

With hierarchical clustering, the sum of squares starts out at zero (because every point is in its own cluster) and then grows as we merge clusters. Ward's method keeps this growth as small as possible (Tibshirani, 2009).

4.6.3.2. Hierarchical cluster analysis

Hierarchical cluster analysis is the major statistical method for finding relatively homogeneous clusters of cases based on measured characteristics.

Methods of hierarchical cluster analysis can be agglomerative (step-by-step clustering of objects and groups to larger groups) or divisive (step-by-step splitting of the whole set of objects into the smaller subsets and individual objects) (Rezanková, 2009). Methods of hierarchical cluster analysis are based on the proximity matrix. This matrix is symmetric with zero on the diagonal. The values of the diagonal express dissimilarities among the corresponding pairs of objects, variables or categories (Rezanková, 2009).

As there are two approaches to hierarchical clustering, one that can go “from the bottom up”, grouping small clusters into larger ones, or the other “from the top down”, splitting big clusters into small ones, called agglomerative and divisive clustering, respectively (Tibshirani, 2009), short description of both will be provided. According to the literature, agglomerative methods are used more often than divisive methods (Cornish, 2007).

The **Hierarchical Agglomerative Clustering** method begins with each instance as a separate group. These groups are combined until there is only one group remaining. (Zhao, Qi, 2010). It starts with each case as a separate cluster, i.e. there are as many clusters as cases, and it

then combines the clusters sequentially, reducing the number of clusters at each step, until only one cluster is left. The clustering method uses the dissimilarities or distances between objects when forming the clusters. The goal of the clustering algorithm is to join objects together into successively larger clusters, using some measures of similarity or distance. As a result, more and more objects are linked together, and amalgamate larger and larger clusters of increasingly dissimilar elements. Finally, in the last step, all objects are joined together as one cluster. In these plots, the horizontal axis denotes the fusion or linkage distance. For each node in the graph (where a new cluster is formed) the criterion distance at which the respective elements were linked together into a new single cluster can be read off (Burns, Burns, 2008).

Divisive Hierarchical clustering constructs hierarchy in diverse order from Agglomerative clustering. Initially, there is one large cluster that consists of n objects. At each subsequent step, the largest available cluster is split into two clusters until finally all clusters, comprise of single objects. Thus, the hierarchy is built in $n-1$ steps.

Within hierarchical agglomerative approach, that was used in research, to cluster analysis there are a number of deferent methods used to determine which clusters should be joined at each stage. The main methods are following: i) the nearest neighbour method (single linkage method): in this method the distance between two clusters is defined as the distance between the two closest members, or neighbours. This method is relatively simple but is often criticised because it doesn't take into account a cluster structure and can result in a problem called chaining, whereby clusters end up being long and straggly; ii) Furthest neighbour method (complete linkage method): The distance between two clusters is defined to be the maximum distance between members, which means the distance between the two subjects that are furthest apart. This method tends to produce compact clusters of similar size but, as for the nearest neighbour method, does not take account of cluster structure. It is also quite sensitive to outliers; iii) Average linkage method: The distance between two clusters is calculated as the average distance between all pairs of subjects in the two clusters. This is considered to be a fairly robust method; iv) Centroid method: The centroid (mean value for each variable) of each cluster is calculated and the distance between centroids is used. Clusters whose centroids are closest together are merged. This is considered also as robust method; v) Ward's method: In this method all possible pairs of

clusters are combined and the sum of the squared distances within each cluster is calculated. This is then summed over all clusters. The combination that gives the lowest sum of squares is chosen. This method tends to produce clusters of approximately equal size, which is not necessarily desirable. It is also quite sensitive to outliers. Despite this, it is one of the most popular methods (Cornish, 2007).

4.6.3.3. Non-hierarchical cluster analysis

Another important group of cluster analysis procedures are partitioning methods. Non hierarchical cluster analysis is very different from the hierarchical clustering and Ward method, which are applied when there is no prior knowledge of how many clusters there may be or what they are characterized by. K-means clustering is used when hypothesis concerning the approximately number of clusters in cases or variables already exists. Hierarchical clustering requires a distance or similarity matrix between all pairs of cases. K-means clustering is a clustering method that doesn't require computation of all possible distances. It differs from hierarchical clustering in several ways. It is not possible to get solutions for a range of cluster numbers, unless rerun the analysis for each different number of clusters. The algorithm repeatedly reassigns cases to clusters, so the same case can move from cluster to cluster during the analysis. In agglomerative hierarchical clustering, on the other hand, cases are added only to existing clusters. They're forever captive in their cluster, with a widening circle of neighbors. In general, the k-means method will produce the exact k different clusters demanded of greatest possible distinction (Burns, 2008).

This method of cluster analysis involves deciding on a set number of clusters to extract. Objects are then moved around between clusters so as to make objects within a cluster as similar as possible and objects between clusters as different as possible. (Anglim, 2007). Object of clustering belongs to group which has nearest center (mean) (Kovačević, 1994). The objects are successively reassigned to other clusters to minimize the within-cluster variation, which is basically the (squared) distance from each observation to the center of the associated cluster. If the reallocation of an object to another cluster decreases the within-cluster variation, this object is reassigned to that cluster (Mooi, Sarstedt 2011).

The algorithm is called k-means, where k is the number of clusters wanted; since a case is assigned to the cluster for which its distance to the cluster mean is the smallest. The action in the algorithm centers on finding the k-means. This algorithm aims at minimizing an objective function, in this case a squared error function. The objective function

$$J = \sum_{j=1}^k \sum_{i=1}^n \|x_i^{(j)} - c_j\|^2$$

where $\|x_i^{(j)} - c_j\|^2$ is a chosen distance measure between a data point $x_i^{(j)}$ and the cluster centre c_j . This is an indicator of the distance of the n data points from their respective cluster centres.

The first step in k-means clustering is finding the initial k centers. This is done iteratively. It starts with an initial set of centers and then modifies them until the change between the two iterations is small enough. After the initial cluster centers have been selected, each case was assigned to the closest cluster, based on its distance from the cluster centers. After all of the cases have been assigned to clusters, the cluster centers are recomputed, based on all of the cases in the cluster. Case assignment is done again, using these updated cluster centers. Assigning cases and recomputing the cluster centers is done until no cluster centre changes appreciably or the maximum number of iterations was reached. After iteration stopped, all cases are assigned to clusters, based on the last set of cluster centers. After all of the cases were clustered, the cluster centres were computed one last time. Using the final cluster centres, it was possible to describe the profile of cluster.

Table 4.1.: Differences between hierarchical and non-hierarchical clustering

Hierarchical	Non-hierarchical
Do not have to assume any particular number of clusters – any desired number of clusters can be obtained by ‘cutting’ the dendrogram at the proper level	The number of clusters has to be fixed to get a solution for that number of clusters.
time complexity - can be very slow	much less demanding than computational resources
The distances at which clusters are combined can be used as criteria. This information can be obtained from the agglomeration schedule or from the dendrogram.	The ratio of total within-group variance to between-group variance can be plotted against the number of clusters.
Initial decision are more influential (one-step only).	Need to set the initial seeds (arbitrary).

4.6.3.4. Two – step clustering method

As the existing clustering algorithms have some disadvantages/weakness, in order to control whether the chosen number of clusters in analysis was optimal, two-step clustering method, that integrates hierarchical and partitioning clustering algorithm with adding attributes to cluster objects, was used. This method defines the relationships among items, and improves the weaknesses of applying single clustering algorithm (Shih et al., 2010).

The name two-step clustering is already an indication that the algorithm is based on a two-stage approach: In the first stage, the algorithm undertakes a procedure that is very similar to the k-means algorithm. Based on these results, the two-step procedure conducts a modified hierarchical agglomerative clustering procedure that combines the objects sequentially to form homogenous clusters. This is done by building a so-called cluster feature tree whose “leaves” represent distinct objects in the dataset. The procedure guides the decision of how many clusters to retain from the data by calculating measures-of-fit (Mooi, Sarstedt, 2011).

4.6.4. Practical implementation of cluster analysis in this research

As a first step, a hierarchical cluster analysis using Ward's method was done. Interpretation of the results started with an agglomeration schedule, which provides a solution for every possible number of clusters, as much as number of cases there are. Looking the changes between agglomeration coefficients, it was decided what is the optimal number of clusters. From the table with agglomeration coefficients, and changes in the coefficients it could be concluded what is the biggest change in agglomeration coefficients. The dendrogram³, as a visual representation of the distance at which clusters are combined, gave support to the agglomeration schedule to see how cases are grouped.

As a second step, in order to actually form the clusters, the *k*-means was used, a non hierarchical clustering procedure. Non hierarchical cluster analysis is a tool to assign cases to a fix number of clusters whose characteristics are not yet known, but are based on a set of specified variables. As it was seen from the table of reformed agglomeration schedule, which presents the value of the distance (or similarity) statistic used to form the cluster analysis, analysis was run with 3 clusters. In order to be sure that decision is right, the analysis with 4 and 5 clusters has also been done, and the conclusion was that any further group have resulted in excessive fragmentation of the sample.

The non-hierarchical cluster analysis procedure begins with the construction of initial cluster centres, which present the variable values of the *k*-well spaced observations. Final cluster centres are computed as the mean for each variable within each final cluster. The final cluster centres reflect the characteristics of the typical case for each cluster. Final cluster centres are presented in tables by calculated mean, standard deviation and standard error of the mean for all clusters.

The iteration history shows the progress of the clustering process at each step. In early iterations the cluster centers shifted quite a lot, and in the last iterations are minor adjustments.

³ Dendograms are presented in appendix

Convergence achieved due to no or small change in cluster centers. The maximum absolute coordinate change for any center is .000.

In order to see which variables contribute the most to the chosen cluster solution, the ANOVA table⁴ was used. To understand better which aspects characterize the different groups, crosstabulation of final cluster centers and ANOVA analysis to compare means was carried out.

The ANOVA Table (or Analysis Of Variance) table gives the following information:

1. Degrees Of Freedom
2. The Sum Of The Squares
3. The Mean Square
4. The F ratio
5. The p-value

Analysis of Variance (ANOVA) tests the hypothesis that means are all the same for various treatments applied to a system. ANOVA calculates the mean for each of the final grading groups - the Group Means; it calculates the mean for all the groups combined - the Overall Mean; then it calculates, within each group, the total deviation of each individual's score from the Group Mean - Within Group Variation; next, it calculates the deviation of each Group Mean from the Overall Mean - Between Group Variation. Finally, ANOVA produces the F statistic, which is the ratio Between Group Variation to the Within Group Variation.

If the Between Group Variation is significantly greater than the Within Group Variation, it is likely that there is a statistically significant difference between the groups.

The ANOVA F-statistic is a ratio of the Between Group Variation divided by the Within Group Variation:

$$F = \frac{BGV}{WGV} = \frac{MSG}{MSE}$$

⁴ ANOVA tables are presented in appendix

For each data value, we calculate its contribution to:

BETWEEN group variation: $(\bar{x}_i - \bar{x})^2$

WITHIN group variation: $(x_{ij} - \bar{x}_i)^2$

As SS stands for sum of squares

MSG=SSG/DFG

MSE=SSE/DFE

ANOVA table also included an F-statistic. The F-test is a test to determine the overall significance of the model, and not just of one individual coefficient. To see how F-statistic is significant it should be looked at an F-table to find our critical value, where numerator degrees of freedom are the degrees of freedom for the model and denominator degrees of freedom are the degrees of freedom for error. The null hypothesis is rejected in every case (Sig. ≤ 0.05).

References

- Anglim, J. (2007): Cluster Analysis & Factor Analysis 3, 25-711 Research Methods, available at <http://web.psych.unimelb.edu.au/jkanglim/03clusterandfactoranalysis.pdf>
- Backhaus, K., Erichson, B., Plinke, W., Weiber, R. (2000), Multivariate Analysemethoden – Eine anwendungsorientierte Einfuehrung, Springer, Berlin
- Brawijaya Professional Statistical Analysis: K-means clustering, BPSA Malang, available at <http://arifkamarbafadal.files.wordpress.com/2011/09/ebook-037-tutorial-spss-k-means-cluster-analysis.pdf>
- Burns, R., Burns, R. (2008): Business research methods and statistics using SPSS available at <http://www.uk.sagepub.com/burns/website%20material/Chapter%2023%20-%20Cluster%20Analysis.pdf>
- Cetrángolo, H., Briz, J. (2008): Wine Argentinean Export Chain: A Case Study in the UK Market, Paper prepared for presentation at the 110th EAAE Seminar ‘System Dynamics and Innovation in Food Networks’ Innsbruck-Igls, Austria, February 18-22
- Chen, Y., Zheng, G., Guo, J., Guo, X., Yao, S. (2011) :SWOT Analysis of agricultural producers in the supply-chain of Chinese agro – products, Asian Agricultural Research 3(5): 103-106
- Cornish, R. (2007): Statistics: Cluster Analysis, available at <http://mlsc.lboro.ac.uk>
- Costa, A., Lourenco – Gomes, L. (2011): Farming Systems and Global Threats: Problems and Proposals Northern Portugal Cases, Paper prepared for presentation at the EAAE 2011 Congress Change and Uncertainty Challenges for Agriculture, Food and Natural Resources August 30 to September 2, 2011, ETH Zurich, Zurich, Switzerland
- Curtis, K. (2008): Conducting Market Research Using Primary Data, WEMC FS#7-08
- Engineering statistics e-handbook (2012): NIST/SEMATECH e-Handbook of Statistical methods, available at <http://www.itl.nist.gov/div898/handbook/>
- Ferrell, O., Hartline, M., Lucas, G., Luck, D. (1998): Marketing Strategy, Orlando, FL: Dryden Press
- Grover, R., Vriens M. (2006): The Handbook of Marketing Research, SAGE Research Methods, University of Guelph

- Harrell M., Bradley M. (2009): Data Collection Methods, Semi-Structured Interviews and Focus Groups, RAND Corporation
- Ho!and, S.M. (2006): Interpretation of Dendrograms : Cluster Analysis, Department of Geology, University of Georgia, Athens
- <http://ebookbrowse.com>
- Hyllegard, K. et al. (2005) “Spanish consumers’ perceptions of US apparel specialty retailers’ products and services”, Journal of Consumer Behaviour, Vol. 4, No. 5, pg. 345-362
- Istudor, N., Pelau, C. (2011): Clusters of consumer behavior for food and near-food products in Romania, Management & Marketing Challenges for Knowledge Society, Vol. 6, No. 4, pp. 529-542
- Kaufman, L., Rousseeuw, P.J. (1990): Finding Groups in Data: An Introduction to Cluster Analysis, Wiley, New York.
- Kotler P., Armstrong G., Saunders J, Wong V. (1999): Principles of Marketing, Second European Edition, Prentice Hall Europe
- Kotler, P. (2002): Marketing Management, Millenium Edition Custom Edition for University of Phoenix, Pearson Custom Publishing
- Kovačić, J.Z. (1994): Multivarijaciona analiza, Univerzitet u Beogradu, Ekonomski Fakultet, Beograd
- Kumar, V. (2006): International Marketing Research, In: Grover R., Vriens M.: The Handbook of Marketing Research, Sage Publications, pg. 628-646
- Kumar, V., Steinbach, M., Tan, P. (2004): Introduction to Data Mining -Cluster Analysis: Basic Concepts and Algorithms, chapter 8, available at <http://www-users.cs.umn.edu>
- Lavrakas, P.J. (2008): Encyclopedia of Survey Research Methods, SAGE Publications
- Legendre, P., Legendre, L. (1998): Numerical Ecology. Elsevier: Amsterdam, p.853
- Lietz, P.(2010): Research into Questionnaire design – A Summary of the Literature, International Journal of Marketing Research vol.52 Issue 2
- Malhotra, N. (2006): Questionnaire Design and Scale Development, In: Grover R., Vriens M.: The Handbook of Marketing Research, Sage Publications, pg. 83-95
- Malhotra, N. K. (2004). Marketing research: An applied orientation (4th ed.). Upper Saddle River, NJ: Prentice Hall

- McCune, B., Grace, J.B. (2002.) : Analysis of Ecological Communities. MjM Software Design:, Gleneden Beach, Oregon, 300 p.
- Mooi, E., Sarstedt, M. (2011): A Concise Guide to Market Research, DOI 10.1007/978-3-642-12541-6_9, Springer-Verlag Berlin Heidelberg
- Novković, N. (2003): Development directions of small business in agriculture and economy of Vojvodina, Ekonomika preduzeća 3-4, Association of Economists of Serbia, Beograd, 128-132
- Pahl, N., Richter, A. (2007): SWOT Analysis - Idea, Methodology and a Practical Approach, Scholarly Research Paper, Grin Verlag, ISBN 978-3-640-30303-8
- Pickton, D., Wright, S. (1998): What's SWOT in strategic analysis?, Strat. Change vol. 7, issue 2, pg101-109,
- Rezanková, H. (2009): Cluster analysis and categorical data, Vysoká škola ekonomická v Praze, Praha
- Roth, K., Diamantopoulos, A. (2009) “Advancing the country image construct”, Journal of Business Research, Vol. 62, No. 7, pg. 726-740
- Sambamoorthi, N.: Hierarchical Cluster Analysis, available at http://www.crmportals.com/hierarchical_cluster_analysis.pdf
- Sharma, S., Kumar, A. (2006): Cluster Analysis and Factor Analysis, In Grover R., Vriens M.: The Handbook of Marketing Research, Sage Publications, pg.365
- Smith, S., Albaum, G. (2012): Basic Marketing Research: Volume 1 Handbook for Research Professionals
- Sotte, F., Chiodo, E. (2005): A SWOT Analysis of the Fischler Reform, Looking towards a new rural development policy, Paper prepared for presentation at the 11th EAAE Congress, Copenhagen, Denmark, 24-27 August
- Stacey, R. (1993): Strategic Management and Organisational Dynamics, Pitman, London
- Steinbach, M., Karypis, G., Kumar, V.: A Comparison of Document Clustering Techniques, Department of Computer Science / Army HPC Research Center, University of Minnesota, available at http://www.cs.cmu.edu/~dunja/KDDpapers/Steinbach_IR.pdf
- Tanioka, K., Yadohisu, H.: Effect of data standardization the result of k-means clustering, available at <http://ebookbrowse.com>

- Tibshirani, R. (2009) Distances between Clustering, Hierarchical Clustering 36-350, Data Mining, available at <http://www.stat.cmu.edu>
- Tryfos, P.(1998): Methods for Business Analysis and Forecasting: Text & Cases, Wiley, Chapter 15:Cluster analysis, available at <http://www.yorku.ca/ptryfos/f1500.pdf>
- Turcinek, P., Stastny, J., Motycka, A.: Usage of cluster analysis in consumer behavior research, Advances in Applied Information Science, ISBN: 978-1-61804-113-5, available at <http://www.wseas.us/e-library/conferences/2012/Istanbul/AICBE/AICBE-26.pdf>
- Wan, Y., Yan, S. (2011): SWOT Analysis of agricultural product logistic development-A case study of Shaanxi Province, Asian Agricultural Research 3(12): 32-34, 38
- www.statasoft.com
- Yi Shih, M., Jheng, J., Fu Lai, L. (2010): A Two-Step Method for Clustering Mixed Categorical and Numeric Data, Tamkang Journal of Science and Engineering, Vol. 13, No. 1, pp. 11-19
- Zhao, H., Qi, Z. (2010): Hierarchical Agglomerative Clustering with Ordering Constraints, available at <http://dsl.cs.ucdavis.edu>

5. CASE STUDIES - SUPPLY SIDE ANALYSIS

5.1. Introduction

This chapter provides brief description of two Serbian PDO products that were chosen as case studies for this research. The goal here is to give the reader synthetic information on the main features of these two newly established PDOs and to discuss the main perspectives, strengths and possible weaknesses, as well as drawbacks they may encounter in the markets. This will be done in the simple framework of a SWOT analysis.

The two products chosen for the field work are Petrovac sausage and Futog cabbage. They were chosen, among other Serbian PDO products, because they originate from the same area - Province of Vojvodina. Also, they are two different types of products – meat and vegetable, and another reason is the availability of producers to cooperate in the research. Within descriptions of the products and their special characteristics, descriptions of the region of origin are also provided. Data for description of the products are taken from the projects that were made for recognition and PDO certification of these two products. Other data, in order to describe products, places, production methods, sales, marketing and prices, were taken from statistical office site, as well as regional offices sites. Very important data are those that were taken from personal interviews and meetings with producers of both products. Most information were given by president of Association “Kulen” for Petrovac sausage, mr Jaroslav Petrovuc, and by president of Cooperative “Futoski kupus” for Futog cabbage, mr Goran Puača. Their willingness to contribute to research and availability to give some statistical data concerning production, had a large impact on the research.

In order to get more information and to understand how the new Serbian PDO scheme is adopted and functioning, interviews with Futog cabbage and Petrovac sausage producers were done. Data were taken in period from September to December, 2011. Before starting interviews, some indicators that would be important to clarify position of products and current situation production were chosen. Indicators that were identified are:

- a) Size and structure of the production (land area, number of farms, animals...)

- b) Market and distribution channels
- c) Motivations to take-up the scheme (Reasons given by firms for taking-up the scheme, incentives, barriers for using/expanding production)
- d) Economic impacts, that focuses on two subject areas, namely the costs and benefits to producers and the market of the products.
- e) Use and perception of the European symbols of PDO/PGI from the producers – in order to examine extent to which the PDO/PGI symbols are recognized and understood by the producers in Serbia (Producer's understanding of application procedure and Producer's understanding of objection procedure).
- f) Cultural events, manifestations connected with products, as well as other activities of peasants that can contribute to rural development in the future.

At the end of the descriptions of both products, the SWOT analysis is given, done for each product itself, with some main points and conclusions. This is helpful in showing current position of the products on the market, as a brief list of the critical success factors in the market, as it also rates strengths and weaknesses, as well as the main opportunities and threats in perspective.

Structure of the chapter is following: Introduction, Petrovac sausage (Place of Origin, History, characteristics and way of the production, Producers ,Production, Sales and marketing, Prices, Communication and Promotion; Cultural events and linkages with other local organizations; SWOT Analysis; Concluding Remarks); Futog cabbage (Place of origin; History, characteristics and way of the production; Producers; Production; Sales and marketing, Prices to final consumer of fresh cabbage, Prices to final consumer of acid cabbage, Communication and Promotion; Cultural events and Linkages with other local organizations; SWOT Analysis; Concluding Remarks).

5.2. Petrovac sausage

Petrovac sausage is registered in Office for Intellectual property of Serbia, as PDO, under number 44. It has been registered since 21.05.2007. The registration was given for dry sausage, with pleasant, smoky smell and piquant taste, produced in Bački Petrovac (Serbia), of the domestic white pig type “Landras”, of specific characteristics and production process.

5.2.1. Place of Origin

Bački Petrovac is a village and municipality in the South Bačka District of Vojvodina, Northern Province of Serbia. Bački Petrovac is situated 30 km north-west of Novi Sad, the capital of Province of Vojvodina. It is settled in plain area, where fertile alluvial soils dominate, and climate is continental. River Danube runs through municipality (www.backipetrovac.rs).

Bački Petrovac municipality includes four villages: Bački Petrovac, Gložan, Kulpin and Maglić. Bački Petrovac is economical, cultural and administrative center of the municipality. It is one of the smallest municipalities in Vojvodina, because it covers area of only 158 km² (www.backipetrovac.rs).

Village has a population of 6.731 inhabitants, while whole municipality of Bački Petrovac has 14.681 inhabitants. Majority of population are Slovaks and Serbs (www.rzs.gov.rs).

South Bačka region with its climatic and soil conditions is one of the most fertile parts of Serbia, was very attractive region for people to make their settlements centuries ago. The first written records about Bački Petrovac appear in the 13th century when Bački Petrovac was mentioned as a church parish belonging to Bač County. Later on, the name was changed into Petrovac. First inhabitants were Hungarians and Serbs. In the first half of the 18th century (1745) Slovaks settled here. Since that time Petrovac developed, and started to represent cultural, economic and political center of the Slovaks in this region (www.backipetrovac.rs).

As Bački Petrovac is settled in plain, fertile area, its economy is oriented mostly to agriculture and food proceeding industry. Other industries in the village are metal and chemical industry, wood proceeding industry, printing activities and clothes industry. (Technological elaborate about production and specific characteristics of Petrovac sausage)

Agricultural land covers 88, 2% of village area (www.rzs.rs). According to data in 2012, almost 40% of employed village population works in agricultural field and 30% in food proceeding industry (www.backipetrovac.rs). Agriculture, as the most important economic activity, is based on the production of field crops (corn, wheat, broom weed, sugar beet), cattle, breeding (poultry, pigs, cows, sheep) and vegetable crops (potato, onion, pepper, tomato) (Technological elaborate about production and specific characteristics of Petrovac sausage).

Geographical position of Bački Petrovac and its local climate conditions have a great influence on Petrovac sausage production process, especially on fermentation and drying. Data that are directly connected with local geographical indications, and that concern climate factors, are minimal and maximal daily temperature, average daily temperature, relative daily humidity, and amount of falls for months in period December - April, that are the most important for Petrovac sausage production. Those parameters are very important for traditional way of production of fermented and dry sausage, because temperature and air humidity cannot be controlled in household conditions. So, this process depends directly of climatic conditions. Traditional way of production that exists by generations concerns those climatic conditions and adjusts them with phases of sausage production, which will be explained in following text.

5.2.2. History, characteristics and way of the production

History of production of Petrovac sausage comes from 18th century. Because of the war between Turkey and Austro-Hungarian Kingdom, Turkey didn't export black pepper anymore. As population from south parts of Austro-Hungarian kingdom, near town Szeged, used a lot spices and black pepper in daily diet, as well as for preparing pork sausage, they suffered the consequences of the situation, and started to use red hot pepper, which was planted in this area, instead of black pepper. When in 1745 Slovak population came from this area to Bački Petrovac,

they brought red hot pepper production and use with them. From that time they started to prepare pork sausage with, beside salt, onion and carum, red hot pepper. First family from Bački Petrovac that started to prepare smoked sausage with red hot pepper was family Potomcok. As sausage prepared with red hot pepper and smoked in winter period, resisted high summer temperatures, family Potomcok, and peasants from Bački Petrovac continued to prepare sausages in the same way through generations. First written document about Petrovac sausage is from 1973, when sausage was exposed on Agricultural Fair in Vienna (Technological elaborate about production and specific characteristics of Petrovac sausage).

Households that produce Petrovac sausage nowadays preserved traditional way of sausage production, as their grandfathers did, and they produce pork and red hot pepper by themselves (Technological elaborate about production and specific characteristics of Petrovac sausage).

For production of Petrovac sausage can be used only pigs breed “Landras”, domestic white pig, 9 to 12 months old, with weight of 135-200 kg. (Technological elaborate about production and specific characteristics of Petrovac sausage)

For pigs alimentation the following ingredients can be used: maize, soybean mill, barns, alfalfa, sunflower mill, fish flour, animal yeast, animal chalk, DKF (dikaliumfosfat), animal salt and premixes. Members of cooperative usually work within the primary agricultural production frames, so majority of substances for animal feeding are produced by themselves, based on principle of good producer practice. Members buy substances that they cannot produce and that are used for pigs feeding, from certified suppliers, through cooperative.

Every household produce its own red hot pepper, and preserve its own seeds. Doing this way, after many years of red hot pepper producing on small area, with crossing many sorts, nowadays it can be told that special red hot pepper sort from Bački Petrovac exists. In laboratories it was shown that peppers from different households from Bački Petrovac have very equable quality (Technological elaborate about production and specific characteristics of Petrovac sausage).

When pepper becomes mature enough, it is harvested. Usually this job is done by women, and they also do selection during harvesting. Selection is based on division of good quality fruits from those that are damaged or of vanished color. After harvesting, fruit is divided from part of seed and stem. Part of fruit is put on a rope one after one in row, and dried. Pepper dried in that way gives special sensor quality attributes to Petrovac sausage that are intensive red color and of piquant spicy hot taste. In households, Petrovac sausage is traditionally prepared at the end of November, and in December, when outside temperatures are 0°C or below.

Parts of pigs' body from which the sausage is prepared are: hindquarter, neck, parts of stomach, solid fat part of stomach, neck and back. These parts have to be meshed, and mashed mass is put on the table 15 cm thick, than above a cut onion is put, as well as salt, red hot pepper and sugar. After that, mass should be mixed in the special way by putting parts from one side to the other. Well-mixed mass should be put in pig bowels and also in industrial (collagen) bowels. During filling bowels it is necessary to squeeze out an air. Sausages in pig bowels should be 35-45 cm long, with diameter of 40-50 mm, and in industrial bowels 50 cm with diameter of 60-65 mm. After the mass is put in bowels, sausages have to be left in horizontal position to squash and afterwards, they should be hanged for smoking. Process of smoking usually takes 10 days, 4-8 hours per day. Usually, cherry and apricot trees are used for smoking them. A tree type has an influence on color and taste of sausage. After the process of smoking is finished, sausages have to be left in dry, airy place to dry. The process is finished when sausages have optimal quality by experience of producer, which means that every producer himself decide when the sausages are dry enough to be preserved in future summer months (Technological elaborate about production and specific characteristics of Petrovac sausage).

Some main special attributes of Petrovac sausage are: Petrovac sausage in natural bowel is 30-45 cm long; and in collagen bowl it is 50cm long. Bowel should be dry, clean, non – grassy, and it should easily be taken away from sausage. Its color should be equable dark red. When it is cut, sausage should look as mosaic, with equal parts of mostly muscular fiber and less solid fat fiber. Color should be dark-red with white grass parts. Sausage should have nice, not strong smell on smoke. Taste should be good, piquant chili, but no acid.

Parameters of quality: (Technological elaborate about production and specific characteristics of Petrovac sausage)

pH_k ≥ 5,4

meat proteins' content ≥ 25

index proteolyses ≥ 15

free fat content (%) < 35

RSPVT/PM(%) < 15

Water content(%) < 15

NaCl (%) < 3,5

Anisidin number < 8

Color L* = 32 – 37

Solid (N) = 10 – 15

Nutritive quality: NaCl < 3,5

Cholesterol < 100mg/100g

Energy value: 1600-1900KJ/100g

5.2.3. Producers – agricultural cooperative “Kulen”

Agricultural Cooperative “Kulen” from Bački Petrovac is producer of Petrovac Sausage. Cooperative was established in 2005. Producers are organized in cooperative, because cooperative is way of organizing people on their own willingness in order to reach a common goal, through democratic participation, and to share risk and benefits. They decided to organize themselves in cooperative, not in association, because cooperative is legal subject and can have profit as well as contact commercial businesses, whilst association cannot (Law about cooperatives 101/2005 and 34/2006).

Cooperative is the form of organizing of physical persons (hereafter called: members of a cooperative) in which they, doing business on co-operative principles of willingness and solidarity, democratic qualities, economic participation, equitable rights of management, independences, economic, social and cultural interests. Cooperative in the legal traffic makes business in cooperatives name and for the cooperative account, on its name, and for the account of member of a cooperative, or in the name of and for the account of members of a cooperative. Cooperative in the legal traffic is responsible for its obligations with all its property. For obligations which cannot be paid with the property of Cooperative, members of a Cooperative

answer with solidarity, minimally with amount of their parts, if the contract about the foundation, in other words, co-operative rules, has not been envisaged to be responsible with bigger amounts. Cooperative rules establish the deadline, which cannot be shorter than one year, in which member of a cooperative to whom this status stops, engages in obligation of cooperative emerge for time while he has been the member of a cooperative. Cooperative can, if it is in the interest of the member of a cooperative, and if this has been established with rules, make business with non-cooperative members. Non-cooperative members do not put the realization of goals, because of which cooperatives have been established, into question.

According to Serbian Law, Agricultural cooperative can be established by at least ten farmers and other physical persons who have the property or on the other base use estate, objects or means for work in the agriculture. Agricultural cooperative “Kulen” was established by 13 founders, agricultural producers from the village. Cooperative has 26 members, and all of them produce Petrovac sausage in their own households. Members paid just one time for joining the cooperative, and that amount was 2000 Serbian Dinars, which was 25 Euros in 2005.

Members are managing the cooperative. In the management cooperative members of a cooperative have equitable rights of votes (one member of a cooperative one voice). Bodies of the cooperative are: assembly, managing board, supervisory board and manager of the cooperatives, if by this law it is not determined otherwise. President and members of the managing board, manager of the cooperative, and president and members of supervisory board are chosen on time that is determined by co-operative rules, which cannot be longer then five years, with the possibility of re-election. (Law about the cooperatives) All managing processes from the establishment have been done by mr Jaroslav Petrović. As relations between members are regulated by the law, there are no problems between them and they have good and friendly relationship.

Cooperative “Kulen” helps in organizing production in every cooperative member’s household. Apart from that, cooperative sells sausages in the name of its members, and also provides reproduction materials, petrol, and mechanization to the members.

The Cooperative also keeps strong relationship with other households which are not members of the cooperative, but produce pigs, crops or vegetables, and buys inputs that are used for Petrovac sausage production from them.

The Cooperative has a vision to make process of sausage production easier and faster, by buying machinery that will reunite all production process from all sausage producers at one place. Namely, as production process is taking place in every household separately, in several phases, because of space for smoking meat on households, the Cooperative is searching for sources and subsidies to organize production at one place. That would make production process faster, and would give possibility for Petrovac sausage production increase.

Before starting application process for PDO certificate all producers clearly understood application procedure as well as objection to the procedure. The main reason for applying for PDO certificate was willingness of producers to preserve tradition and to achieve possibility to sell sausage for higher price than before, and higher price in comparison to the other non-PDO/PGI sausage producers. As sausage exists for a long period, and many people from surrounding villages were going to buy it, producers had an idea that with gaining PDO certificate, it will become well-known and recognizable on wider market.

Agricultural cooperative “Kulen” from Bački Petrovac got incentives for starting building capacities, provided by Provincial Secretary for Agriculture, in period 2006/07. They got also subsidies for Elaborate for PDO certification creating, for applying for the PDO certificate, from Ministry of Agriculture.

During conversation, producers mentioned that according to them, the biggest problems for using and expanding PDO production is political situation, which means that government is changing often, transition period was very difficult, and there is an absence of law regulation. As it was explained in previous chapters, laws about food safety, geographical indications, organic production are very new, and exist only up to a few years. Besides, they also fear that with expansion of production tradition will be lost, because other producers can start producing different sausage with the same name.

5.2.4. Production

Production is organized within every household itself. Sizes of households are very different, from very small units, in a few cases they even are without their own land; to large ones with vast arable area for crop production. Some of the fields are property of cooperative members, some of them are rented. But one common characteristic for all of them is that they are producing sausages in the same, very traditional way and manually. As every household produces on their own, capacities to dry and preserve sausage in their own houses are not as big as in factories, and therefore the production in a household is not high. Average sausage production in households is around 500 kg. In the village there are around 10.000 pigs, but only around 50% of producers of Petrovac sausage have their own pigs. Others are bought from pig producers from the village or other surrounding villages. Pig production is simple reproduction within farm. Usually for sausage production 6-8 pigs per household are taken. Every producer has their own place for smoking meat in the house, which is small. As a consequence, production has to be divided and repeated several times. That process, because of repetition, takes usually 10 days. All production processes are done by men.

Beside pig production, producers are cultivating peppers that are used for sausage production. Besides, in the village fields, in order to respect crop rotation and to feed pigs, they are producing sorghum, wheat, industrial plants and vegetables, specially potato, onion, tomato, watermelon, melon and carrot.

The following table with the data shows average production at the level of cooperative. It can be seen that Petrovac sausage production has been increasing from year to year. It is visible that in respect of 2008, when Petrovac sausage production as PDO certified product started, the production increased for 50%. This increase is mostly because market demand for Petrovac sausage increases, which gives producers motivation to produce sausage not just for themselves as they did years before, but also for the market.

Table 5.1. : Production of Petrovac sausage

year	2008	2009	2010	2011
Amount (t)	10	12	13	15
Increase in % in respect of 2008	-	20	30	50

Source: our interviews

5.2.5. Sales and marketing

Market for Petrovac sausage is mostly domestic. Around 2/3 of Petrovac sausage production is sold in Serbia. There is also an important market for this product in some foreign countries – especially Slovakia and to a lesser extent in Germany.

Distribution is strictly conducted by direct sales: producer-consumer, or through cooperative as intermediary. Usually buyers, physical persons or firms, hotels, or restaurants, go directly to producer's households or cooperative in the village and directly buy sausage. Majority of the Petrovac sausage production, 2/3, is sold directly on producers household. It is because producers have regular buyers. Other 1/3 of sausage is sold through cooperative.

Organization of export to foreign countries is pretty complicated. There is no officially organized export. Buyers from foreign countries have to buy product in Serbia, and organize themselves in private way.

Petrovac sausage can be ordered in advance with a fix price, in production period, which is from November to January, by phone of the cooperative or through web site of the cooperative (www.kulen.rs).

5.2.5.1. Prices

Prices of Petrovac sausage during 4 years have changed significantly, from 1200 din/kg in 2008 to 1500 din/kg in 2012, which is shown in table. Considering that the average rate of currency in that period was 1 euro, which was equal to 100 Serbian Dinars, price increase was

around 100 Dinars, which is 1Euro/kg. In 2012 ratio dinar-euro was also changed, and 1 euro had value of 115 Serbian Dinars, which also changed the Petrovac sausage price for 200 dinars in respect to previous years, which is 1.74 Euro/kg. Price increase was also the consequence, as producers told, of input prices incensement . The table 5.2. shows prices of Petrovac sausage starting from 2008. It can be seen that in first years 2008 and 2009 there were no price difference, and in next years, price increased for around 8%.

In season 2011/2012 estimated costs were 1000 din/kg, which was more than previous years. Pigs did not cost more. Cost was higher because of production cost of typical red pepper, which is, as already mentioned, produced in the village. Calculation is that from 100 kg of mincemeat 70 kg of sausage can be produced. In amount of 100 kg of mincemeat 230-240 kg of alive pigs should be put. Costs for 100 kg of mincemeat are 90.000 Dinars. When costs of pepper and onion are added the estimate costs were, as it was said before, 1000 din/kg.

Forecast for 2012 is that costs of input will be drastically increased, which will have impact on final product cost. Namely, last year, price of the alive pig was between 130 and 140 Dinars per kilogram (1.3-1.4 Euro /kg). In October 2012 already price of the alive pig is between 230 and 250 Dinars per kilogram (2-2.2 Euro/kg), which means that prices increased for more than 70%. Also other costs of inputs are increased, specially red pepper, which in 2011 cost 600 din /kg (6 Euro/kg) and in October 2012 it was 1000 din/kg (8.7 Euro/kg). Those prices incensement happened due to the fact that summer of 2012 had extremely high temperatures and almost no rainy days. As a consequence, there was a low production of all crops, which made crops and vegetables prices higher, and also less food for animals. Higher prices of vegetables made alive pig prices higher.

Table 5.2.: Prices of Petrovac sausage

Year	2008	2009	2010	2011	2012
Price (din/kg)	1200	1200	1300	1300	1500
Change % (base 2008)	-	-	+8,3	+8,3	+25

Source: our interviews

Price of Petrovac sausage is around 40% higher from prices of other non-PDO/PGI sausages, which can be seen as a benefit to producers. In this table, price differences with two big industrial produces are shown, from the same, North-Bačka area (Vojvodina), not registered as PDO. It is necessary to underline that those two industries are taken as example because Carnex is one of the biggest meat industries in Serbia, with long tradition, and Matijević is well-known as meat industry with lowest prices in Serbia.

Price of Petrovac sausage in 2011 was 1300 din/kg and price of others around 800/900 din/kg. In summer 2012 price of Petrovac sausage is 1500 din/kg if ordered quantity is up to 7 kg, and 1400 din/kg if ordered quantity is more than 10 kg.

Table 5.3.: Price difference with competition

Name of the sausage (producer)	Petrovac sausage PDO	Carnex – non PDO	Higher price of Petrovac sausage - (%)	Matijevic – non PDO	Higher price of Petrovac sausage - (%)
Price (din/kg) 2011	1300	1000	30	850	53
Price (din/kg) 2012	1500	1100	36	900	67

Source: our interviews

5.2.5.2. Communication and Promotion

Usually members of the cooperative do “mouth to mouth” promotion. They believe that it is the best way of promoting Petrovac sausage with good words for quality to satisfy consumers, as they do not have the possibility to expand production and produce higher amount of their product, in case that they demand increase. Beside that, they also use Internet for promotion, site www.kulen.rs and a Facebook page. Sometimes they are guests in TV and radio shows. Cooperative also places sausage at manifestations and fairs. Manifestations where they exposed sausage, with possibility to sell it and people to try are: Festival of Kulen, Slovak traditional days, Festival of Slovak music and folklore “Tancuj, tancuj” (www.turizambackipetrovac.com).

The most popular of these manifestations is Festival of Sausage, with a popular name “Kulenijada”, which takes place on 24th and 25th of May every year in Bački Petrovac. Main goal of the manifestation is to reunite producers, buyers and other people that like sausages at one place and have role in sausage reproduction chain at the place, with specific cultural and artistic program and atmosphere.

The biggest fair where Petrovac sausage was exposed was Novi Sad Agricultural Fair, the biggest and most important agricultural fair in the region. On that fair Petrovac sausage won three golden medals for quality in 2006, 2007 and 2008.

5.2.6. Cultural events and linkages with other local organizations

Petrovac sausage production could have a strong impact on rural development. For now, it is too early to speak on great impact that Petrovac Sausage has on rural area, because less than 10 years have passed, and overall impact cannot be seen. But some positive impacts connected with diversification of rural economy are already achieved, and are mostly connected with tourism and traditional handcrafts.

With a manifestation “Festival of kulen” that as an event started in 2005, more people from surrounding villages and nearby towns have started to visit village. That had impact on other local associations that joined cooperative in promotional activities and events where they exposed Petrovac sausage.

Two local associations linked with Petrovac sausage are Tourist organization from Bački Petrovac. This local organization brings tourists from other parts of Serbia to manifestations, provide brochures of Vojvodina and Bački Petrovac, with Petrovac sausage as national specialty included. Other very important association linked with the Cooperative is Women association. Women association from Bački Petrovac usually follows Petrovac sausage producers on manifestations. They make traditional handcrafts and souvenirs, which make stands more beautiful and representative in traditional way. That can contribute diversification of economic activities in the village, in the future period, because more people are involved in activities. But

unfortunately, it was not possible to get data about income generation of Women association, as there are not official statistical data.

Beside that, in the village of Bački Petrovac there are some restaurants that have Petrovac sausage in their standard offer. Some of them are owned by some of the producers themselves, and they directly take their products from household to the restaurant. Other restaurants buy through the Cooperative, but amount and period of purchases depends on their needs. Usually they order Petrovac sausage when special events have to be organized, so there are not some regular purchases and official data for this.

5.2.7. SWOT Analysis

In this case SWOT analysis is used in order to analyze collected information about internal and external factors that have, or may have, an impact on the evolution of a product position and organization process development, also as the regional development Strategic logic requires that the future pattern of actions to be taken should match strengths with opportunities, ward off threats and seek to overcome weaknesses. Drawing up Opportunity and Threat matrices encourages an assessment of the likely probability and impact any factor may have on the organization.

In this case SWOT analysis takes the form of a matrix presenting the most important strengths, weaknesses, opportunities and threats for the product and area, examined and aiming at giving a reasonable overview of major issues in current period. It is based on interviews with producers, collected data analysis, and according to description of the product and place of origin. These issues could be taken into account when subsequently drawing up strategic plans for the future activities. The aim of the presented matrix is to be able to focus on strengths, minimize weaknesses, and take the greatest possible advantage of opportunities available.

Table 5.4.:SWOT analysis – Petrovac sausage

Strengths 1. Tradition – sausage production exists and it is preserved in the same way for more than 200 years. 2. Experience of the producers – every sausage producer has improved the process of sausage production from his father and grandfather and they are doing in the same way for years. 3. Own impute production – households produce inputs on their own, so they are sure that ingredients are good and they do not need to search the market in order to buy them. 4. Good quality and Typicality – for the quality they have certificate from Research Institute Laboratories, and they also win medals on fairs. 5. Reputation in area and even some other countries - word of mouth. 6. Good relationships between members of the cooperative. 7. Near Novi Sad – near big market. 8. Developed agricultural region – crop production for animal breeding exists; pepper production exists as well.	Weaknesses 1. Small, individual capacities for drying and preserving on all households and whole quantity cannot be produced in one time. 2. Small quantity of produced sausage - around 500 kg/household. 3. distribution channels are not developed – usually direct on farm or through cooperative, without professional and well connected traders (larger market chains). 4. Low investments in promotion activities – only internet and local manifestations. 5. Small number of households that produce pigs – just 50% of households have their own pigs, and other producers depend on them, which results with small quantity of produced pigs, and it can be limitation factor for sausage production There are no big capacities that will provide production in one place – it will be much easier and quantity of production could be higher if the production would be organized in one place. 7. Low possibility in current situation to produce more sausages – because of producers' capacities. 8. No officially organized export – difficulties to sell in a foreign country.
Opportunities 1. Higher market demand than quantity of production – market is interested in product. 2. Higher price in respect of other similar products – possibility for producers to have higher income. 3. Cultural events – ideal opportunity to do promotion of the products. 4. Tourism development – with bringing people from different places that have never eaten Petrovac sausage, possibility for sale increases. 5. Well-known in some foreign countries (Slovakia and Germany) – opportunity to find new market	Threats 9. Unstable economic situation, ratio Dinar - Euro is changing – that changes prices of inputs and it is not favorable for income, and on the other hand, purchase possibility of people decreases. 10. Pig prices vary every year – unstable price predictions and income generation. 11. Variation of cereals and animal feedings prices – makes production unstable. Low interest from Ministries and public institutions to provide incentives – as Public bodies do not have special funds in budget to help all producers. 13. Lack of own resources and public subsidies – lack of possibility to increase production and tendency to decrease. Bank credits not accessible.

5.2.8. Concluding Remarks

Although Petrovac sausage has many strong sides and potential opportunities, as old tradition, experience, good quality, many medals won on the fairs and with a possibility to expand sale, the production is still based only within small households with small capacities, and producers cannot produce bigger quantities.

In order to resolve this problem, cooperative needs to built one plant for processing meat and smoking it, in which all parts of sausage production will be able to take place for all producers (proceeding meat, smoking, drying). With building this plant production process will be simplified, as now producers in every household produce a few times smaller quantities. For building the capacity Cooperative has already made a project and they have a site where to build it. Predicted costs are 400.000 Euros. Until now, it has not been built because producers did not have that amount of money to invest and they could not find support and incentives.

As we were informed by the producers, they have already done project for this object. This object would cost around 400.000 euro, but producers as individuals, do not have this money. They need incentives, but until now they didn't find any support. Having production organized at one place will make also product control easier.

Another important point is that pig production in Serbia is instable, because of meat prices and food prices that are changing. Because of pig market situation, other households, that are not included in Petrovac sausage production, are not interested to produce pigs. As a consequence, there is a small amount of pigs, which influences Petrovac sausage production amount.

In the following table prices of alive pig meat in Serbia during period 2006-2010 are shown, according to FAO statistics. As it can be seen prices are changing every year, which gives instability to pig, and as a consequence to sausage production and those data can be seen in the following table. (www.fao.org). Data for 2011 do not exist on FAO statistics site, so they are not put and presented in the table.

Table 5.5.: Alive pig production and prices in Serbia

year	2006	2007	2008	2009	2010
pig production (stocks)	3211600	3831890	3594240	3631010	3488740
Alive pig prices (USD/t)	1166.3	1186.1	2165.9	1978.4	1405.4

Source: faostat.fao.org

Due to the small quantity of the Petrovac sausage production, market demand cannot be satisfied. Very often, there is situation that buyers want to order sausage, but Cooperative does not have it anymore. The same situation happened in November 2011, when I was in the Cooperative, in purposes of doing this research.

5.3. Futog cabbage

Futog cabbage is registered in Office for Intellectual property of Serbia, as PDO under number 50. It has been registered since 12.05.2008. The registration was given for fresh and acid cabbage, got from autochthon Futog cabbage population, with specific natural characteristics for fresh cabbage, and specific characteristics and way of production for acid cabbage. The long-duration selection was responsible for the creation of the population called “Futoški kupus” (the Futog cabbage), which was important for the fresh consumption, and for souring, as well (Office for Intellectual property of Serbia).

Fresh Futog cabbage, Futog cabbage population recognized on specific morphological characteristics, color, shape of the head, leaves overlapping, size of the root, leaf's nervature. Other important characteristic is amount of sugar that exists in fresh Futog cabbage, and that is very important for preparation of acid Futog cabbage. For acid Futog cabbage preparation quantity of NaCl is also important, as well as kalium-sorbate. Those characteristics differentiate Futog fresh and acid cabbage from other hybrid cabbages.

5.3.1. Place of origin

Geographical area where production of fresh Futog cabbage and proceeding of Futog acid cabbage is based is the municipality of village Futog. Futog village is situated in the southern Bačka, 14 km from Novi Sad, Province of Vojvodina, Serbia. Area of the village has specific characteristics of soil, climate and hydrology, which traditionally oriented village population to production of the cabbage, as a vegetable for which production there are optimal conditions. Futog is based on the middle of the Danube stream. The village covers area of 8.561 ha. Futog area outspreads on coffin terrace, alluvial plane and induction plane. Climate is medium-continental (temperatures in summer are higher than 30C and in winter below 0C), influenced by the mountain Fruška Gora and the river Danube. Average annual temperature is 11. 2 °C. Precipitation is 700 mm per year, and the highest amount of falls is in autumn and spring. Hydrology includes the river Danube, pond and the Danube-Tisa-Danube Canal. This area is very fertile part of Panonian basin, and type of soil that dominates is very fertile chernozem.

For Futog village usually there is a saying: “down is the cabbage and upstairs the sky“. But, besides production of cabbage, there is production of maize, wheat, industrial plants, and other vegetables, especially carrot and onion. Futog has a population of more than 20.000 people. Population of the village includes 25% persons under 15 years old, 66% work capable people and 10% farmers. Futog has some successful enterprises. The ones that are worth mentioning are “Aroma” factory for spices production, “Futožanka” factory for cattle food, “ASCO Vidak” factory for wire production.

5.3.2. History, characteristics and way of the production

Cabbage production in Serbia, in village Futog, was mentioned for the first time in 1578, in a Turkish document. When Turks left Futog area in 17th century, agriculture and cabbage production increased and the old fair, that was one of the biggest in Europe, was established again. On this fair numerous salesman from Turkey, Austria, Persia, Middle East and Russia, were coming. They were taking and organizing sales of Futog cabbage and

promoting its name and quality. Futog cabbage became so well-known that in 1721 Austrian kingdom army asked that Futog village gave 1283 kg of cabbage for their purposes. Also, in the following period, during 18th and 19th century, tradition of Futog cabbage production continued, and due to many salesmen that were traveling on Danube, thus taking the word of the cabbage's name all around Europe.

With long period of cabbage production in Futog village, one population, which is different with its quality characteristics from other populations of cabbages, has been formed. Because of that producers started to separate only some plants for seed, and it became Futog cabbage (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage).

Futog cabbage is a late variety, which made it convenient both for acidification and for fresh consumption. Fresh, it can be consumed during whole year as a salad, as well as for preparing different meals. It can be used even in winter, if it is stored well. But in winter it is usually used as an acid cabbage.

Leaf rose has deep green color, with in average 10 leaves per rose. The rose has half-vertical form, with flat, slightly jagging leaf periphery. Leaves are thin, easily flexible and elastic. Nervature of leaves is not strongly accepted. Diameter of rosette is in average 90.2 cm. Inside of cabbage head, there is a stalk with average length 9.4 cm.

With respect to the head height, the length of inner stalks amounts in average to 55.2%. The average height of the head is about 18.9 cm, and its average diameter is about 22.6 cm. The Futog cabbage is primarily designed for sour cabbage making, for which is convenient it's sugar content. Sugar content near the top of the head is about 3.1%; in the middle of the hear is about 3.3%, and near the root it amounts to about 3.4%. Vegetation period is between 110 and 140 days from day of nursing. Average yield is 50t/ha.

Futog cabbage is produced from nursery in 3 ways:

1. production in open hotbed

2. production container
3. hydroponics production

Production in nurseries begins between 20th and 25th of May and lasts for 35 – 40 days. When plants are grown to put them in field, the selection should be done, and weak or ill plants are thrown away. Plants are taken in field when they have 5 to 6 well develop leaves, and it should be in period between 5th and 25th of July.

Crop rotation is very important condition for quality production. Futog cabbage can be cultivated also after main cultivation in autumn (after beans, cucumber, potato, grass and wheat) and as main crop without any other crop before. It should not be cultivated at the same place for 3 years, and if some of diseases appears at least 4-5 years. If it is cultivated in intensive crop rotation, or just with 1 year of difference, it is necessary to add organic fertilizer into soil. The best way of cultivating soil is in winter on 25 to 30 cm depth, or in summer, after cultivating crop that was there, on 20 to 25 cm depth. When soil is mineralizing, soil analysis should be done first, in order to know what exact amounts of minerals should be put into soil, for getting better quality and yield. Futog cabbage is not resistant to bacteria and parasites fungi, and can also be attacked by insects. With purpose of getting healthier product and in order to prevent damage from insects, bacteria, and fungi, it is recommended to use biological treatments with 5% of insecticide, and agro technical and hygienic measures (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage).

Futog cabbage harvesting is being done successively in full technological maturity. Harvesting is manual process and depends a lot on experience of field workers, who should know which cabbage is mature enough to be harvested and the way to do it.

Futog acid cabbage must be produced using the native population of the Futog cabbage. Sensory characteristics of the Futog acid cabbage are also specific. After the fermentation, head of the Futog sour cabbage has uniform, amber-yellow color, which is considered as very convenient property with respect of consumers. Head of the Futog sour cabbage has slightly oblate form. Leaves of the Futog sour cabbage are overlapping in such a

way that the next leaf from the opposite side is situated over the preceding one, so that the separation of leaves has to be performed gradually and with attention, in order to avoid their damaging. Leaves of the Futog sour cabbage have slightly ellipsoid form. Leaves of the Futog sour cabbage are in all their surface thin; central part of the leaf with which is the leaf connected with stalk is not thick; it is elastic and flexible. NaCl content has to be not below 1.5% and not over 3.5%. Total acids content (expressed as lactic acid) ought not to be lower than 0.5% and higher than 2%. Volatile acids content (expressed as acetic acid) shall not be higher than 0.7%. As the preservative, only K-sorbate can be used, and its analytically determined content must not be higher than 0.13% (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage).

Traditional way of production of Futog acid cabbage is defined by three peculiar aspects:

1. raw material (fresh cabbage) selection
2. characteristic of technological production
3. characteristics of final product (Futog acid cabbage)

Way of production is still the same as it was few centuries ago. Only difference is that today acid cabbage production is taken in bigger halls, built for proceeding of fresh cabbage and making acid cabbage.

Production of Futog acid cabbage starts with acceptance/selection of fresh cabbage in halls. For its preparation only fresh Futog cabbage is used. It is produced by members of association, or bought from other producers. It is brought from field clean, healthy, mature, without exterior leaves, and without holes in leaves. During acceptance it is selected by experience of workers.

Cabbage is put manually in pools for fermentation, but in the way that roots are turned up. After putting cabbage in pools, over them is pouring liquid that causes fermentation. This liquid is made from water, that has stayed left 24 hours to liberate Cl, and salt in proportion 2,5-4 % of pools' volume, or 5% of putted cabbage mass. Over the pools, wood boards, which should keep all process of fermentation inside of the pools, are put. The process in manufacturing of

acid cabbage is a sugar fermentation which exists in fresh cabbage into the milk acid (milk acid fermentation), which is done by nature in high quality condition, thanks to added salt without any additional additives and preservatives. Process of fermentation has 25-30 duration, on optimal temperature 18-21°C, and it has to be monitored. Fermentation is finished when pH in pools becomes 4, or acid value of 1,2-1,5%, that is the best value according to seasonal characteristics of Futog acid cabbage. After fermentation is finished, cabbages are taken out from pools and put on tables to leach (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage).

Packaging of Futog acid cabbage is in polyamide and polyethylene bags in vacuum conditions. Futog acid cabbage can be packaged in shape of whole cabbage, cut cabbage pieces, and only leaves. Packaged like this it can stay for 90 days on temperature 4-8 °C. Before packaging measuring, selection and labeling should be done.

After fermentation, cabbage color becomes amber yellow, flattened head, leaves are overlapping. Leaves dividing should be done carefully and one by one. Leaves are slightly elliptic shape, thin, and central part of the leaf, that is connected to root, is elastic, with weak nerves and consistency. Those characteristics of leaves are very important from consumers point of view for preparing Serbian traditional meal called “sarma”(stuffed-meat acid cabbage). Futog acid cabbage has soft, not strong taste, not too salty, not too acid, tastes aromatic, with flavor smell. Amount of salt (NaCl) should be between 1,5-3,5%. Amount of all acids should be between 0.5 – 2%. Amount of evaporative acids should not be over 0,7%. Amount of conserves should be maximum 0,13 % and it is allowed only K sorbet (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage).

5.3.3. Producers – Processors association “Futog Cabbage”

Association of producers and processors of Futog cabbage was established in February 2007, and registered on 17th July, 2007. It has 150 producers, and 6 processors (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage) The name of the association is “Futog cabbage”.

Association is voluntarily, nongovernmental, nonpolitical, nonprofit legal body organized on free willingness of few physical or legal bodies, established because of achievement or improvement some common goal or interest, that are not forbidden by the Constitution or the Law (Law about associations). Association can be furthermore associated with other Associations in the country and abroad. Members of association or delegated persons are managing the association.

Association “Futog cabbage” does promotional activities, technical assistance, advisory service, sanitary control on soil and product. Main goals of association are:

- to connect different stakeholders who are producing and proceeding Futog cabbage;
- to promote Futog cabbage as traditional product of village Futog;
- promotion of village Futog;
- exchange of experience and knowledge between association members and
- to participate in ecological protection of the area and preserving ecological quality of Futog cabbage.

Main assignments of association are:

- to collect scientific literature in area of association acting, only for members’ needs, without gaining any profit;
- to make connections with other similar organizations;
- to organize seminars, meetings and other types of information sharing in area of production and proceeding of Futog cabbage, without gaining any profit, and
- to cooperate with universities, scientific associations and other organizations in the country and abroad, that can help members with advises in field of Futog cabbage production and proceeding.

Membership in association costs 1000 din/year for farmers that only produce cabbage and for processing 10.000 din/year for processors. Besides these payments, every year producers of Futog cabbage have additional costs, because they pay experts that do analyses of the soil and

field visits. Also, costs for manifestations and fairs exhibitions are shared between members of the Association.

Producers decided to apply for PDO scheme with the main reason to preserve the tradition and willingness to preserve a product with the added value. During the process of PDO certification Association had contacts and relationship with other stakeholders. Stakeholders from governmental part, that have had key role in certification process are Provincial Department for economy, which financed elaboration of the project; Ministry of agriculture, forestry and water management, which financed support of the “Futog cabbage” Association, supplying of computers and country vehicle aimed for the field works, financing of the marketing activities; and Institute for the intellectual property.

According to producers, the biggest barrier for expanding and using PDO production is that trade relations are not harmonized, which means that at the market there often can be seen fake cabbages - both fresh and acid Futog cabbages. At the markets around Novi Sad city, and also around Serbia, many sellers told that cabbage is Futog's, but it is not. As there are not high punishments and inspection measures, producers are in difficult position, because they have to combat with an unfair competition.

Another problem is that market conditions are unstable, as well as agreements, so they cannot be sure in which period they would be paid for the sold cabbage. Furthermore, agreement with supermarkets for quantity and price is all the time changing. Those selling conditions do not give producers stable perspective.

Relationships between its members are good. Association does promotional activities, and organises manifestations. During these activities members are participating and exhibiting together. As the Association is not profitable and everyone can go on trade alone, there are no misunderstandings between producers about quantities that would be sold, places and times. Every producer is free to decide where he would sell cabbage, and quantity that would offer.

In period 2005/06 producers creatively decided with consensus to do application, immediately after law regulation was written. According to producers, application procedure for PDO scheme is clear and objectives of PDO scheme are understandable.

5.3.4. Production

Futog cabbage is produced on agricultural area of 5000 ha. Average size of the farm is 10 ha, which is very small area. Futog cabbage is produced by 150 households, out of which 35 are certified for production of Futog cabbage. Some producers of Futog cabbage also produce hybrid cabbage. That can be seen from the fact that from 600 ha for cabbage production 100 ha is production of Futog cabbage. Around 0,5 ha is production for Futog cabbage for every producer. Beside cabbage, corn, soybeans, wheat, potatoes, carrot are produced in Futog, in order to have crop rotation and to keep soil quality.

In the following table is shown data about area on which Futog cabbage was produced from 2008. It can be seen that from the 2009 area under Futog cabbage production has been increasing

Table 5.6.: Production (years)

year	2008	2009	2010	2011
Amount (ha)	-	50	70	80
Increase (% base year 2009)	-	-	40	60

Source: our interviews

There are some differences in production and costs between hybrid cabbage and Futog cabbage. One of the differences is seed cost. Other difference is quality. Furthermore, Futog cabbage is less resistant. Seed for Futog cabbage is produced on the farms, everybody for themselves. For the seed, cabbage is starting with production in November. In May this seed is put for cabbage production in leys or hydroponics. All process for cultivation is done by hands. This is because Futog cabbage is soft and if it is done by mechanization, it could be damaged.

Hybrid cabbage is more resistant, on temperature, climatic conditions, diseases, and with difference from Futog cabbage it can be collected from July. It has higher yield for 30-40% than Futog cabbage.

Only one farm is certified only for Futog acid cabbage production. This farm proceeds only Futog cabbage, not hybrid, and only this farm is certified for acid Futog cabbage. Other proceeding farms make acid cabbage both from Futog and hybrid cabbage, and they do not have certificate for acid Futog cabbage.

This farm has its own small proceeding capacities, with 15 workers. Also, when it is the season they take other seasonal workers. Besides cabbage, in order to have rotation, it also produces other vegetables and processes them. In processing firm, majority of workers are women, because they do better selection of cabbage leaves. From 1 kg of fresh cabbage 0,8 kg acid cabbage can be made (fresh is putting in water with salt). Futog cabbage becomes acid after 28 days in salt water.

Better way to produce acid cabbage is with Futog cabbage than with hybrid cabbage, because, there is possibility that hybrid does not become acid. Quality of souring depends on space between leaves, and this space for Futog cabbage is optimal, as hybrid has stronger structure and this space is smaller. Usually for souring cabbages of 1,5kg weight are taken.

Cabbage is put in salt water to become acid in period between September and December. In this period, in winter, when temperature are lower it can stay in pools with capacities of 1000-1500 liters. Afterwards, in February and March, cabbage is taken away from big pools and put in smaller ones, and in April, it is put in cold storage (fridges). When stored like that, the period for sale is whole year.

For acid cabbage production in farm “Ćulum”, around 15-20% of total acid cabbage production is from their household. The rest this producer buys from other Futog cabbage producers, with payment period of 30-60 days.

In the cost structure of acid Futog cabbage only 25% of total costs are cost of fresh cabbage. Other 75% of total cost is costs of labor, packaging, petrol, transport, water, salt and electricity.

Following table 5.7. gives detail description on production costs of fresh cabbage. At it is shown total costs are 139.700,00. which is around 1100 Euro/ha.

Table 5.7.: Production costs for 1 ha

costs	dinar
Land rent	20.000,00
Soil cultivation	74.700,00
Seed	5.000,00
Fertilizer	20.000,00
Treatments	10.000,00
Herbicide	1.600,00
Insecticide	4.200,00
Fungicide	4.200,00
TOTAL	139.700,00

Source: our interviews

5.3.5. Sales and marketing

Around 20% of cabbage is transformed to acid, and 80% is sold as fresh cabbage. Ten producers have their own places on markets in Novi Sad and they are selling fresh cabbage.

The biggest market for Futog cabbage is Serbia. Around 20% of Futog cabbage production is exported, mostly in Germany, Slovenia, Sweden and France. It is exported as acid cabbage. In 2009 amount of export was 500 t. In 2010 that amount highly increased for around 90%, and was 950t.

Acid cabbage is usually sold on markets or by retail chains (Mercator and Univerexport). On markets it is sold directly to consumer. In Novi Sad town it is sold at eight markets. Producers have contracts with retail chains, in which ways of selling the product are specified.

Contracts are annual, between the producer and the chain, but not well defined in terms of price and amounts, so these are accomplished by the annexes.

Distribution channels of Futog cabbage sales are various. It is sold on

- Direct sales to consumers at farm,
- Markets in Novi Sad,
- Retail chains in country,
- Export in foreign countries,
- Internet, as a new marketing channel.

5.3.5.1. Prices to final consumer of fresh cabbage

In the following table number 5.8. the prices of Futog fresh cabbage to consumers are given. There is a variation between prices, because data are shown for years and during every year prices are changing, depending on season and market conditions. There is also a difference in prices because on some markets, cost for having a place, are higher than on others.

For 2011 price difference is explained below. Before 1st November 2011 price for hybrid was 7 din/kg and Futog cabbage 10 din/kg. From 1st November price increased, for hybrid 15-20 din/kg, and for Futog cabbage 25 din/kg. Price increase happened because the demand increased, as from November, people in Serbia traditionally start to prepare food for winter consumption, including acid cabbage.

Table 5.8.: Prices of fresh and acid cabbage

year	2008	2009	2010	2011
Price din/kg (fresh cabbage)	8-10	8-12	10-15	10-25
Price din/kg (acid cabbage)	-	90	150	170

Source: our interviews

5.3.5.2. Prices to final consumer of acid cabbage

The table 5.8. shows prices of acid Futog cabbage that were paid by consumers in previous years. There is a huge increase of 67% in 2011. The increase was explained by Dinar-Euro ratio and increase of prices of inputs, electricity and other costs.

Price of acid Futog cabbage and hybrid is the same for export 55-60 EU cents/kg. In Serbia acid hybrid cabbage costs 60 din/kg (2010), and acid Futog cabbage costs 90 din/kg. The difference occurred due to the fact that there is a price difference in fresh hybrid and Futog cabbage, as fresh Futog cabbage has 30% higher price than hybrid cabbage.

In summer 2012, there were not big quantities of acid cabbage at markets, because of its seasonal production. The consequence is higher prices at the market. Price for a whole Futog acid cabbage is 150 din/kg.

Even though the price of Futog cabbage is higher, an income from Futog cabbage production is not much higher, because price difference between hybrid and Futog cabbage hardly covers lower productivity: actually hybrid has 30-40% higher yield compared to Futog's.

5.3.5.3. Communication and Promotion

Association promotes Futog cabbage on fairs in the country and outside the country, manifestations, and on the Internet. The biggest promotional activity is manifestation called "Kupusijada". Main goal of the manifestation is promotion of the "Futog cabbage" as a brand. On the manifestation, Futog cabbage meals, which visitors can try, are prepared. It is followed with cultural and artistic program. Manifestation is organized from 1999 every year in October (www.turizamns.rs).

5.3.6. Cultural events and Linkages with other local organizations

Futog cabbage production has a potential to impact rural development, especially thanks to the connections established with tourism and traditional handcrafts. With manifestation called Kupusijada, which as event has started since 1999, more people from Novi Sad and surrounding villages have been visiting Futog village. Besides positive impact for the brand of Futog cabbage, that had impact on other local associations that joined association in promotional activities and events on which they exposed Futog cabbage.

Local associations linked to the Futog cabbage are Art colony - Čerevicka skela, Motorcycle association from Futog and Novi Sad, Cultural-informative center, as well as primary schools from Futog village, nurseries, sports clubs, music associations and women associations.

Very important association linked with the Association is Women Association. Women association from Futog usually follows Futog cabbage producers on manifestations and also helps with food preparing activities for “Kupusijada” event. Women association makes traditional handcrafts and souvenirs, which make stands more beautiful and representative in traditional way. That can contribute diversification of economic activities in the village in the future period, because more people are involved in them. Schools and agricultural high school are involved in manifestations, because producers organize small cultural shows with folklore dance or acting with the children on manifestations.

Along with that, there are also some restaurants in the village that have Futog cabbage meals in their offer. People from Novi Sad, nearby town, as well as other nearby cities go there to eat, which also contributes rural development and money gaining from activities different from agriculture.

5.3.7. SWOT Analysis

According to previous explanation of method and reasons to use SWOT analysis, it should be said that in the case of Futog cabbage it has been used to organize information that are helpful in matching the associations' resources and capabilities to the competitive environment in which it operates and is therefore an important contribution to the strategic planning process. In this case SWOT analysis is used in order to analyze collected information about internal and external factors that have, or may have, an impact on the evolution of a product position and organization process development, also as regional development. It generally provides a list of a Strengths and Weaknesses, as indicated by an analysis of its resources and capabilities, plus a list of the Threats and Opportunities identified.

SWOT analysis for the Futog cabbage, is presented as a matrix that presents the most important strengths, weaknesses, opportunities and threats for the product and area, examined and aiming at giving a reasonable overview of major issues in current period. It is based on interviews with producers' collected data analysis, and according to description of the product and place of origin. These issues could be taken into account when subsequently drawing up strategic plans for the future activities. The aim of the presented matrix is to be able to focus on strengths, minimize weaknesses, and take the greatest possible advantage of opportunities available.

Table 5.9.: SWOT analysis – Futog cabbage

Strengths 1. Well-known name in Serbia and other nearby countries – consumers are already well informed about quality of Futog cabbage 2. Near Novi Sad - near big markets 3. Tradition – cabbage production in village Futog exists for more than 200 years 4. Favorable climate conditions -benefit to the production 5. Other institutions are involved in promotion – which helps promotional activities and brings higher impact 6. Experience of the producers – every cabbage producer easily makes difference between Futog cabbage and hybrid cabbage 7. Good quality and Typicality – certificated from Research Institute Laboratories 8. Good relationships between members of the association	Weaknesses 1. Small area of Futog cabbage production on households – average is 0.5ha for every producer 2. Less resistant than hybrid - many producers keep producing hybrid cabbage 3. Hybrid cabbage yield is higher – many producers keep producing hybrid cabbage 4. Costs of the production are higher than hybrid - many producers keep producing hybrid cabbage
Opportunities 1. Eating habits and tradition of Serbian population – eating acid cabbage in winter period is habitual diet in Serbia 2. High Domestic demand – as cabbage is in habitual diet there is high demand for both fresh and acid cabbage in Serbia 3. High foreign demand – export can be increased which can bring higher income to producers and name of Futog cabbage can be wider well-known 4. Manifestations and fairs – where promotions can be made, in order to increase the demand	Threats 1. There is low willingness of producers to replace hybrid production with Futog cabbage – because hybrid is more resistant, costs of the production are lower 2. Trade relations are not harmonized – many times there were frauds with using the name of Futog cabbage 3. Law regulation - there are frauds on market with using the brand name of Futog cabbage 4. Payment periods are long – producers have to wait for payments and they cannot make new investments 5. Low support of governmental institutions - as Public bodies do not have special funds in budget to help all producers 6. Large amount hybrid cabbage production – many times happened that some producers of hybrid cabbage sold hybrid as PDO Futog cabbage

5.3.8. Concluding Remarks

As it was described, Futog cabbage production has a long tradition and it is well-known for many years. There are many good and strong points for its production and expansion of sale, especially the possibility to export outside Serbia. As it can be seen from data showed, price difference between Futog cabbage and other hybrids is much more crystallized in favour of Futog cabbage. Other important fact is that Futog cabbage purchase and use have been increased. On the other hand there is a problem in terms that hybrid cabbage production is very high and many cabbage producers from Futog do not want to replace hybrid with PDO Futog cabbage, because costs of hybrid seed are lower, hybrid is more resistant and yield is higher. Other important thing to underline is that fraud in its name usage still exists, and it has not been stopped until now.

With just one household which prepares acid PDO Futog cabbage, and its capacity of 2000 t, it is not possible to answer the demand that exists for acid cabbage outside of Serbia. Because of the small capacities, most of the cabbage is sold as fresh. That brings lower income to producers. Also in that way, it is very important that majority of fresh cabbage is sold in short time period, in order to retain its quality. Acid cabbage, when prepared and packaged, can stay and be sold in longer time periods, and can also be transported to further destinations.

References

- Elaborat o načinu proizvodnje i specifičnim karakteristikama proizvoda Futoški sveži kupus i futoški kiseli kupus (Elaborate about production and specific characteristics of Futog fresh cabbage and Futog acid cabbage)
- Kotler P., Armstrong G., Sanders J., Wong V. (1999): ‘ ‘ Principles of Marketing ‘ ‘. Second European Edition , Prentice Hall Europe
- Popis stanovništva 2002, Republicki zavod za statistiku – National statistical data about population, Statistical office of Republic of Serbia
- Tehnološki elaborat o načinu proizvodnje i specifičnim karakteristikama proizvoda Petrovačka kobasica (Technological elaborate about production and specific characteristics of Petrovac sausage)
- Wheelen T., Hunger D. (1998): Strategic Management and Business Policy-Entering the 21st century Global Society, Addison Wesley
- www.fao.org
- www.faostat.fao.org
- www.juznbackiokrug.gov.rs
- www.kulen.rs
- www.nwetmba.com
- www.paragraf.rs
- www.stat.gov.rs
- www.turizambackipetrovac.com
- www.turizamns.rs
- www.zis.gov.rs
- Zakon o udruženjima, Sluzbeni glasnik republike Srbije br 51/2009 i 99/2011 (Law about associations – Official gazette of Republik of Serbia number 51/2009 and 99/2011)
- Zakon o zadrugama, Sluzbeni glasnik republike Srbije 101/2005 i 24/2006 (Law about cooperatives - Official gazette of Republik of Serbia number 101/2005 and 34/2006)

6. DEMAND PERSPECTIVES: CONSUMER ANALYSIS

This chapter focuses on empirical evidences about consumers' attitude towards Futog cabbage and Petrovac sausages both in Serbia and Italy. The Chapter is basically divided into two parts: the first is devoted to the Serbian market and the second to the Italian one. The two parts are quite identical, each one starting with providing qualitative and quantitative information about the whole sample, regarding diet habits, with emphasis on consumption and attitudes regarding dried sausages and acid cabbage; interest in typical products, awareness of PDO/PGI scheme, and awareness of existing and interest in buying PDO Futog cabbage and PDO Petrovac sausage. Demographical characteristics of the sample are also presented. Afterwards, a brief explanation of different groups of consumers that were identified by cluster analysis is given. A concluding Section includes a comparison between the findings in the two markets.

Structure of the chapter is following: Evidences from the Serbian consumers, with Introduction and Description of the sample; Differentiation within the Serbian consumers, with Introduction and Overview on the Three clusters; and Concluding remarks, main differences and comparison between the clusters. Than follows, Evidences from Italian consumers, with Introduction and Description of the sample characteristics; Differentiation within the Italian consumers, with Introduction and Nature/ characteristics of three clusters; Concluding remarks, main differences and comparison between clusters; and at the end of the chapter Differences between Serbian and Italian samples clusters.

6.1. Evidences from the Serbian consumers

6.1.1. Introduction

This chapter will provide information about the sample that was surveyed in Serbia, regarding diet habits, especially oriented towards acid cabbage and dried sausages, buying behavior, interest in typical products, opinion and attitudes regarding PDO products, with emphasis on Futog cabbage and Petrovac sausage, respondents on questionnaire in Serbia have, and also demographic characteristics of the sample.

Sample is based on 251 responded questionnaires. Interpretation of the results is based on calculated mean values and frequencies of responses, in the way that is explained in Chapter number 4 (Research methodology). Graphs, pies and tables were made in Excel program. As the survey was made with focus on interest for some question groups, interpretation of the results is provided that way.

6.1.2. Description of the sample

Demographic characteristics: About two third of respondents were women and one third where men. Higher percentage of female is the consequence of the face to face surveys that were conducted at the supermarkets and markets where mainly women do the family shopping. Similar results are also gained in other researches, where there was an obvious disproportionate share of household grocery shopping done by females (e.g. Evans, 2007, Lusk et al., 2001). Furthermore, women showed a higher availability to spend some time in order to respond to our questions⁵.

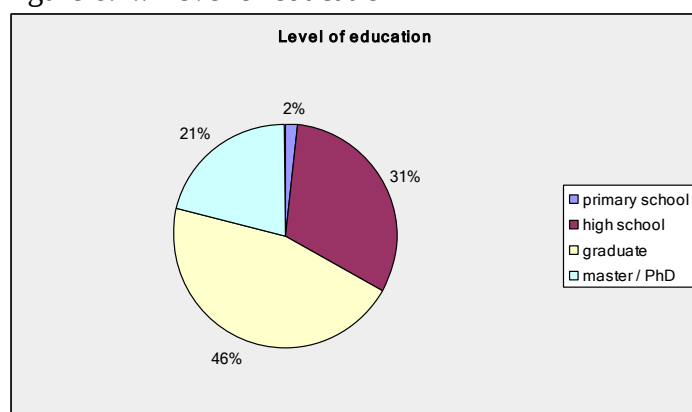
In respect to age, we miss 10 data due to missing answers. More than one out of four (27%) in the sample are young people between 20 and 34 years old; almost one half of respondents (47%) are people between 35 and 49 years old; 17% of the sample consists of respondents aged between 50 and 65. 7% are people older than 65 years.

The prevalence of females in the sample implies that more than half of it is dedicated to cooking meals for the family (27% of surveyed people do it always and another 27% do it often). When taken into consideration that there is also 27% of people that sometimes cook their meals, there is big part of sample, 81% that cook at their homes, and think and make decisions about the food that will be prepared and bought. This means that the majority of the respondents is well aware of food products and nutrients, ingredients to be chosen in the market place and to be cooked at home and thus they represent a good target for the research purpose.

⁵ Out of the total number of interview done in Serbia (251), 100 hundred were face-to-face and the remaining number of them was made on the Internet (see the methodological chapter for more details).

A university degree has 46% of the sample. 21% have Master or PhD certificate, 31.5% have finished high school, and 1.6% finished only primary school. Overall, it could be said that 67% of the sample is highly educated. High percentage of faculty educated persons in the sample can be explained with a fact that 151 questionnaires were done online, and thus respondents are persons that use internet and technology, and obviously have higher education. Furthermore, other 100 face to face surveys were conducted in area of city of Novi Sad that is the second largest city in Serbia, and a university center, which is why many respondents who live in it have a university degree. Information of level of education was required in the surveys because influence of education on behavior is pervasive. Many aspects of the behavior of the individual are seen to be closely associated with level of schooling. Income, choice of occupation, residential location, geographical mobility, consumption expenditures, would appear to be relatively strong correlates of education (Michael, 1975). Besides that, due to educational level, consumers in principle could have a propensity to new and complex quality attributes about food (Carbone et al, 2009). Thus, according to high level of highly educated people in the Serbian sample (67%), it can be expected that interest in typical food and labeled products would be higher, which could have impact on buying Futog cabbage and Petrovac sausage.

Figure 6.1.: Level of education

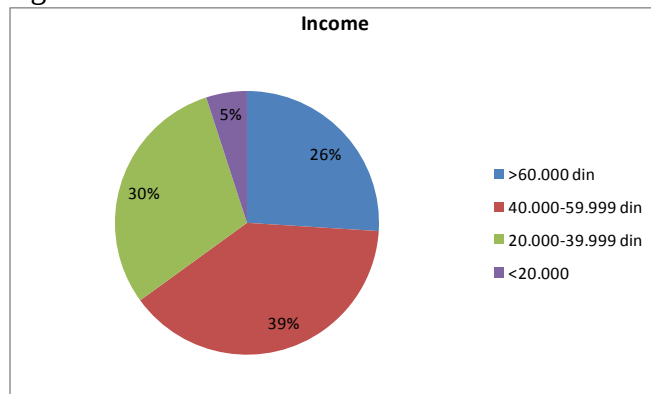


Almost all surveyed people were born in Serbia or other EX-Yugoslavian countries (Bosnia and Herzegovina, Croatia or Montenegro). Also 250 from 251 respondents live in Serbia now. According to this, it can be concluded that all respondents are used to eat traditional Balkan, especially Serbian cuisine.

Majority of respondents 83.7% live in Autonomous Province of Vojvodina. It is mostly because face to face interviews were conducted in area of Novi Sad, capital of Vojvodina. There are no respondents that have never been in Vojvodina. Those who do not live in Vojvodina, have been there a few times, or usually go there. Furthermore, 89% of surveyed sample live in urban area and 11% in countryside. Majority of respondents, 73.7% of them, live in Novi Sad area. Around 6% of sample lives in various towns in Province of Vojvodina. 10.8% of sample lives in area of capital of the Serbia, Belgrade. Only 1.6% of sample lives in other towns in central Serbia. The fact that majority of the sample lives in Novi Sad is a consequence of the place where face to face interview were taken. Hundred face to face interviews were conducted in supermarkets and markets within city of Novi Sad. Considering that majority of respondents live in urban areas, it can be expected that sample does not produce for self-consumption. For buying food products they normally go to retailers. Besides that, Underhill and Figueroa (1996) found that urban dwellers were more likely than suburban or rural households to purchase organic meat products, so this can be case with origin labeled products.

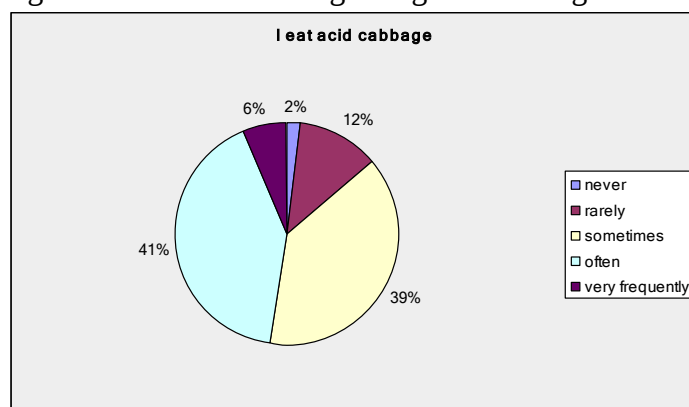
Monthly net income of 39% of surveyed population is between 40.000 and 59.999 Dinars. For better understanding, it could be mentioned that 1 euro equaled 112 Dinars (on January 31st, 2012). 30.2% of respondents have income between 20.000 and 39.999 Dinars, and 5% of people that have monthly income under 20000 Dinars. It should be underlined that according to Statistical office of Serbia, average net monthly income from November 2012. was 42.395 Dinars. Considering other prices and expenses that people have, monthly income for sure can be one limiting factors for PDO/PGI products consumption and purchase for this sample. Besides that, according to the literature, the distribution of willingness to pay is expressed as a function of consumer income (Bonnet and Simoni, 2001).

Figure 6.2.: Income



Consumption habits towards acid cabbage: Majority of respondents eat acid cabbage. Only 2% of them do not eat acid cabbage. High percentage, 41% of respondents, eats acid cabbage often. There is a high market demand for both fresh and acid cabbage, but frequency of consumption depends on whether people prepare acid cabbage by themselves or they buy already prepared acid cabbage. Also, many respondents, 38.6% eat acid cabbage sometimes, which probably depends on seasonality of acid cabbage preparation. In Serbia, traditionally, acid cabbage is eaten in winter months, and it is traditional meal for New Year, and Christmas, and other holidays in period from December to March.

Figure 6.3.: Diet habits regarding acid cabbage



Regarding attitudes toward acid cabbage, and motivations for eating it, it can be concluded that majority of respondents eat acid cabbage because they like its taste and think that it is healthy. A huge percentage of them think that it is not easy to prepare acid cabbage. Also, as a consequence of traditional seasonal character of acid cabbage eating in Serbia, respondents do not totally agree that acid cabbage is in their habitual diet all year. It can also be seen that people

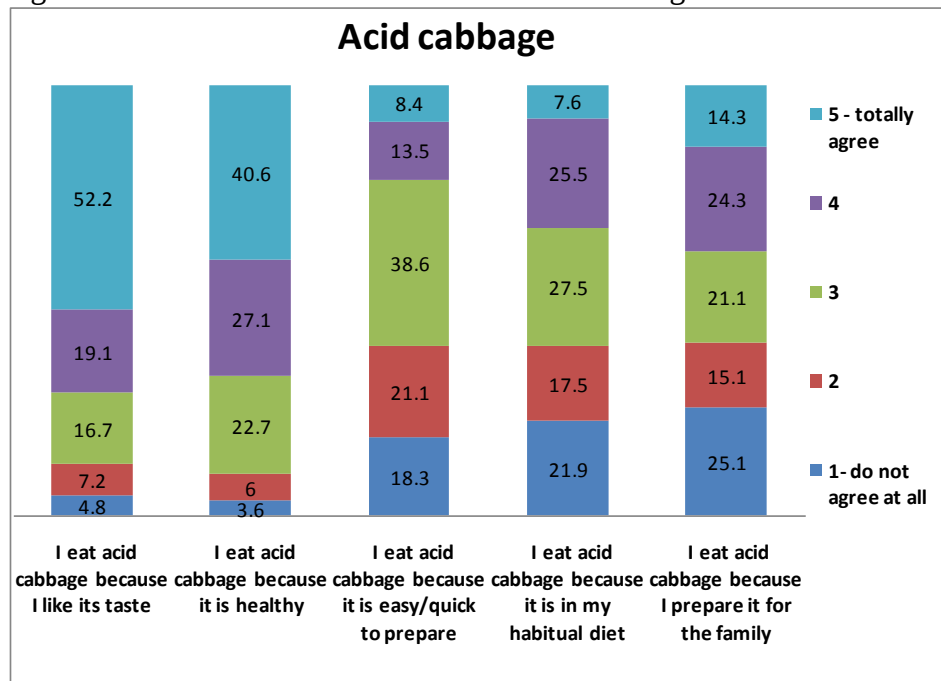
do not eat acid cabbage only because they prepare it for their families. These conclusions could be seen from the data presented in table 6.1.

Table 6.1.: Attitudes and habits towards acid cabbage

	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat acid cabbage because I like its taste (%)	4.8	7.2	16.7	19.1	52.2
I eat acid cabbage because it is healthy (%)	3.6	6	22.7	27.1	40.6
I eat acid cabbage because it is easy/quick to prepare (%)	18.3	21.1	38.6	13.5	8.4
I eat acid cabbage because it is in my habitual diet (%)	21.9	17.5	27.5	25.5	7.6
I eat acid cabbage because I prepare it for the family (%)	25.1	15.1	21.1	24.3	14.3

Respondents express their grade of agreement on scale from 1 to 5, where 1 was total disagreement and 5 total agreements with proposed statements.

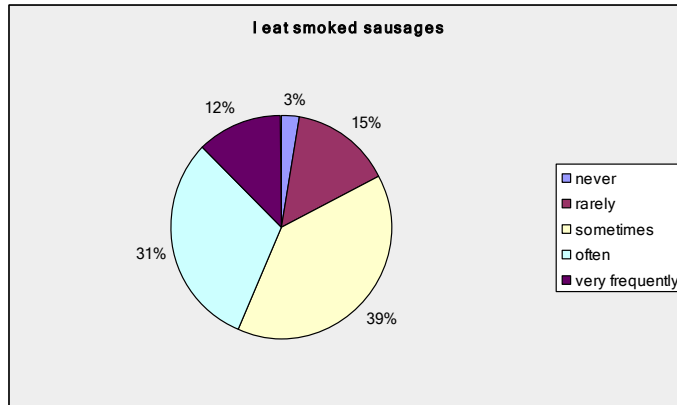
Figure 6.4.: Attitudes and habits towards acid cabbage



Consumption habits towards dried sausages: 43.5% of the sample eats dried sausages very often. If we add 39% of the people who eat them sometimes, it can be seen that Serbian population use dried sausages in their diet very much. Only 2.8% of respondents do not eat them

at all. High percentage of people who eat dried sausages can be positive aspect for their production, as obviously market demand is high.

Figure 6.5.: Consumption of dried sausages

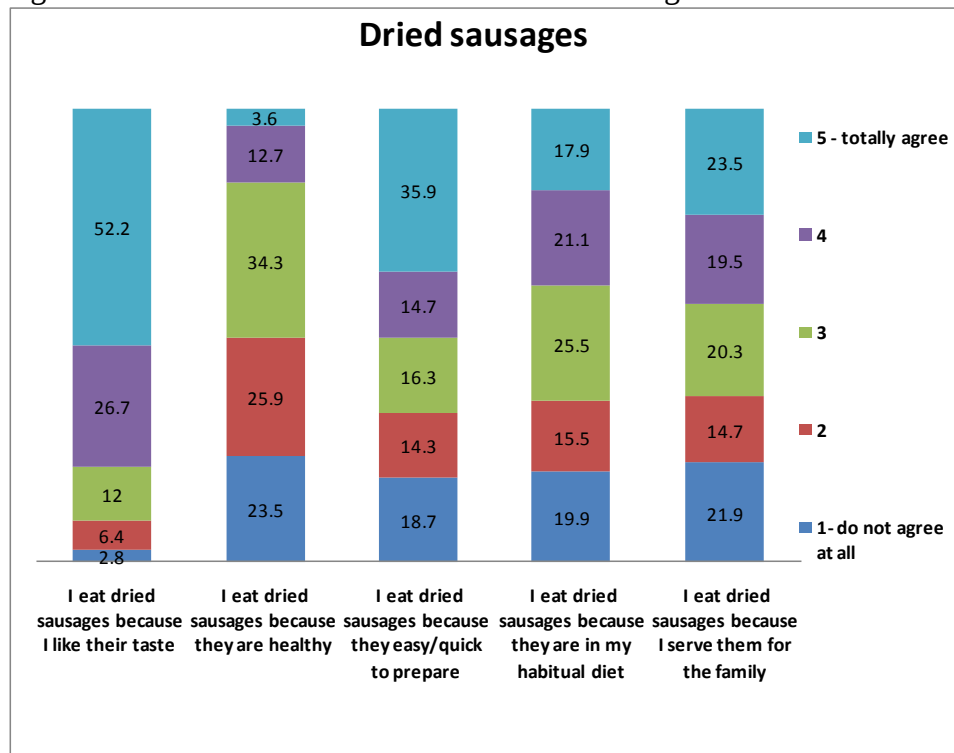


As it can be seen from table 6.2., majority of respondents eat dried sausages because they like the taste. Besides, respondents have opinion that dried sausages are easy to prepare. People eat dried sausages even they think that they are not very healthy. Consumption habits regarding daily using of dried sausages and serving them to their families will not expand consumption to very frequent or in larger amounts.

Table 6.2.: Attitude and habits towards dried sausages

	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat dried sausages because I like their taste (%)	2.8	6.4	12	26.7	52.2
I eat dried sausages because they are healthy (%)	23.5	25.9	34.3	12.7	3.6
I eat dried sausages because they easy/quick to prepare (%)	18.7	14.3	16.3	14.7	35.9
I eat dried sausages because they are in my habitual diet (%)	19.9	15.5	25.5	21.1	17.9
I eat dried sausages because I serve them for the family (%)	21.9	14.7	20.3	19.5	23,5

Figure 6.6.: Attitude and habits towards dried sausages

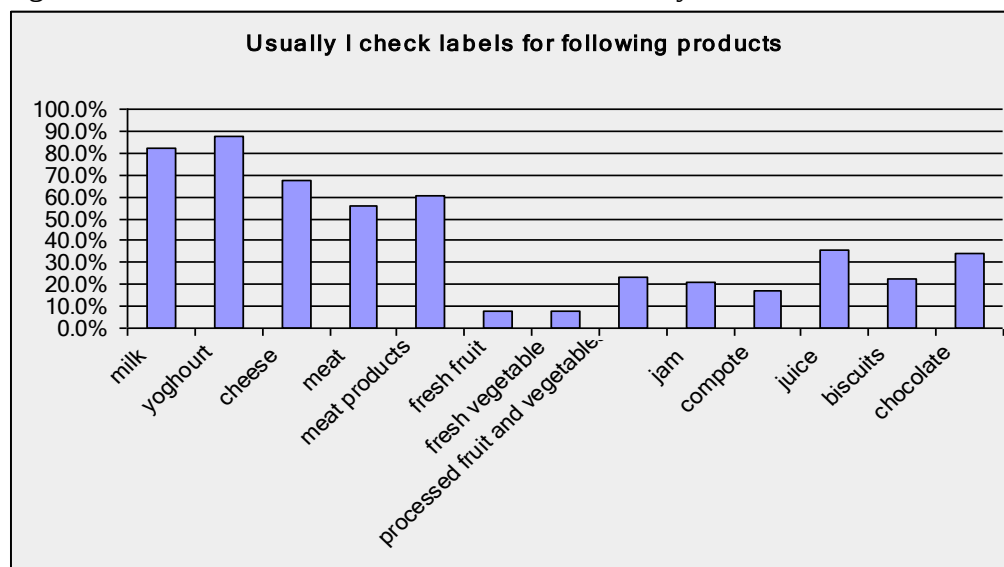


Checking for information reported on food labels: Consumers from the sample look at info labels on food products quite often: 90.8% of people answered that they check at info labels, and only 7.2 % that they look at them very rarely and 2% that they never look at info labels.

In particular they usually look labels for following products: yoghurt (87.3%), milk (82.1%), cheese (67.3%), meat products (60.6%) and meat (55.8%). People also look info labels for other products as juice, chocolate, conserved fruit and vegetables, fresh fruit and vegetables, biscuits, eggs, cakes and different milk products, but in this case they check less frequently (Figure 6.7.). Consumers mostly check products that they eat and buy every day and those that do not have long period of expiration, and that need to be stored in appropriate temperature and place. On the other hand, products such as fresh fruit and vegetables are more frequently bought at the farmers' markets, where they are sold without labels. People from the sample usually believe in visual aspect of these products and their ability to understand whether product is fresh or not. Products like jam, chocolate, biscuits have longer period of freshness as they are preceded, and people usually buy them looking at labels, in order to be able to recognize favorite brands/characteristics. Besides, many people responded that sometimes they do not look at info

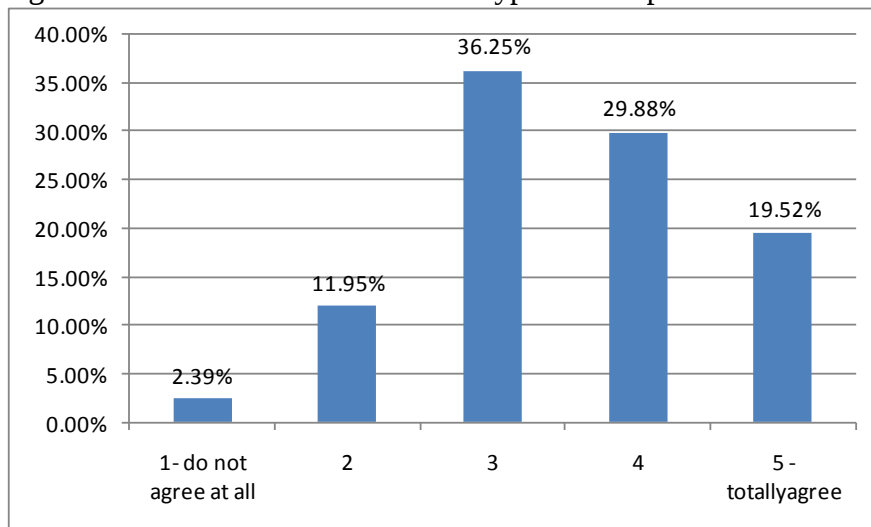
labels because they are in a hurry and they do not have time or they forget to see the label. Only 11.5% responded that they do not care for info labels, and 9.1 % that they do not trust information reported on labels.

Figure 6.7.: Products for which info labels are usually looked for



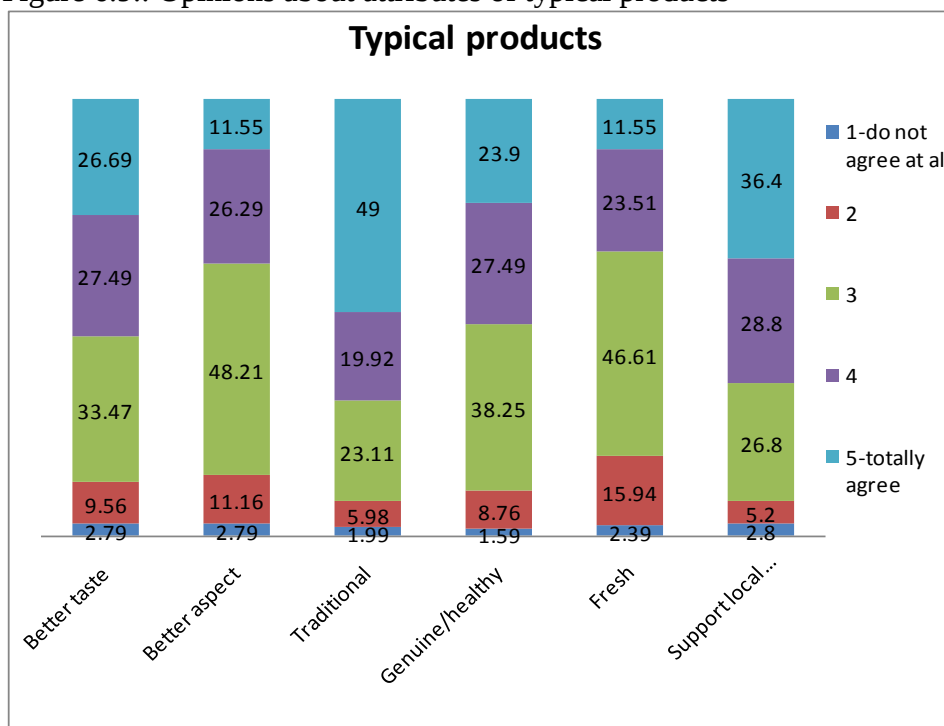
Attitude towards typical food products: According to questionnaire results huge part of surveyed population (36%) responded “neutral” when it concerns their interest for typical food products, with 3 on scale from 1 to 5. By Analysing further responses, it can be concluded that Serbian population have interest in typical food products, which can be described with the facts that 19.5% of the sample responded that they are interested very much, and with 4, on scale to 5, responded 30% of respondents, which makes almost 50% of surveyed population. High level of interest in typical food products gives opportunity to increase their production and sale. Regarding two products that are in our research, this is also a positive fact, because the higher level of interest and likeness of typical products is, the higher demand for our products is possible.

Figure 6.8.: Level of interest towards typical food products



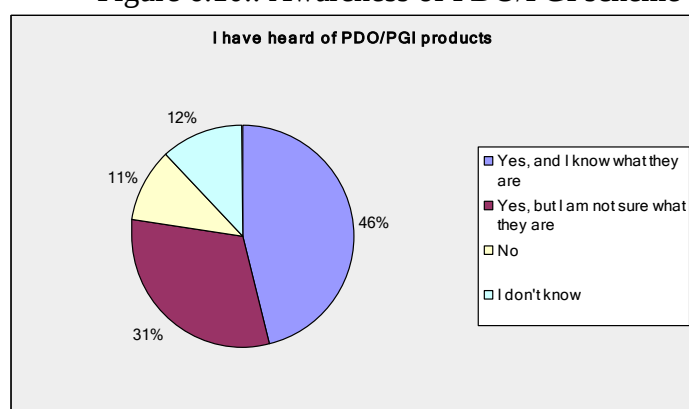
Attributes that people associate to typical products, are linked to tradition and support of local economy. Opinions that typical products have better taste and they are healthy are on the lower level for the sample. More detailed analysis of the responses is presented on the Figure 6.9.

Figure 6.9.: Opinions about attributes of typical products



Awareness of existence of PDO/PGI products: 46.2% of respondents know what PDO/PGI products are. Besides, 31.1% have heard for these kinds of products but are not sure what they are. From these answers it is obvious that people in Serbia are familiar with the existence of PDO/PGI products. This evidence is quite remarkable, facing the very recent introduction of PDO/PGI certification in Serbia. It is connected with high level of well educated respondents in the sample (Carbone et al., 2009). At the same time, it witnesses the presence of PDO/PGI products from EU for many years and interest of Serbian consumers for this kind of products. In perspective, it can be very positive premise for production and positioning of PDO/PGI products, and for two products on which this research is faced.

Figure 6.10.: Awareness of PDO/PGI scheme



But, although the level of knowledge about existence of PDO/PGI products is high, 32.27% of respondents have never bought any of them. 23.51% have bought them very rarely, and 37.05% sometimes buy these products. Only 7.57% of population buys them frequently and 0.40% very frequently.

Those people who buy PDO/PGI products mentioned that they have bought Futog cabbage, Zlatibor ham⁶, different types of cheese and vines.

Regarding level of trust in PDO/PGI certification 11% do not trust at all, 12.7% do not trust moderately, 36.3% are undecisive, 28.3% moderately trust and 11% trust completely.

⁶Zlatibor (Uzice) ham is dried beef ham, registered under number 3 in Intellectual property office.

Table 6.3.: Trust in PDO/PGI certification

Statement: I trust PDO/PGI certification					
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
Percent (%)	11.2	12.7	36.3	28.3	11.6

The level of awareness and trust into PDO/PGI scheme is very important condition in decision for purchasing PDO/PGI products. As it has been stated in the Chapter 1, place of origin is a credence attribute, thus level of trust and awareness into the scheme is determinant for decision whether to purchase these products or not. If the level of awareness and trust is high, the probability of buying is higher. If people trust the scheme and they have to choose between two similar products, where one is with certificate and the other without, they would choose the one with certification, because it guarantees quality.

PDO Futog cabbage: The name of Futog cabbage is well-known and famous in Serbia, as a “variety of cabbage”. It is supported by the fact that 169 respondents (67.3% of the sample), have heard for Futog cabbage very often.

Only 6.4% of surveyed population has never eaten Futog cabbage. 43.4% people eat Futog cabbage frequently. This means that there is a high level of demand for Futog cabbage in Serbia.

Furthermore, 45% of surveyed population ranked their likelihood towards Futog cabbage with level 5, from 1 to 5. As only 5.6% of sample told that they do not like Futog cabbage at all, and 3.2% of sample ranked they likeness with 2, percentage of population that like Futog cabbage is really high.

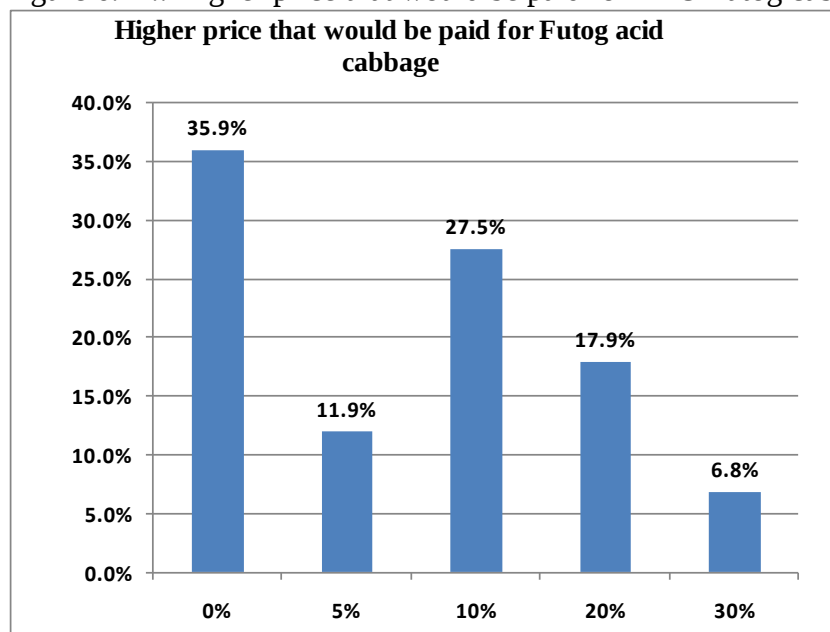
Besides, 55.80% of respondents totally agree with the statement that they would pay the same price for PDO Futog cabbage as for some other similar cabbage. It can be seen that huge majority of respondents, 91.2%, would pay that same price, if people that responded with level 3, 4 or 5, on scale from 1 to 5, where 1 was total disagreement and 5 is total agreement.

Table 6.4.: Interest for buying PDO Futog acid cabbage at equal price than other similar cabbage

I would buy PDO Futog acid cabbage at equal price than other similar cabbage					
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
Percent (%)	3.6	5.2	16.3	19.1	55.8

64.1% of sample would buy PDO Futog acid cabbage if the price is higher than for some other acid cabbage. Furthermore, 11.9% of people would pay 5% higher price. 27.5% would pay 10% higher price, 17.9% would pay 20% more, and 6.8% of the persons would pay additional 30%.

Figure 6.11.: Higher price that would be paid for PDO Futog cabbage



PDO Petrovac sausage: Existence of Petrovac sausage is familiar to 94% of surveyed sample. Almost half of respondents, 47%, have only sometimes heard for the sausage. Furthermore, only 9% of respondents eat Petrovac sausage frequently. Majority of respondents, 68%, have eaten it sometimes or rarely and 23% of them have never tried it. These figures gives information that Petrovac sausage is not present too much in everyday diet, or, at least, not as much as Futog cabbage. The reason for that may be found in the absence of promotional activities, and as it was told before, the other reason can be that Petrovac sausage cannot be found in supermarkets, due to limited and spare supply and small production area.

When asked to choose level of likelihood of Petrovac sausage on the scale from 1 to 5, 27.50% of sample responded with 5 and 27.50% with 4. According to this it can be said that 55% of population, who have tried it, like taste of Petrovac sausage. This appreciation is very favourable for Petrovac sausage producers. As people have heard of it and like its taste, the possibility that they would like to buy it is higher.

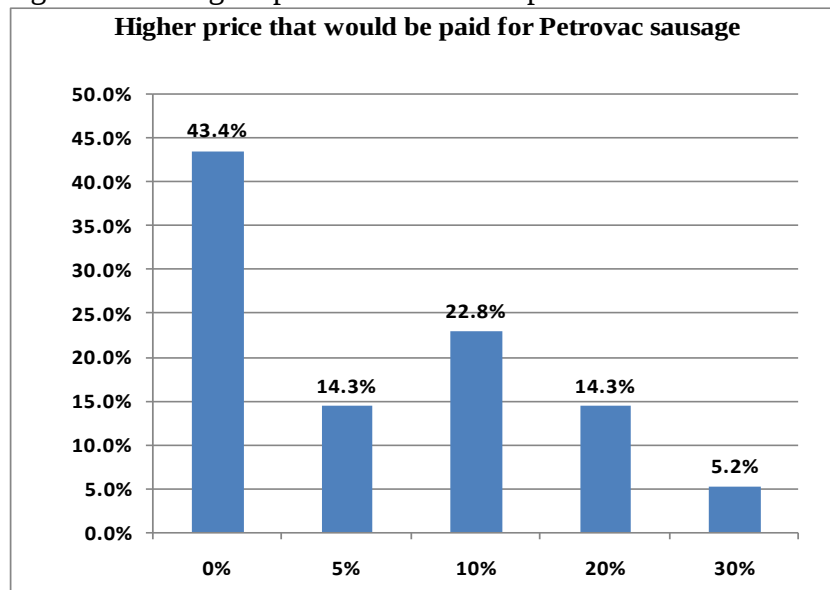
38.6% of surveyed sample totally agrees with the statement that they would pay for the Petrovac sausage the same price as for any other sausage. Only 11.2% of the sample totally disagrees with the statement. According to these statements, it can be concluded that majority of population would buy Petrovac sausage for the price equal to some other sausages.

Table 6.5.: I would buy PDO Petrovac sausage at equal price as some other similar sausage

I would buy PDO Petrovac sausage at equal price as some other similar sausage					
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
Percent (%)	11.2	8.8	23.5	17.9	38.6

Higher price for the Petrovac sausage would pay 56.6% of the surveyed population. 5% higher price would pay 14.3% of the sample, 10% higher price would pay 22.8% of the sample. 20% more would be paid from 14.3% of the surveyed population, and 30% higher price would pay 5.2% of the people. These responses show that people who have tried and eaten Petrovac sausage are willing to pay some extra price for it.

Figure 6.12.: Higher price that would be paid for PDO Petrovac sausage (in %)



According to previously explained data collected from the interviews in Serbia, it can be concluded that both products are well recognized from the consumers, but name of Futog cabbage is more familiar to them. As in Serbian traditional diet both acid cabbage and dried sausages are present, majority of the respondents would buy both Futog cabbage and Petrovac sausage for the price similar to some other similar products. Furthermore, more than half of the sample would pay some level of higher price for both products. This is connected to interest of the sample for typical products, and also to their awareness of PDO/PGI scheme. Even though these products are familiar for the Serbian consumers, their PDO label is something new, consumers recognize the value that brings that label, and are willing to pay for it.

6.2. Differentiation within the Serbian consumers

6.2.1. Introduction

Segmentation of the sample was created in order to ascertain the profile of consumers that show a stronger and more concrete interest in the two focus products. The analysis that was done highlights the existence of homogeneous groups of consumers, characterized by similar habitual daily diet attitudes, attitudes towards typical foods and products, perception and awareness of PDO/PGI scheme and attitudes towards two Analysed PDO products – PDO Futog cabbage and PDO Petrovac sausage.

For this purpose a cluster analysis was applied, using the K-means method (explained in chapter 4- methodology of the research). Also hierarchical clustering method and two-step clustering method were used,. in order to check if the composition and decision of cluster numbers was optimal, division into three groups was made - clusters proved the partitioning that gives more insights on the consumers' attitude and behavior in respect to two Serbian PDOs.

6.2.2. Overview on the Three clusters

Cluster analysis; as it was said before, lead to splitting the sample from Republic of Serbia into 3 groups of about respectively 28.7%, 41.8% and 29.5% people each.

Mean values of variables were calculated in order to describe group profile for each group. For better understanding of which aspects characterize each group, a cross-tabulation of ANOVA⁷ table and analysis to compare means, was carried out. ANOVA table, with F test, were conducted for each variable to indicate how well the variable discriminates between clusters. According to ANOVA tests, all included variables proved significant in determining cluster groupings ($p < 0.05$). If we take a glance to the F-tests in ANOVA table, it can be concluded that the most variables that describe consumption and habits of dried sausages and acid cabbage contributed clustering; in particular those that relate to daily habits and serving it to families.

⁷ ANOVA table is presented in appendix

Other variables that express opinions about acid cabbage do not have high impact on clustering, as all cluster respondents have similar attitude towards eating, likelihood on the taste and impact on health of acid cabbage. Most important here: variables that show attitudes towards buying PDO Futog cabbage and PDO Petrovac sausage for higher prices than for some other similar cabbage or sausage have large impact on clustering.

Table 6.6.: Variables that contributed the most on 3 clusters formation

variable	F value
I eat smoked sausages because they easy/quick to prepare	158.06
I eat smoked sausages because they are in my habitual diet	163.24
I eat smoked sausages because I serve them for the family	165.72
I eat acid cabbage because it is in my habitual diet	105.26
I would buy Futog acid cabbage if the price is higher than other similar cabbage	70.78
I would buy PDO Petrovac sausage if the price is higher than the price of some other similar sausage	84.93

Source: Our field interviews and elaboration

Cluster analysis revealed the existence of three different groups of individuals with a different daily diet habits and tastes, regarding dried sausages and acid cabbage, with a diverse degree of knowledge and interest in the typical attributes of foods and PDO/PGI certification, and different attitudes towards buying two selected PDO products.

These three groups can be summarized as follows:

- the first group gather people that like both PDO products, PDO Futog cabbage and PDO Petrovac sausage, and who would pay higher price for both of them;
- the second group includes people that do not show such a strong attitude, they consider the possibility to buy the two PDO products and to pay a higher price, though this interest and attitude are basically not so definite;
- the third group consists of consumers that definitely have a low interest in these products and would not pay any higher price for them.

Following tables present final cluster centers, for each variable, and from them differences between three clusters can be seen.

Table 6.7.: Daily habits and attitudes towards dried sausages

Statements	C1	C2	C3
I eat smoked sausages	4.10	2.69	3.58
I eat smoked sausages because I like their taste	4.72	3.75	4.27
I eat smoked sausages because they are healthy	3.07	1.75	2.90
I eat smoked sausages because they easy/quick to prepare	4.18	1.09	3.42
I eat smoked sausages because they are in my habitual diet	4.18	1.83	3.57
I eat smoked sausages because I serve them for the family	4.19	1.78	3.84

Source: Our field interviews and elaboration

Table 6.8.: Daily habits and attitudes towards acid cabbage

Statements	C1	C2	C3
I eat acid cabbage	3.85	2.98	3.47
I eat acid cabbage because I like its taste	4.71	3.61	4.09
I eat acid cabbage because it is healthy	4.32	3.70	3.95
I eat acid cabbage because it is easy/quick to prepare	3.19	2.34	2.81
I eat acid cabbage because it is in my habitual diet	3.75	1.81	3.24
I eat acid cabbage because I prepare it for the family	3.76	1.98	3.28

Source: Our field interviews and elaboration

Table 6.9.: Habits and attitude regarding labeling and PDO/PGI certification

Statements	C1	C2	C3
When I buy food products I look at info labels	3.93	3.90	3.26
I have heard of PDO/PGI products	2.71	2.25	1.77
I have bought PDO/PGI product	2.65	2.42	1.50
I trust PDO/PGI certification	3.85	3.20	2.43

Source: Our field interviews and elaboration

Table 6.10.: Interest for typical products

Statements	C1	C2	C3
I am interested in typical products	4.31	3.20	3.22
Typical products have better taste	4.39	3.16	3.65
Typical products have better aspect	3.83	3.05	3.23
Typical products are traditional	4.61	3.50	4.38
Typical products are genuine/healthy	4.33	3.13	3.66
Typical products are fresh	3.74	3.09	3.04
Typical products sustain local economy	4.44	3.68	3.70

Source: Our field interviews and elaboration

Table 6.11.: Awareness of existent of Futog cabbage, attitudes and consumption habits, interest for buying PDO Futog cabbage

Statements	C1	C2	C3
I have heard for Futog cabbage	4.65	4.73	4.20
I have eaten Futog cabbage	4.06	3.11	3.04
I like Futog cabbage	4.82	3.58	3.85
I would buy PDO Futog acid cabbage at equal price than other similar cabbage	4.83	3.83	4.04
I would buy Futog acid cabbage if the price is higher than other similar cabbage and I would pay 0%, 5%, 10%, 20%, 30% higher price	3.64	2.30	1.59

Source: Our field interviews and elaboration

Table 6.12.: Awareness of existent of Petrovac sausage, attitudes and consumption habits, interest for buying PDO Petrovac sausage

Statements	C1	C2	C3
I have heard for Petrovac sausage	3.67	3.03	2.66
I have eaten Petrovac sausage	2.62	2.44	1.92
I like Petrovac sausage	4.50	3.01	2.97
I would buy PDO Petrovac sausage at equal price as some other similar sausage	4.78	3.19	3.18
I would buy PDO Petrovac sausage if the price is higher than the price of some other similar sausage and I would pay 0%, 5%, 10%, 20%, 30%.% higher price	3.42	2.09	1.30

Source: Our field interviews and elaboration

In order to analyse differences regarding demographical characteristics among clusters t-test and chi-square test were used. All groups are significantly different, regarding the average age (p values are <0.05). Regarding the average level of income, first and second cluster are not significantly different one from one other. But the third cluster is significantly different from other two clusters (in terms of 10%). Clusters are not significantly different in terms of average family members.

Demographic characteristics are presented in table 6.13., with average values for each cluster.

Table 6.13.: Demographic characteristics

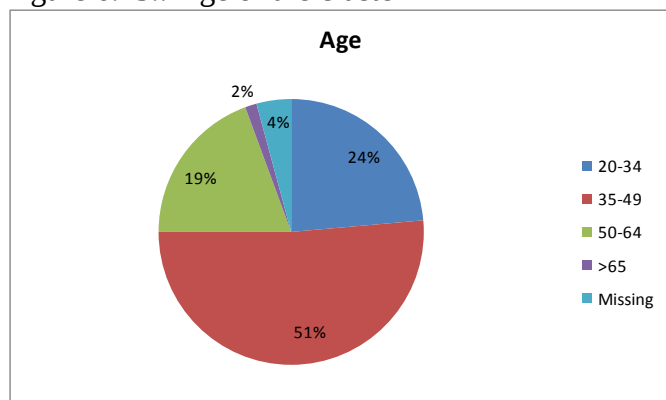
	C1	C2	C3
Gender (% of females)	69.4%	56.2%	77%
Age (average)	41 y	37 y	50 y
Education (majority)	high	high	lower
Family members (average)	3	3	3

Source: Our field interviews and elaboration

6.2.2.1. Cluster 1 – Consumers strongly interested in Futog cabbage and Petrovac sausage

Demographic characteristics: Cluster 1 consists of 72 respondents (28.7% of the sample). 69.4% are female and 30.6% are males. 23.6% of the cluster consists of respondents ranging between 20 and 34 years of age, 51.4% are people aged 35 to 49, 19.4% are 50 to 64 years old, and only 1.4% of the cluster are people older than 65. According to their responses regarding occupation, it can be said that working population dominates in this cluster. Higher percentage of females in this cluster influenced on interest in two PDO products. According to other researches, females were significantly more likely to purchase organic food products, as in this case is for purchasing PDO products (Underhill and Figueroa, 1996, Byrne et al., 1991). Literature also states that females were more likely to pay to avoid genetically modified organisms and irradiation in organic foods (Evans, 2007 from Conner and Christy, 2002). These conclusions can also be connected to PDO/PGI food.

Figure 6.13.: Age of the cluster

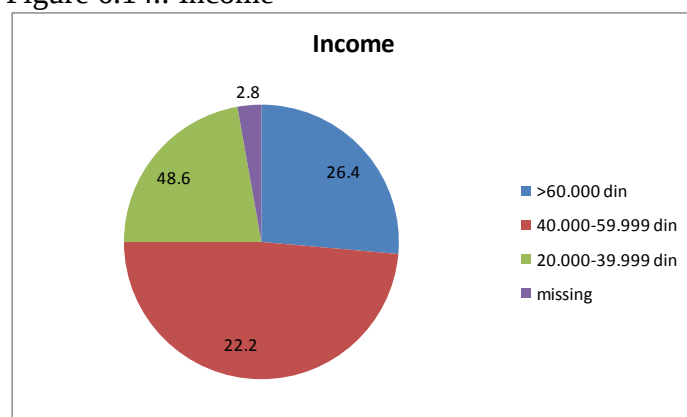


23.6% of the cluster has finished secondary school. 58.3% withhold a faculty degree, and 16.7% have gained Master or PhD certificate. As it was mentioned before, previous studies showed that high level of education usually is positively related to interest in typical products and products with certification of origin (Carbone et al, 2009). Our results seem to confirm this link.

Income and education were found to have significant and positive impact on the probability of buying organic products (Byrne et al., 1991), and thus also PDO labelled products.

When turning to income, 22.2%, have net income between 20.000 and 39.999 Dinars, 48.6% have income in range from 40.000-59.999 Dinars, and 26.4% monthly earns more than 60.000 Dinars. 22.2% of people from this cluster have lower income than average in Serbia, and others have income higher than average. According to the income, it could be expected that these respondents would be interested in buying some products that are considered as quality products, and spend some more money on them.

Figure 6.14.: Income



Majority of people from the cluster, 76.4% of the respondents, live in a town, and 23.6% live in the village. 87.5% of the cluster lives in Novi Sad area. Other people live in Belgrade (4.2%) and other towns in Province of Vojvodina. According to the literature, people from urban areas are more likely than their rural/suburban counterparts to have purchased organic and quality labelled products (Underhill, Figueroa, 1996).

Attitude and habits towards dried sausages: Respondents of the cluster eat dried sausages often. When analysing deeper, it can be said that 55.6% of the cluster responded that they eat dried sausages often, and 27.8% that they eat them very frequently. Respondents like the taste of dried sausages very much, as average mean is 4.72. Furthermore, regarding this question, the highest level of agreement has 75.0% of the cluster, and there is no person that does not like dried sausages. Respondents eat dried sausages because they are easy to prepare (4.18), they use sausages in habitual diet (4.18) and they serve them to their families (4.19). They do not consider dried sausages especially healthy (3.07), so that motivation for buying is more the taste and quick preparation.

Figure 6.15.: Frequency of dried sausages consumption

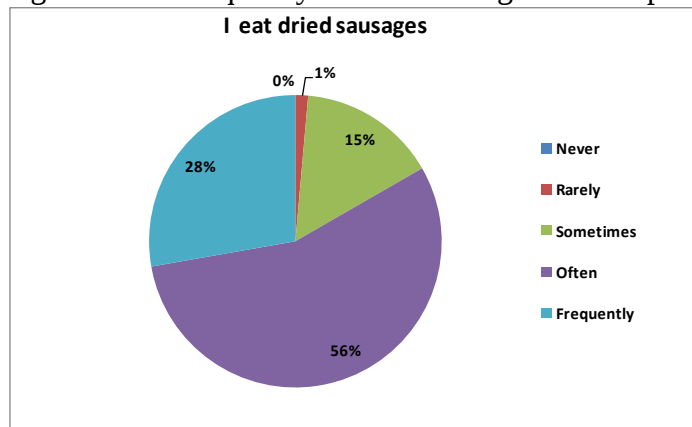
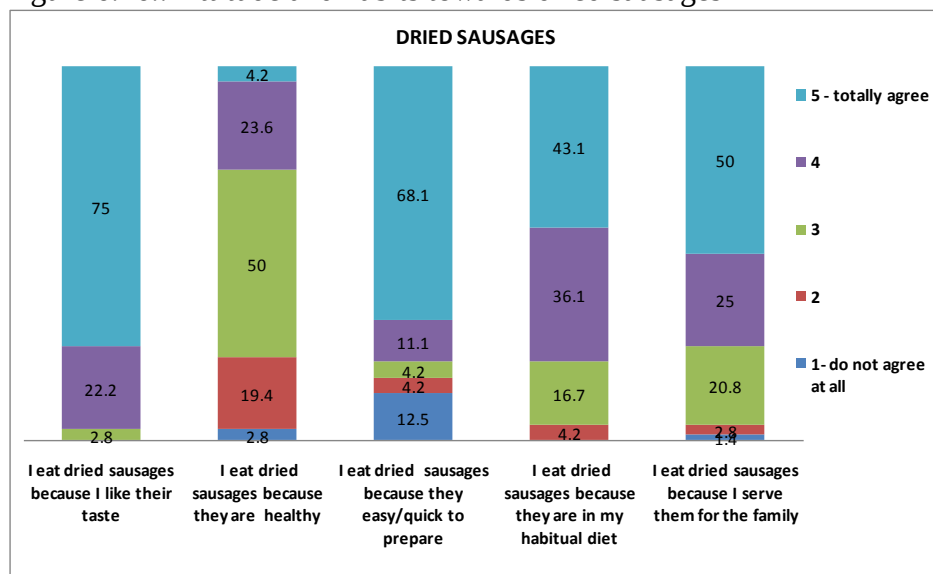


Table 6.14.: Attitude and habits towards dried sausages

	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat dried sausages because I like their taste	-	-	2.8	22.2	75
I eat dried sausages because they are healthy	2.8	19.4	50	23.6	4.2
I eat dried sausages because they easy/quick to prepare	12.5	4.2	4.2	11.1	68.1
I eat dried sausages because they are in my habitual diet	-	4.2	16.7	36.1	43.1
I eat dried sausages because I serve them for the family	1.4	2.8	20.8	25	50

Figure 6.16.: Attitude and habits towards dried sausages



Attitudes towards acid cabbage and consumption habits: People from this cluster eat acid cabbage often. They like acid cabbage very much, as mean is 4.71 for the statement that they eat acid cabbage because they like the taste, and 4.32 for the statement that acid cabbage is in their diet because it is healthy. With the highest level of agreement that they eat acid cabbage because they like the taste, responded 76.4% of the cluster. Mean is 3.75 for the statement that they eat acid cabbage because it is in their habitual diet, and 3.75 for preparing acid cabbage for the family. Main reasons for eating cabbage are related to its taste and nutrition, while the way of preparation is not considered a reason for eating acid cabbage. Easiness of preparation is still important as a factor inducing consumption, but less than taste and nutrition.

Figure 6.17.: Frequency of acid cabbage consumption

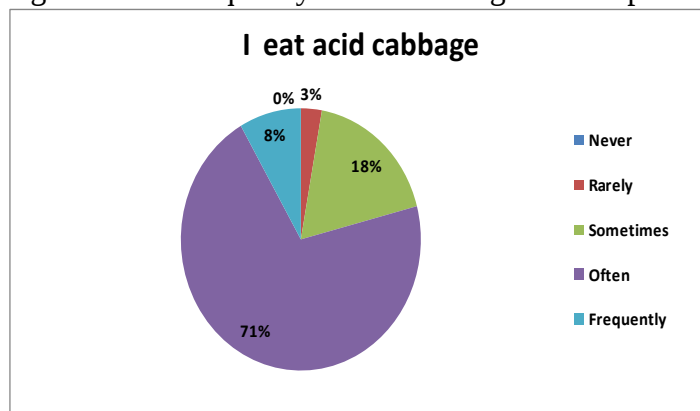
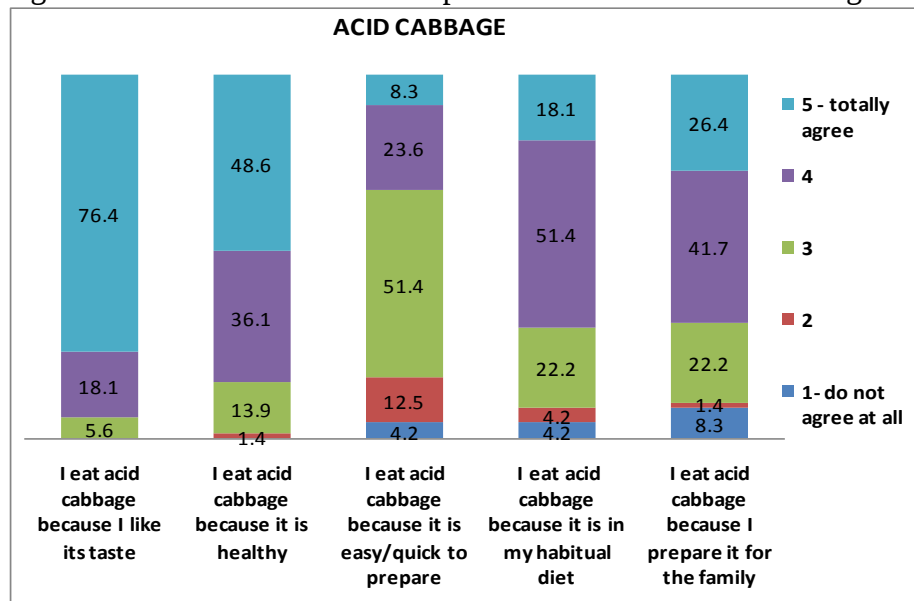


Table 6.15.: Attitude and consumption habits towards acid cabbage

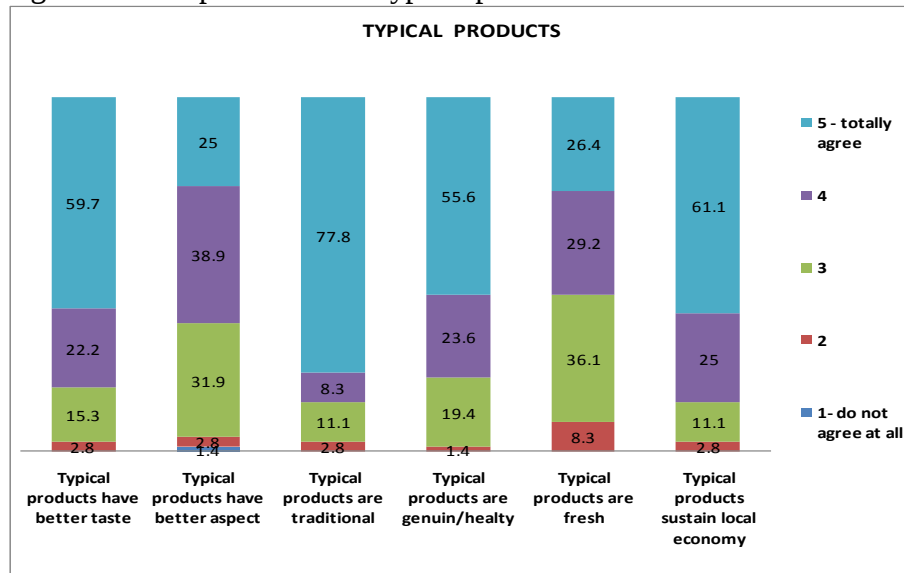
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat acid cabbage because I like its taste	-	-	5.6	18.1	76.4
I eat acid cabbage because it is healthy	-	1.4	13.9	36.1	48.6
I eat acid cabbage because it is easy/quick to prepare	4.2	12.5	51.4	23.6	8.3
I eat acid cabbage because it is in my habitual diet	4.2	4.2	22.2	51.4	18.1
I eat acid cabbage because I prepare it for the family	8.3	1.4	22.2	41.7	26.4

Figure 6.18.: Attitude and consumption habits towards acid cabbage



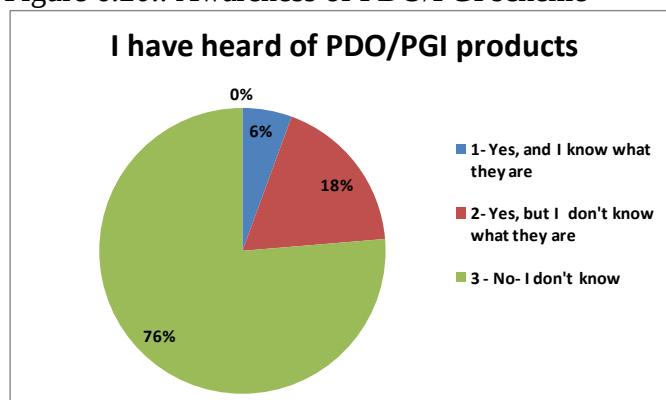
Interest and attitudes for typical products: Respondents from this group are very interested in typical products (4.31). Cluster is characterized with a high level of agreement with the statements that typical products have better taste (4.39), that they are traditional (4.61) and they are healthy (4.33). They agree that typical products sustain local economy (4.44). They responded with average 3.83 that typical products have better aspect, and 3.74 that typical products are fresh.

Figure 6.19.: Opinions about typical products



Labeling and PDO/PGI certification: People from this cluster look often info labels while buying food products. Generally, they have heard of PDO/PGI products, and they know what these products are. These results are in accordance to the high level of education of the group. To explain better, 76.4% know what PDO/PGI products are, and 18.1% have heard but are not sure what this means. Majority of them (51.4%) have sometimes bought some of PDO/PGI products, mostly PDO Futog cabbage and PDO Zlatibor ham. Their level of trust in PDO/PGI certification is 3.85, so it can be said that they trust into this certification. This could be favourable facts for buying PDO Futog cabbage and PDO Petrovac sausage. As respondents are aware of the scheme and even trust in it, they could be interested in buying these products as products with higher quality. Even the fact that they have already bought Futog cabbage confirms these implications.

Figure 6.20.: Awareness of PDO/PGI scheme

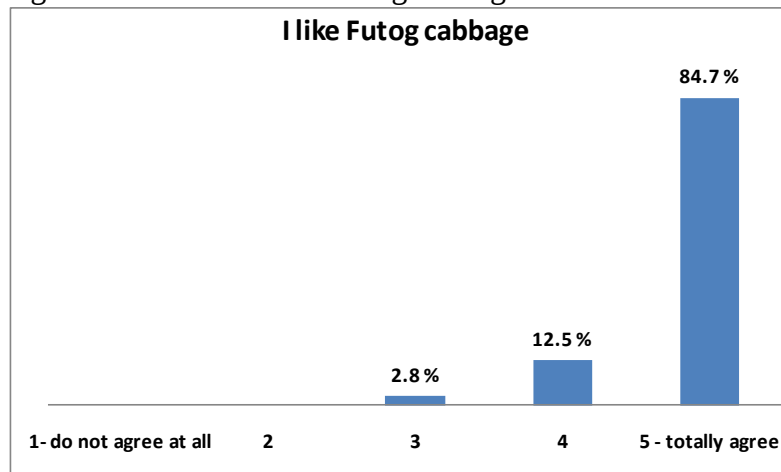


PDO Futog cabbage: Respondents from the cluster have heard very often of Futog cabbage (4.65) and they have eaten PDO Futog cabbage often. They like it very much (4.82). Respondents from this cluster completely agree that they would pay for sure the same price for PDO Futog cabbage as for some other similar acid cabbage (4.83). To explain deeper, 88.9% of the cluster totally agree that they would pay the same price for PDO Futog cabbage, and there is no person that would not pay the same price as for some other acid cabbage.

Table 6.16.: Awareness and consumption of Futog cabbage

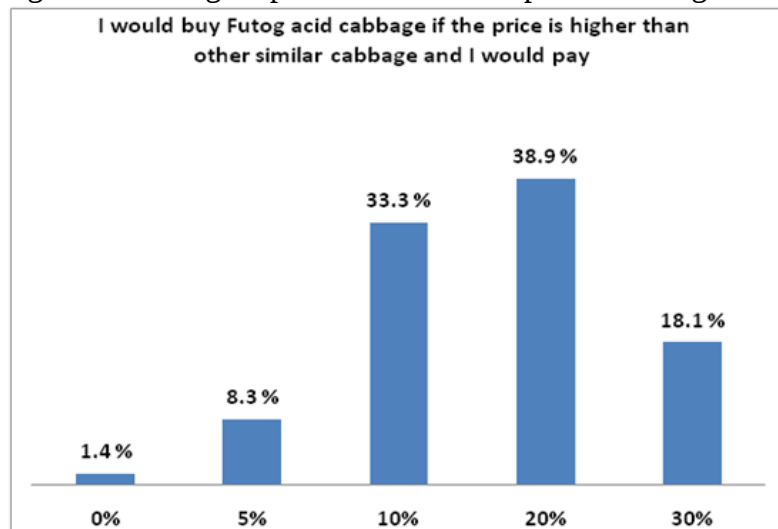
	Never	Rarely	Sometimes	Often	Frequently
I have heard for Futog cabbage	-	-	1.4	31.9	66.7
I have eaten Futog cabbage	-	2.8	19.4	47.2	30,6

Figure 6.21.: Likeness of Futog cabbage



When it comes to willingness to pay, this sample would definitely pay higher price for PDO Futog cabbage than for some other acid cabbage. Furthermore, 38.9% of the cluster would pay 20% more, 33.3% would pay 10% more, and 18.1% would pay even 30% higher price for PDO Futog cabbage.

Figure 6.22.: Higher price that would be paid for Futog acid cabbage

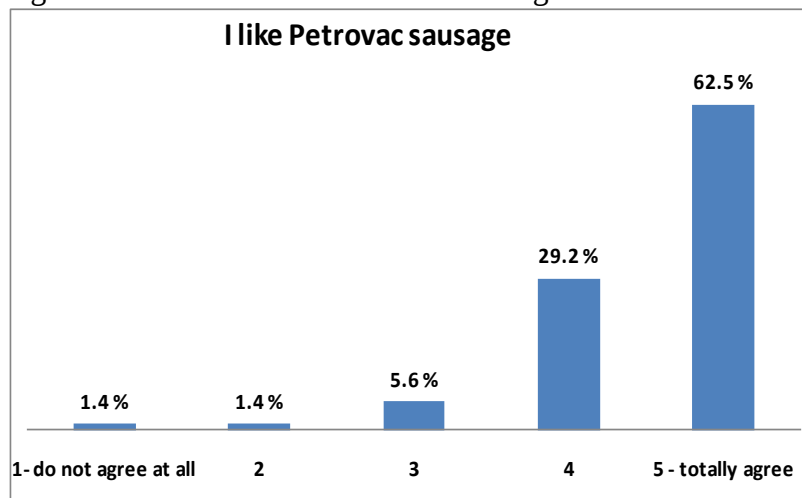


PDO Petrovac sausage: In this cluster people have sometimes heard of Petrovac sausage. Moreover, 47.2% have sometimes heard of it, and 34.7% have often heard of Petrovac sausage, and there is no person who has never heard of it. But, although they have heard of Petrovac sausage, they have eaten it rarely (48.6% have eaten it rarely and 37.5% sometimes). Respondents from the cluster like PDO Petrovac sausage very much (4.50). They would definitely buy PDO Petrovac sausage for the same price as for some other similar sausage (4.78).

Table 6.17.: Awareness and consumption of Petrovac sausage

	Never	Rarely	Sometimes	Often	Frequently
I have heard for Petrovac sausage	-	1.4	47.2	34.7	16.7
I have eaten Petrovac sausage	2.8	48.6	37.5	5.6	5.6

Figure 6.23.: Likeness for Petrovac sausage



Regarding the data already explained for this cluster, if the comparison between knowledge and frequency of eating of Futog cabbage and Petrovac sausage is done, it can be seen that people from this cluster have heard more frequently for Futog cabbage, than for Petrovac sausage. Furthermore, respondents from this cluster have also eaten Futog cabbage much frequently in respect to Petrovac sausage. Also, the comparison of level of likeness is provided in the graph. The highest level of appreciation is more likely in favour of Futog cabbage than in Petrovac sausage. Comparisons are shown on the following graphs 6.24; 6.25 and 6.26.

Figure 6.24.: Awareness of existent of PDO Futog cabbage and PDO Petrovac sausage

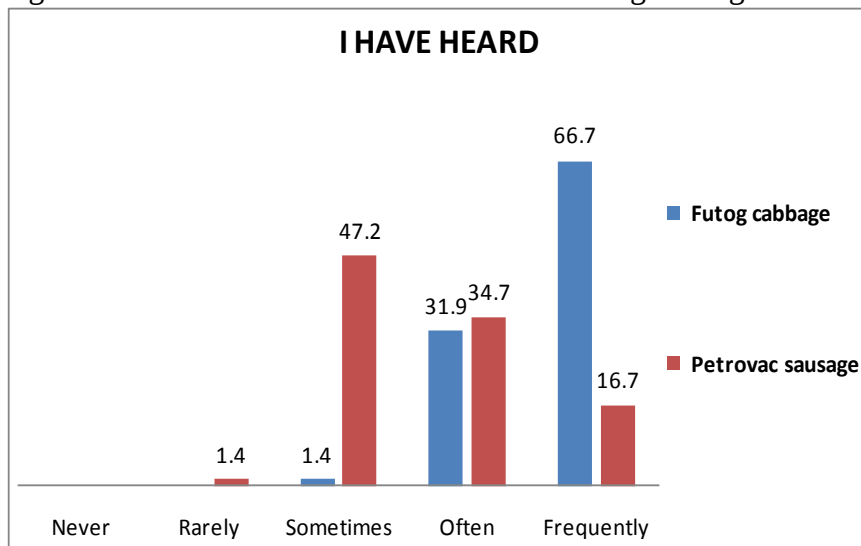


Figure 6.25.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

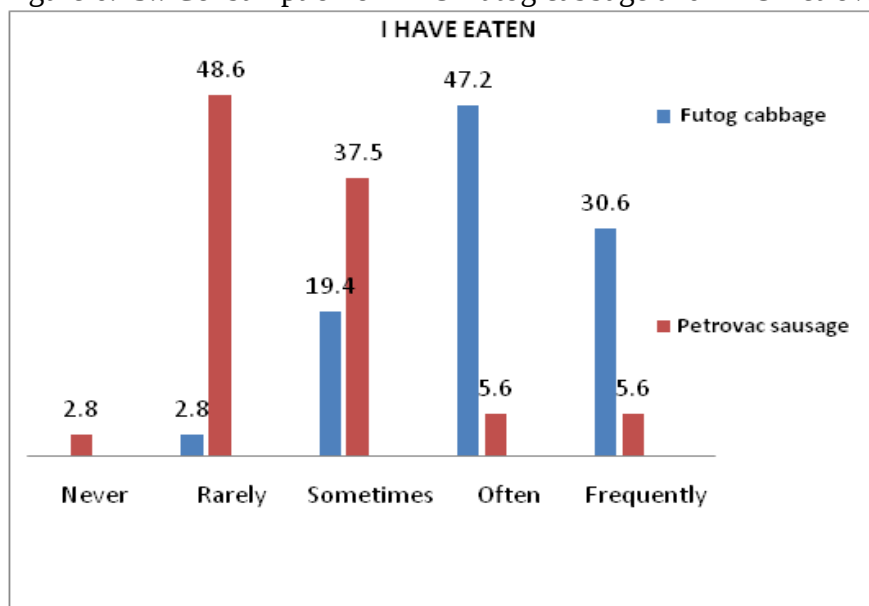
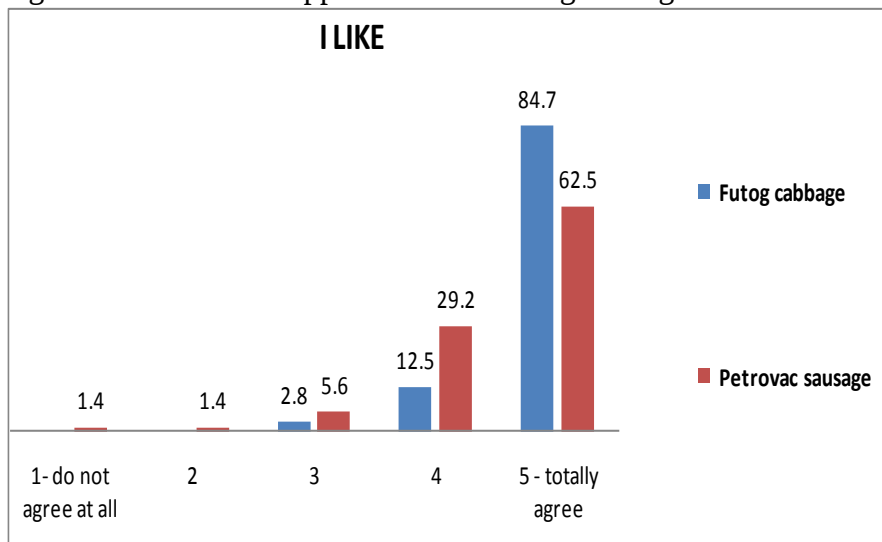
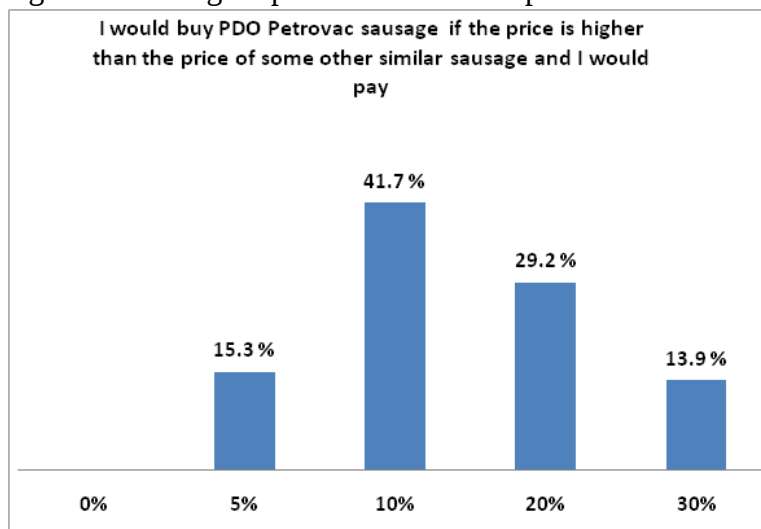


Figure 6.26.: Level of appreciation for Futog cabbage and Petrovac sausage



Considering willingness to pay higher price for PDO Petrovac sausage in respect to some other similar sausage, it can be concluded that this group of respondents would definitely pay higher price for it. There is no person from this group that responded negatively. 41.7% of the cluster would pay 10% higher price, 29.2% would pay 20% higher price, 15.3% would pay 5% more and 13.9% of the cluster would pay even 30% higher price for the Petrovac sausage.

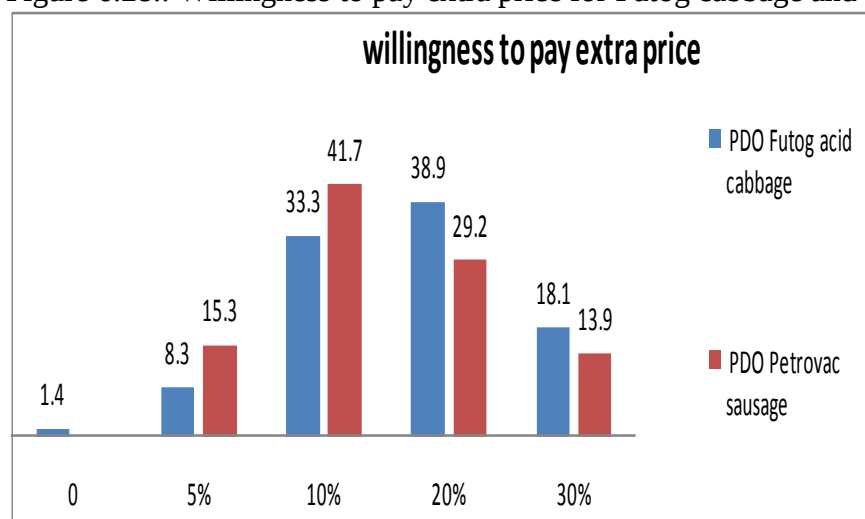
Figure 6.27.: Higher price that would be paid for PDO Petrovac sausage (in%)



Comparing willingness to pay higher price for PDO Petrovac sausage with willingness to pay higher price for Futog cabbage, it can be seen that 5% and 10% higher price in respect to some other similar product respondents would pay for Petrovac sausage, but 20% and 30%

higher price more people would pay for PDO Futog cabbage. Figure 6.28 shows comparison of willingness to pay for Futog cabbage and Petrovac sausage of the respondents from the cluster.

Figure 6.28.: Willingness to pay extra price for Futog cabbage and Petrovac sausage



Summarizing: The profile for the cluster can be summed-up as follows: it comprises mostly females, younger, between 35 and 45 years of age, highly educated. They have families of, on the average, 3 members. They were born in Serbia where they still live, mostly in Novi Sad. They have level of income above the national average.

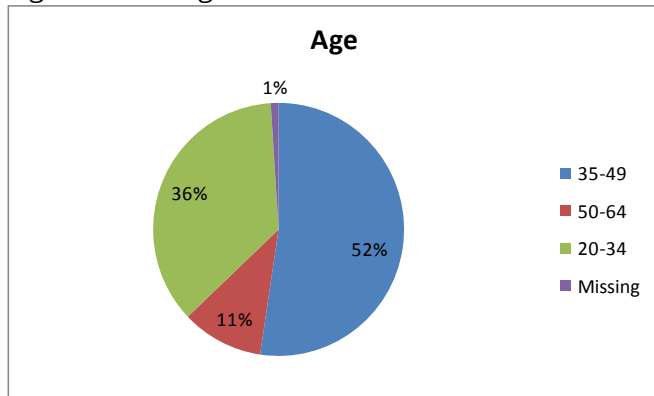
Respondents from the cluster like to eat both acid cabbage and dried sausages very much. They have both products in their diet often. Furthermore, they have high level of interest into typical products, and positive attitudes towards them. These, as well as awareness and trust into PDO/PGI certification are positive features for purchasing one or both PDO products. Besides, the level of income allows them to buy some high quality and expensive food items. This is also important premise for purchasing Futog cabbage and Petrovac sausage, and if it is put into a consideration together with their diet habits, taste and interests, it brings high level of possibility that this cluster would buy both of researched products.

This group of people has heard of PDO Futog cabbage and PDO Petrovac sausage and likes to eat them very much. They would definitely pay the same price for these products as for some other similar products. Even more, people from this cluster are also definitely willing to pay some higher price for both of these products, probably in range of 10-20% more.

6.2.2.2. Cluster 2 – Consumers moderately interested in Futog cabbage and Petrovac sausage

Demographic characteristics: This cluster represents the largest share of our sample (41.83%) as it consists of 105 people, from which 56.2% are female and 43.8% male. 36.2% of the cluster are people between 20 and 34 years old, 52.4% are people aging between 35 and 49, and 10.5% are in the age group from 50 to 65 years old. As in the first cluster, around half of the cluster consists of people from 35 to 49 years old. All respondents from the group work. 29.5% of the cluster live in families with 4 members, 27.6% with 3 members, 19% with 2 members, 6.7% have families with 5 members and 4.8% live alone.

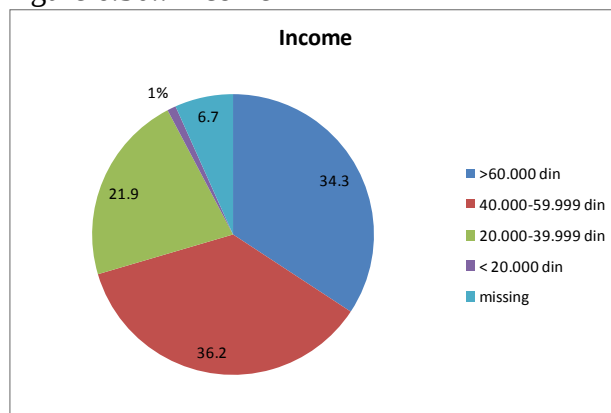
Figure 6.29.: Age of the cluster



With high level of education is 81% of the group. Furthermore, 50.5% of the group is with faculty education, and also 30.5% of the group has Master or PhD certificate. 18.1% of this group has secondary school education. Also the level of education of this cluster is very similar to level of education of the first cluster.

Income lower than 20.000 Dinars has 0.9% of the cluster, 21.9% of the cluster has monthly income in range between 20.000 and 39.999 Dinars, 36.2% of the group has income between 40.000 and 59.999 Dinars and 34.3% of the group even more than 60.000 Dinars. Analysing the income levels in this group, it can be said that majority of this group has income higher than average in Serbia. When compared to the first cluster, it can be seen that they are similar in respect of income.

Figure 6.30.: Income



61.4% of the people from the cluster were born in Serbia, and others were born in other republics of former Yugoslavia (Bosnia and Herzegovina, Croatia, Montenegro and Slovenia). The fact that around 40% of the people indicated that they were born in Yugoslavia, or some of former republics, can be explained with the fact that until the 1990's, Socialistic Federative Republic of Yugoslavia existed, and all respondents that were born in that time, officially were born in Yugoslavia. That is the reason why some people indicated Yugoslavia as the country of their birth. Furthermore, during the wars in the same period, many people from Croatia, Slovenia and Bosnia and Herzegovina moved to Serbia, where they live now. Because of these facts, it can be considered that country of birth, in this case, does not affect on the preferences towards dried sausages and acid cabbage. Nowadays, all of them live in Serbia. 96.2% of this group lives in town. 51.4% of the group lives in Novi Sad, 20% in Belgrade, 1% of the group lives in southern Serbian city of Niš, and other respondents live mostly in smaller towns in the Province of Vojvodina.

Attitudes towards dried sausages and consumption habits: People of the cluster eat dried sausages sometimes. It means that frequency of consumption of dried sausages is lower of frequency of the first cluster, where people eat them often. It can be said that respondents like the taste of died sausages but not very much, regarding the first cluster, as average mean is 3.75. Respondents do not eat dried sausages because they are quick/easy to prepare (1.10), and for them time of preparation is not as important as for the respondents from the first cluster (4.18). Besides, they do not eat sausages because sausages are in habitual diet (1.83), and that is also very different habit in respect to the first cluster, where this is very important fact for eating dried

sausages (4.18). They do not find motivation for eating sausages because they serve them to their families (1.78), as people from the first cluster do (4.19). Although, these respondents do not eat dried sausages because they are healthy (1.75).

Figure 6.31.: Frequency of dried sausages consumption

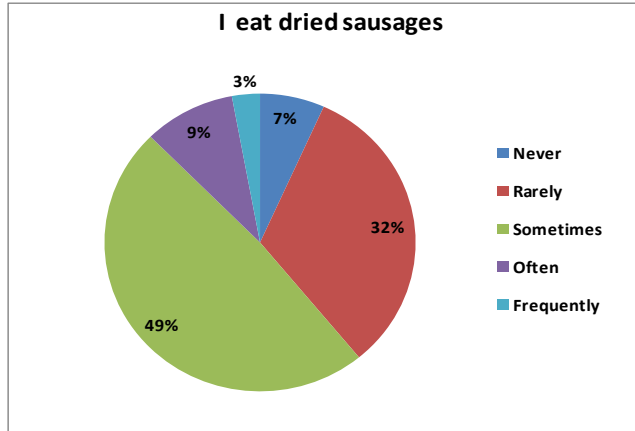
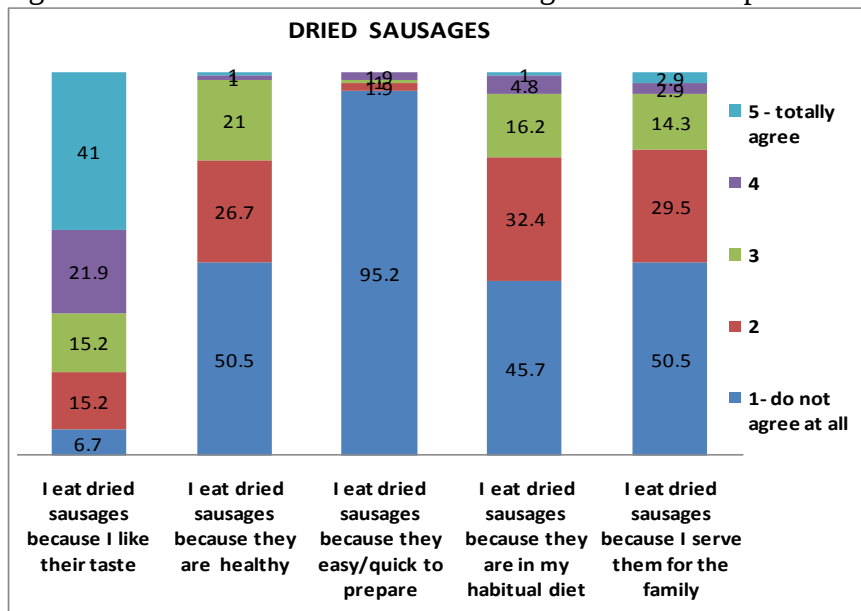


Table 6.18.: Attitude towards dried sausages and consumption habits

	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat dried sausages because I like their taste	6.7	15.2	15.2	21.9	41
I eat dried sausages because they are healthy	50.5	26.7	21	1	1
I eat dried sausages because they easy/quick to prepare	95.2	1.9	1	1.9	-
I eat dried sausages because they are in my habitual diet	45.7	32.4	16.2	4.8	1
I eat dried sausages because I serve them for the family	50.5	29.5	14.3	2.9	2.9

Figure 6.32.: Attitude towards dried sausages and consumption habits



Attitudes towards acid cabbage and consumption habits: Respondents from the cluster eat acid cabbage sometimes, which is less frequent than people from the first cluster who eat it often. Looking their preferences towards acid cabbage, following conclusions can be made: respondents eat acid cabbage because they like the taste (3.61), and acid cabbage is in their diet because it is healthy (3.70). They do not eat acid cabbage because it is in their habitual diet (1.82), which is different in respect from habitual diet habits from the first cluster. They find less motivation for consumption of acid cabbage because of preparing it for the family (1.98), as respondents from the first cluster do. Easiness of preparing of acid cabbage is less important for this group (2.34).

Figure 6.33.: Frequency of acid cabbage consumption

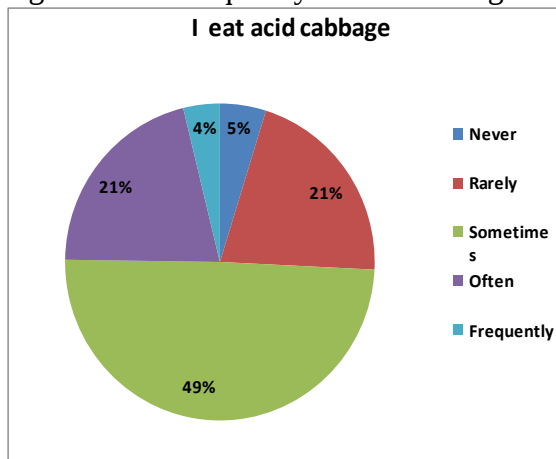
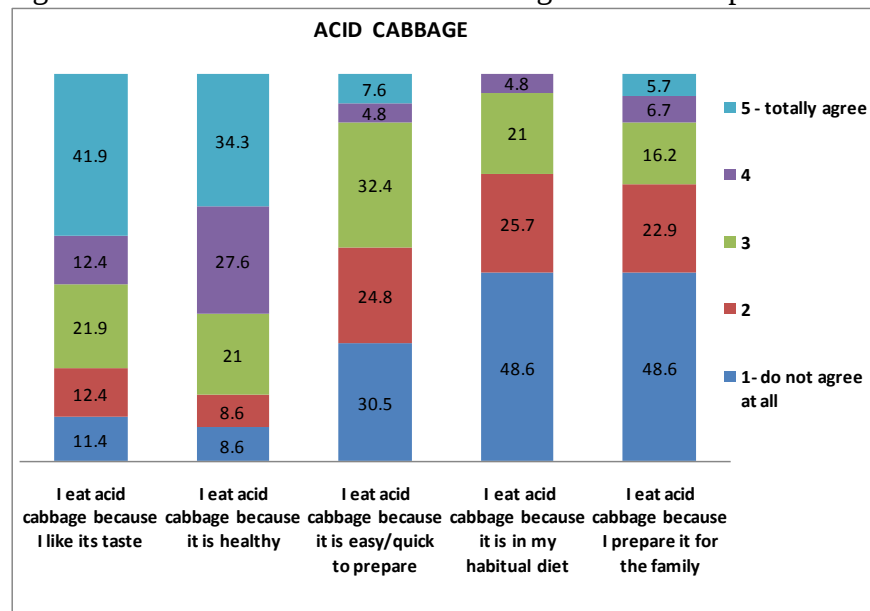


Table 6.19.: Attitude towards acid cabbage and consumption habits

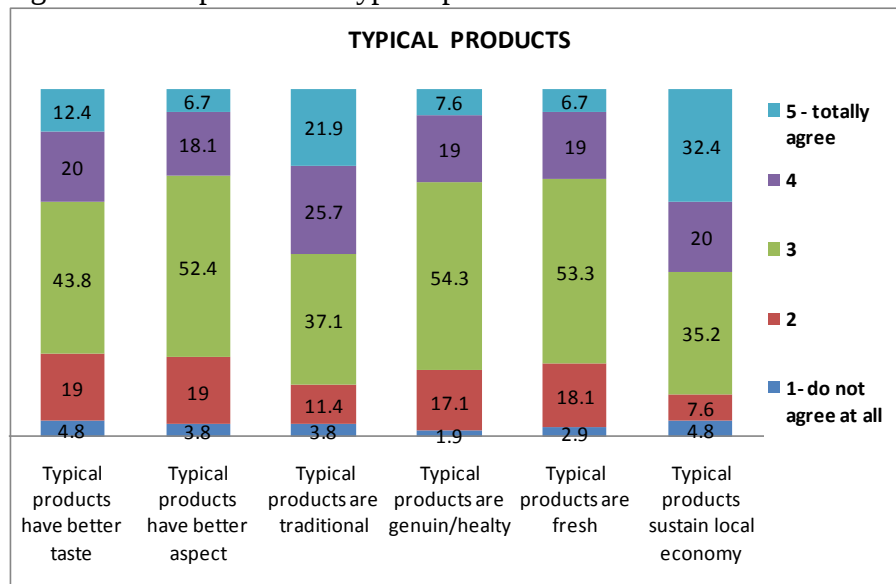
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat acid cabbage because I like its taste	11.4	12.4	21.9	12.4	41.9
I eat acid cabbage because it is healthy	8.6	8.6	21	27.6	34.3
I eat acid cabbage because it is easy/quick to prepare	30.5	24.8	32.4	4.8	7.6
I eat acid cabbage because it is in my habitual diet	48.6	25.7	21	4.8	-
I eat acid cabbage because I prepare it for the family	48.6	22.9	16.2	6.7	5.7

Figure 6.34.: Attitude towards acid cabbage and consumption habits



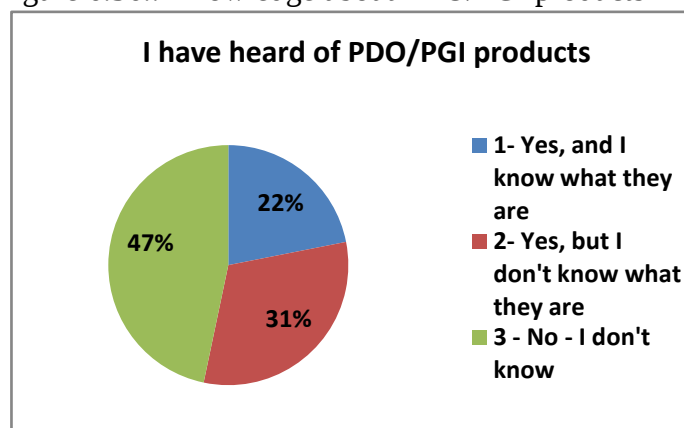
Interest and attitudes for typical products: Interest of this group for typical products is not very high (3.20) in respect of the first cluster. Their opinions regarding typical products are the following: typical products have better taste – 3.16; typical products have better aspect - 3.05, typical products are traditional - 3.50, typical products are healthy – 3.13, typical products are fresh – 3.09, typical products sustain local economy – 3.68. According to these answers, it can be expected from this group to have smaller interest in purchasing food products just because they are typical, regarding respondents from the first cluster.

Figure 6.35.: Opinions for typical products



Labelling and PDO/PGI certification: Respondents from this cluster look into labels often when they buy food. This habit is the same as the respondents from the first cluster have. Regarding their awareness about existing PDO/PGI scheme, 21.9% have never heard of it and do not know what the scheme means; 31.4% have heard about these products, but they are not sure what the scheme means; and other 46.7% of the cluster is familiar with meaning and purpose of the scheme. But, although they have heard of the scheme, respondents from this group have rarely bought some of the PDO/PGI products. 22.9% of them have never bought any of them. One of the reasons for that could be found in their level of trust in PDO/PGI certification which is 3.21, and the other in their interests towards typical products.

Figure 6.36.: Knowledge about PDO/PGI products

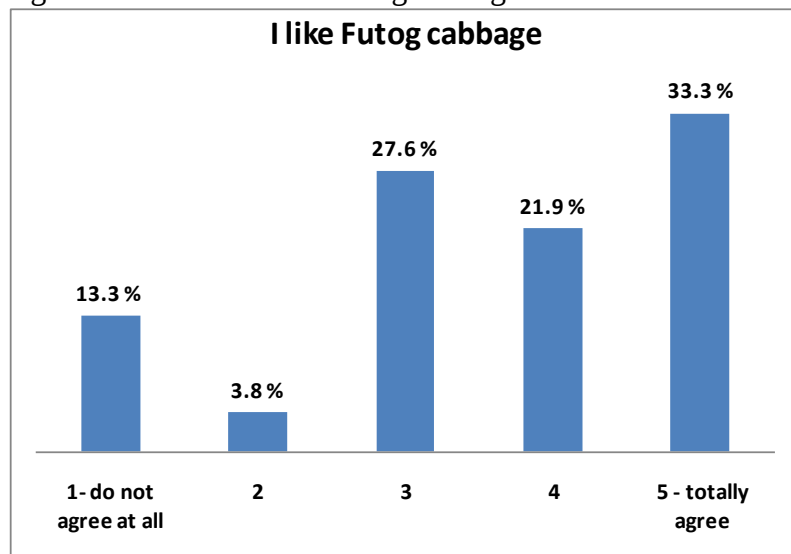


PDO Futog cabbage: Respondents from the cluster have heard very often of Futog cabbage (4.73), but they have eaten it sometimes. They have eaten it less often regarding the respondents from the first cluster. They like Futog cabbage (3.58), but the less than respondents from the first cluster do (4.82).

Table 6.20.: Awareness and consumption of Futog cabbage

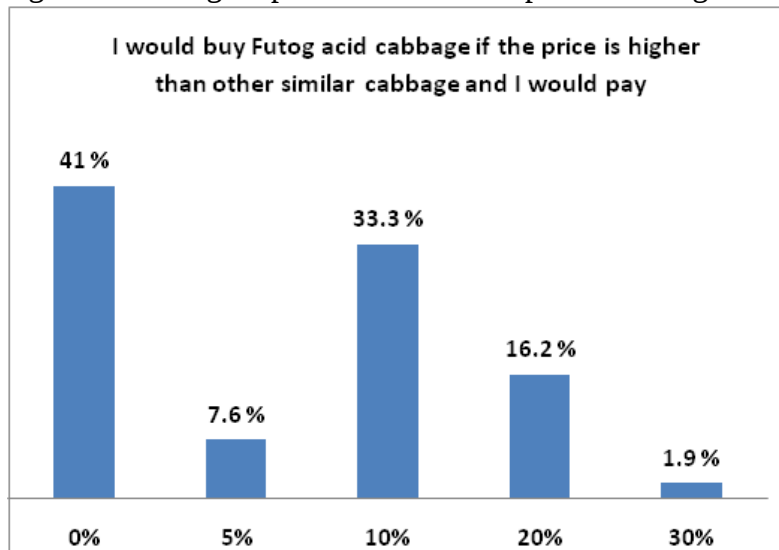
	Never	Rarely	Sometimes	Often	Frequently
I have heard for Futog cabbage	1	3.8	4.8	1.9	88.6
I have eaten Futog cabbage	14.3	11.4	38.1	21	15.2

Figure 6.37.: Likeness of Futog cabbage



Respondents from the cluster would pay the same price for PDO Futog cabbage as for some other similar acid cabbage (3.83). Analysing deeper, majority of the group, 44.8% totally agree that they would pay the same price for PDO Futog cabbage as for some other cabbage. Only 7.6% of the group would not pay the same price for PDO Futog cabbage.

Figure 6.38.: Higher price that would be paid for Futog cabbage (in %)



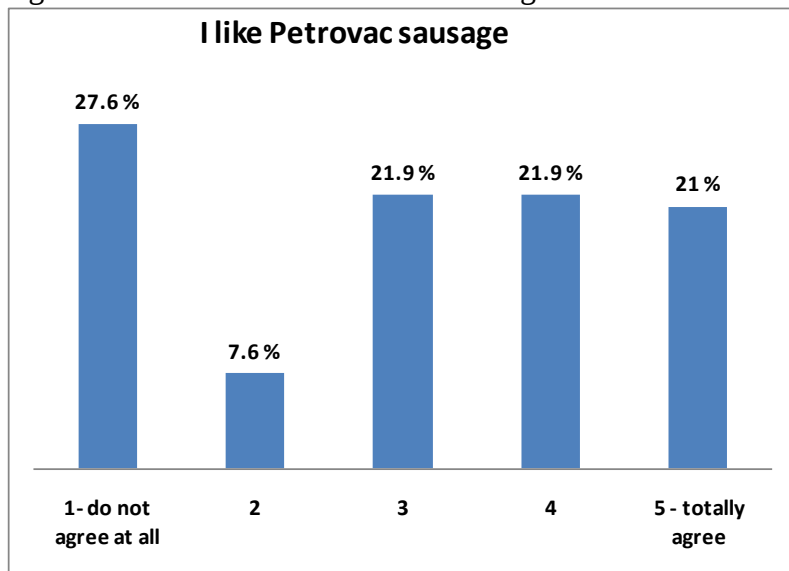
When analysing whether respondents from the group would or would not pay any higher price, it can be concluded that average person would pay 5% higher price for PDO Futog cabbage (2.30 which corresponds to 5% more). Their willingness to pay extra price for PDO Futog cabbage is lower than willingness respondents from the first cluster have, as they are willing to pay 10-20% higher price. If data are analysed much deeper, it can be seen that 59% of the group would pay higher price for PDO Futog cabbage. Furthermore, 33.3% of the cluster would pay 10% more for it, 16.2% would pay 20% more, 7.6% would pay 5% more, and 1.9% of the group would pay 30% higher price for PDO Futog cabbage than for some other acid cabbage.

PDO Petrovac sausage: In this cluster people have sometimes heard of Petrovac sausage, and they have eaten it rarely. The average level of likeness of Petrovac sausage is 3.01, lower than it is from the first cluster (4.50).

Table 6.21.: Awareness and consumption of Petrovac sausage

	Never	Rarely	Sometimes	Often	Frequently
I have heard for Petrovac sausage	23.8	3.8	36.2	18.1	18.1
I have eaten Petrovac sausage	30.5	14.3	41.9	7.6	5.7

Figure 6.39.: Likeness of Petrovac sausage



As it can be seen from the following graphs people from this cluster, as well as it was the case in the first cluster, are more familiar with existence of Futog cabbage than Petrovac sausage, and they have also consummated it more. Again, more consumers chose the higher level of appreciation for Futog cabbage than for Petrovac sausage. These data are shown on Figures 6.40; 6.41 and 6.42.

Figure 6.40.: Awareness of existence of PDO Futog cabbage and PDO Petrovac sausage

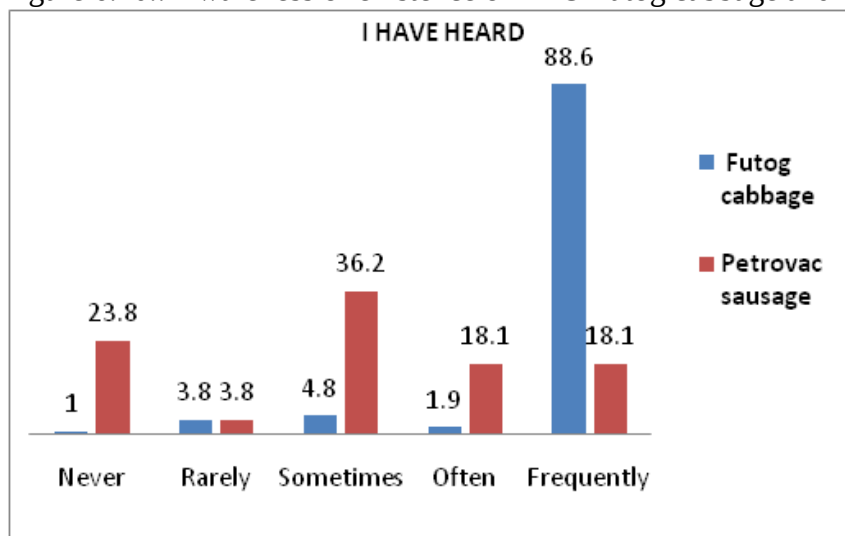


Figure 6.41.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

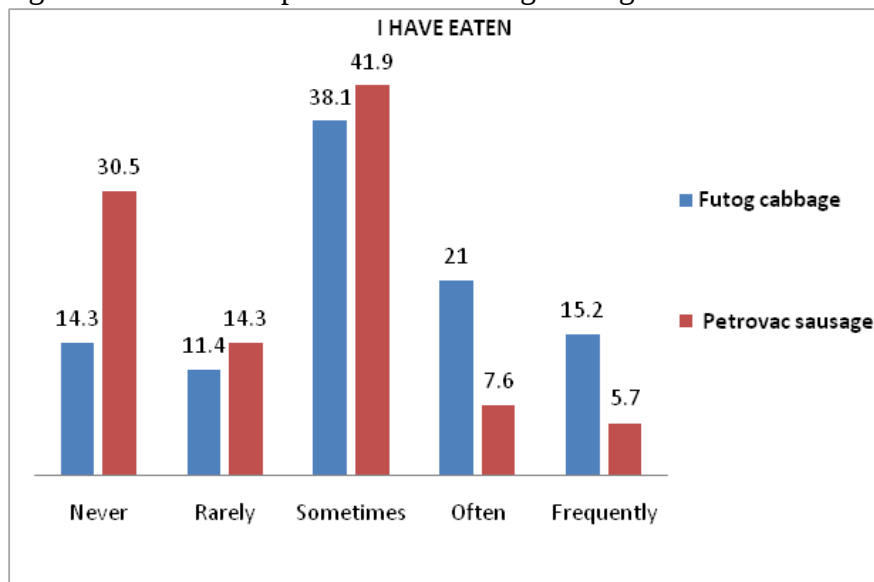
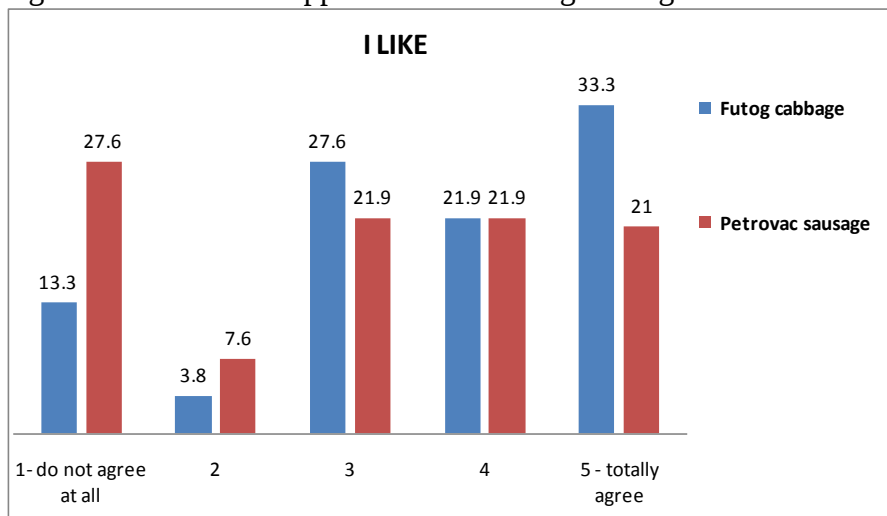
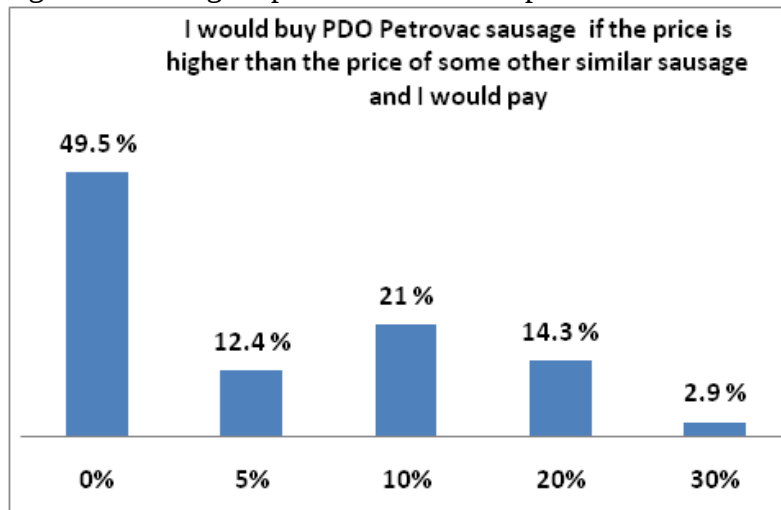


Figure 6.42.: Level of appreciation for Futog cabbage and Petrovac sausage



Respondents would buy PDO Petrovac sausage for the same price as for some other similar sausage (3.19). Level of agreement with this statement is lower than level of agreement with the same statement from the first cluster (4.78). Moreover, 20% of the cluster would not pay the same price for it, and 27.6% totally agree that they would pay the same price for Petrovac sausage.

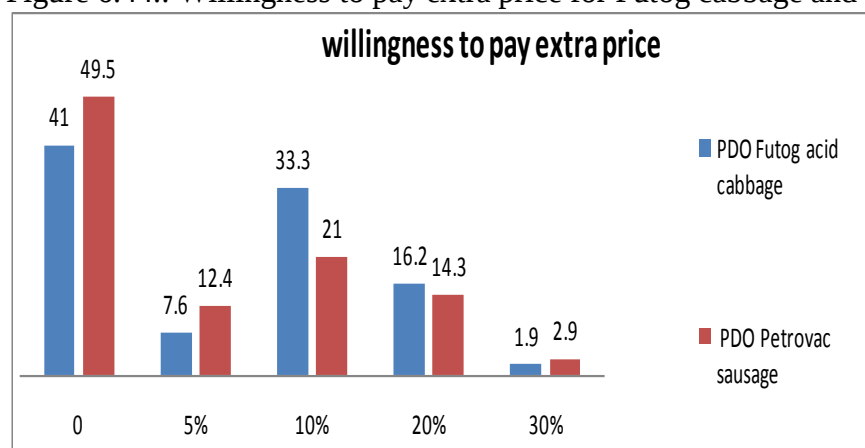
Figure 6.43.: Higher price that would be paid for Petrovac sausage (in %)



This group would pay for PDO Petrovac sausage 5% higher price than for some other sausage (the average mean is 2.09 which corresponds to 5% higher price). But with deeper analysis, it can be seen that half of the group would pay higher price (50.5%) and the other half would not pay any higher price. Furthermore, 21% of the cluster is willing to pay 10% more, 14.3% would pay 20% more, 12.4% would pay 5% higher price for Petrovac sausage. Only 2.9% of the cluster would pay 30% higher price for it. As it can be seen, people from this cluster would pay some extra price, but lower than what people from the first cluster would pay.

On the graph 6.44 the comparison between willingness to pay of this cluster for Futog cabbage and Petrovac sausage is provided. As it has been said, average of the cluster would pay for both products 5% extra price, but on this graph it can be seen that differences between respondents' willingness to pay for some of these products are not significant. More respondents from the second cluster would pay 5% higher price for Petrovac sausage, but 10% and 20% higher price for Futog cabbage. But, in this cluster there are more respondents that would pay 30% higher price for Petrovac sausage, which is different from willingness to pay more in the first cluster.

Figure 6.44.: Willingness to pay extra price for Futog cabbage and Petrovac sausage (in %)



Summarizing: This cluster is formed of both men and women; in particular it is worth underlining that it has the highest share of males in the sample. Mostly, cluster consists of young people, with very high level of education, and with a work that brings income which can be considered as quite high in Serbia. They have families with 3 members, and live in Serbia, in towns of Novi Sad or Belgrade.

In their habitual daily diet both dried sausages and acid cabbage can sometimes be found, which is less frequent in respect to first cluster where people eat these products often. They like to eat these products, but less than it is the case in the first cluster.

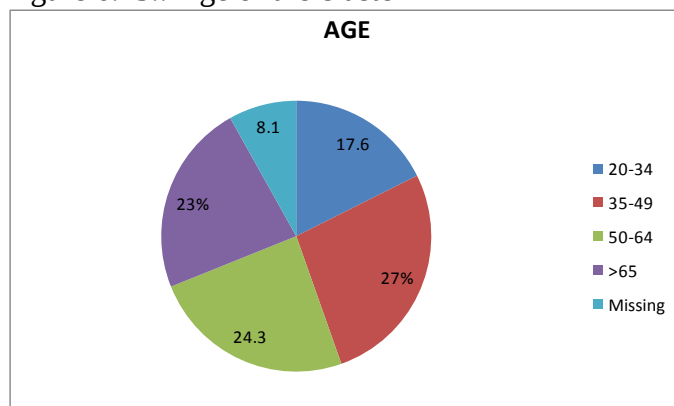
Their interest in typical food products is not so high compared to respondents from the first cluster. The level of awareness about existence and trust into PDO/PGI exists, but they buy these products rarely.

These consumers would pay the same price for PDO sausage and Futog cabbage as for some other similar products. Although there is possibility that respondents from the second cluster would pay slightly more for both PDO Futog cabbage and PDO Petrovac sausage, than for generic substitutes. Although willingness to pay higher price for both products exists, it is definitely lower, compared to the first cluster.

6.2.2.3. Cluster 3 – Consumers not willing to pay any premium price for Futog cabbage and Petrovac sausage

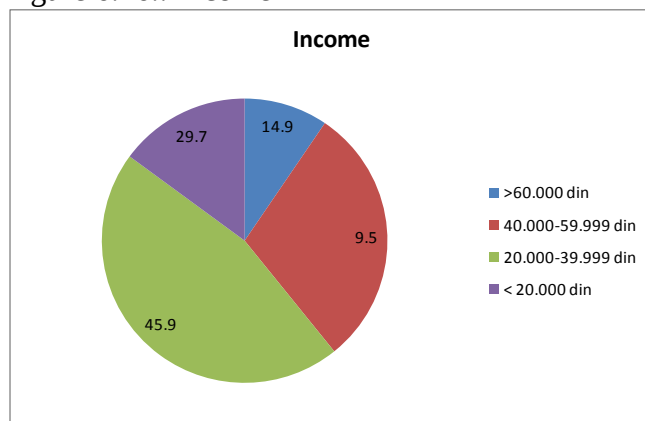
Demographic characteristics: Cluster consists of 74 respondents (29.5% of the sample). This cluster has the largest share of females regarding all three clusters, with 77% of females. 17.6% are respondents in the age group younger than 34, people of aging between 35 and 49, and represent 27% of the cluster; 24.3% are between 50 and 64, 23% are people older than 65. In this group, besides employed people, there are people who are retired, housewives and unemployed. In this cluster there is 5.4% of people who have finished only primary school, 55.4% of the cluster have secondary school education, 27% are with faculty education, 10.8% withhold Master or PhD certificate. Mostly, they live in 4 members families (39.2%). 1.4% of the respondents from the group live alone, 24.3% have families with 2 members, 21.6% with 3, 4.1% with 5, and 1.4% with 6 family members.

Figure 6.45.: Age of the cluster



Regarding their income, 14.9% earns less than 20.000 Dinars, 45.9% of the cluster earns between 21.000 and 40.000 Dinars. 29.7% have income in range of 41.000 -60.000 Dinars, and only 9.5% of the group has income higher than 61.000 Dinars. It can be said that in this cluster people do not have high salaries, and even earn less in respect to other two clusters, which can be a limitation for any type of purchase.

Figure 6.46.: Income



According to demographic and socio-economic characteristics of this cluster and the literature, which says that income significantly influenced willingness to pay, and the fact that females, more often than males, are typically the respondents in the household who shop for groceries and therefore may be more food budget-conscious (Maynard et al., 2003), it is understandable why respondents from this cluster would not pay any higher price for either of two products.

Majority of respondents, 74.3% were born in Republic of Serbia, and all the others, apart from 1 person that was born in Germany, were born in some of ex-Yugoslavian republics. Currently, 98.6% of them live in Serbia, and 1.4% in Bosnia and Herzegovina. 91.9% of them live in towns, mostly (83.8%) in Novi Sad. Other respondents live in Belgrade (2.7%), and other towns both in central Serbia and Vojvodina.

Attitudes towards dried sausages and consumption habits: People from the cluster eat dried sausages sometimes, but more frequently than respondents from the second cluster, and less than respondents from the first cluster. It can be said that they like the taste of dried sausages very much, as average mean is 4.27. All the respondents from the cluster eat and like dried sausages. The main reason for eating dried sausage is its taste. Respondents also eat dried sausages because they are easy to prepare (3.42), but time for preparation is less important to them, than to the respondents from the first cluster, and more important than to those from the second cluster. They also eat dried sausages because sausages are in their habitual diet (3.57), but for them, this is a less of a motive than for the first cluster, and higher than for the second cluster.

Motivation to serve them to their families for people from this cluster is important (3.84), especially in comparison to the same motivation for the people of second cluster. They eat dried sausages less because of their nutrition values (2.90).

Figure 6.47.: Frequency of dried sausages consumption

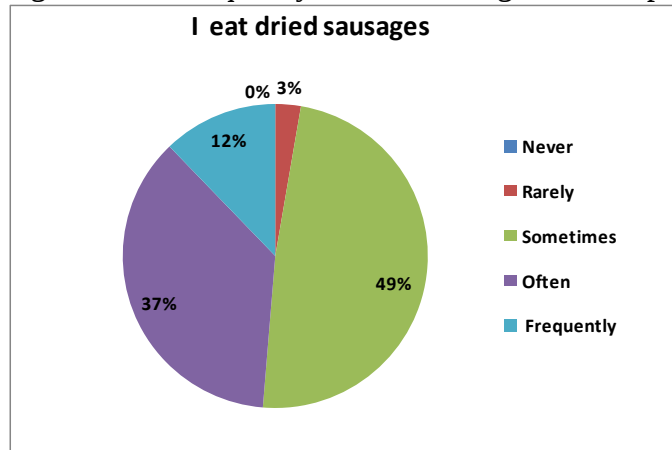
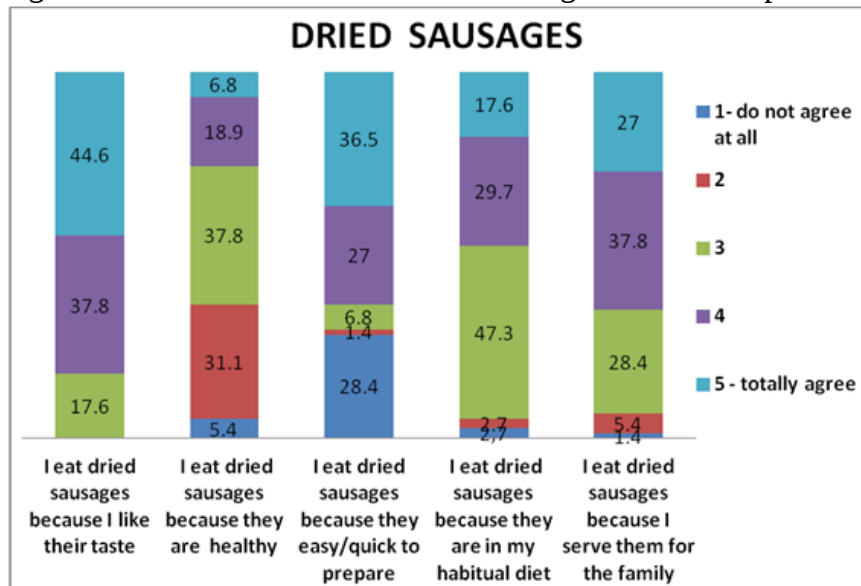


Table 6.22.: Attitudes towards dried sausages and consumption habits

	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat dried sausages because I like their taste	-	-	17.6	37.8	44.6
I eat dried sausages because they are healthy	5.4	31.1	37.8	18.9	6.8
I eat dried sausages because they easy/quick to prepare	28.4	1.4	6.8	27	36.5
I eat dried sausages because they are in my habitual diet	2.7	2.7	47.3	29.7	17.6
I eat dried sausages because I serve them for the family	1.4	5.4	28.4	37.8	27

Figure 6.48.: Attitudes towards dried sausages and consumption habits



Attitudes towards acid cabbage and consumption habits: Cluster members eat acid cabbage sometimes; mostly because they like its taste (4.09) and because it is healthy (3.95). Respondents from all three clusters like to eat acid cabbage, and also all of them have similar opinion about its nutritional value. Other reasons for eating acid cabbage respondents from this cluster found in their habitual diet (3.24), and for them this diet habit is more important than for the people from the second cluster. Motivation for eating acid cabbage this group finds in preparing acid cabbage for the family (3.28), but much less in easiness of preparation (2.81).

Figure 6.49.: Frequency of acid cabbage consumption

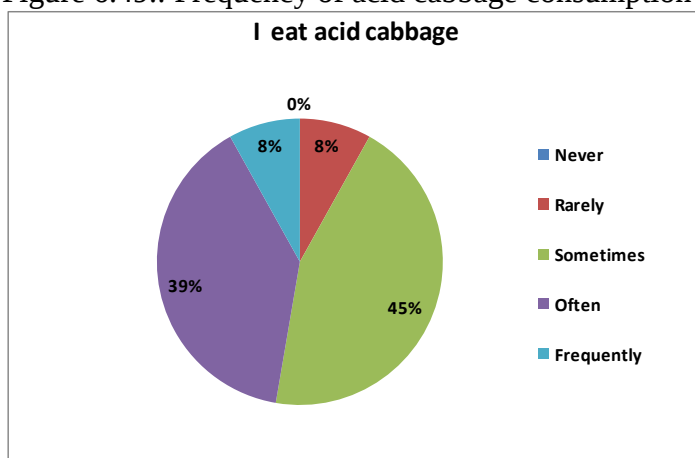
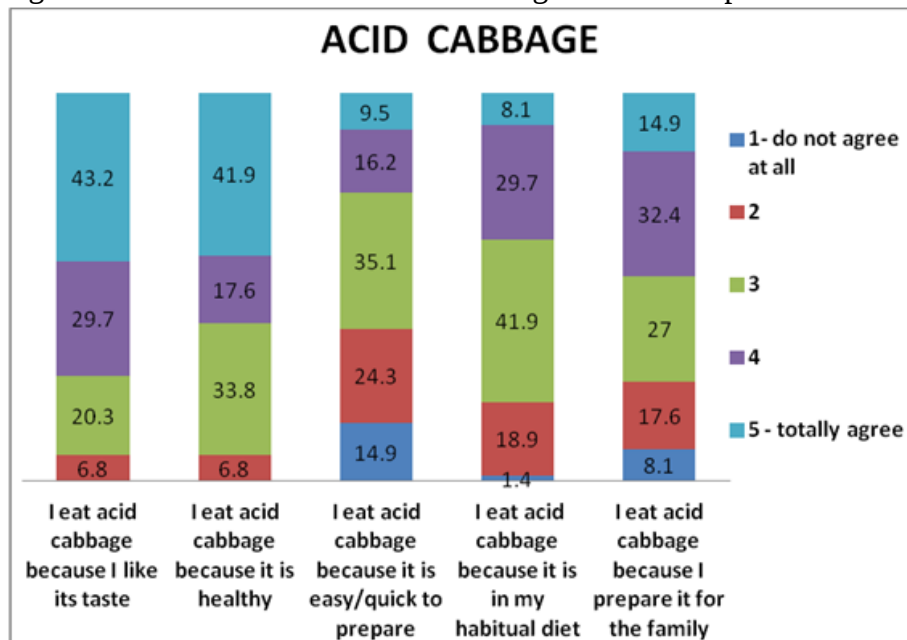


Table 6.23.: Attitude towards acid cabbage and consumption habits

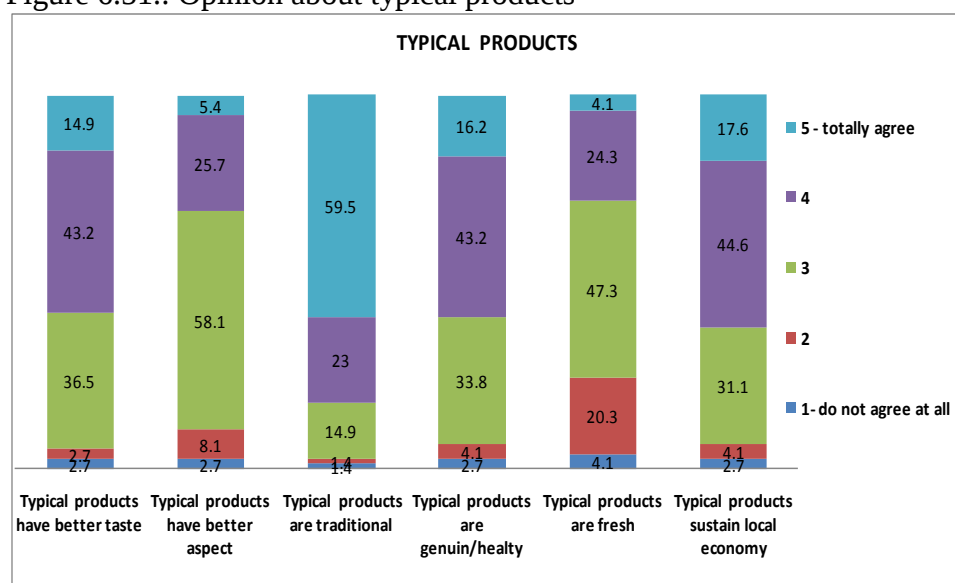
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
I eat acid cabbage because I like its taste	-	6.8	20.3	29.7	43.2
I eat acid cabbage because it is healthy	-	6.8	33.8	17.6	41.9
I eat acid cabbage because it is easy/quick to prepare	14.9	24.3	35.1	16.2	9.5
I eat acid cabbage because it is in my habitual diet	1.4	18.9	41.9	29.7	8.1
I eat acid cabbage because I prepare it for the family	8.1	17.6	27	32.4	14.9

Figure 6.50.: Attitude towards acid cabbage and consumption habits



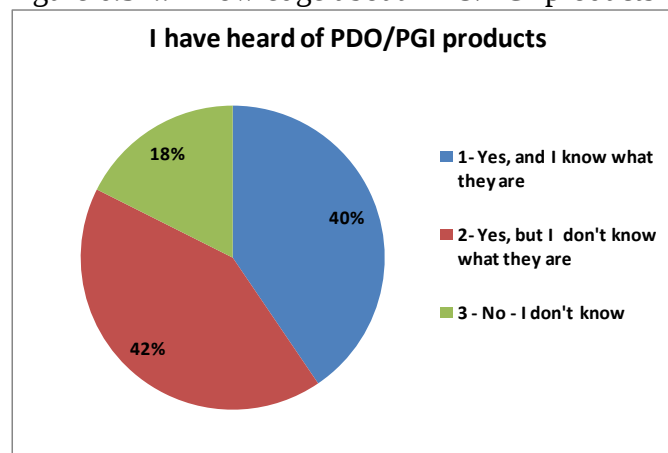
Interest and attitudes for typical products: Respondents from this group do not have very high level of interest in typical products (3.22), in respect to interest of the first cluster, but this interest is very similar to the second cluster. Besides all aspects of typical products, they consider those products mostly traditional (4.38). Mostly attitudes regarding typical products are similar between clusters.

Figure 6.51.: Opinion about typical products



Labelling and PDO/PGI certification: Respondents from the cluster sometimes look info-labels while buying food products. This group is characterized with low level of awareness about existence of PDO/PGI products, lower than in other two clusters. 40.5% of the group have never heard of the scheme, and 41.9% have heard but do not know what those products present. Only 17.6% of the group knows what PDO/PGI products are. Also the level of purchase of PDO/PGI products is very low (1.50), as 64.9% of the cluster has never bought any of these products. The trust in PDO/PGI scheme is lower in respect to other two clusters, as a consequence of this low awareness. (2.43).

Figure 6.52.: Knowledge about PDO/PGI products

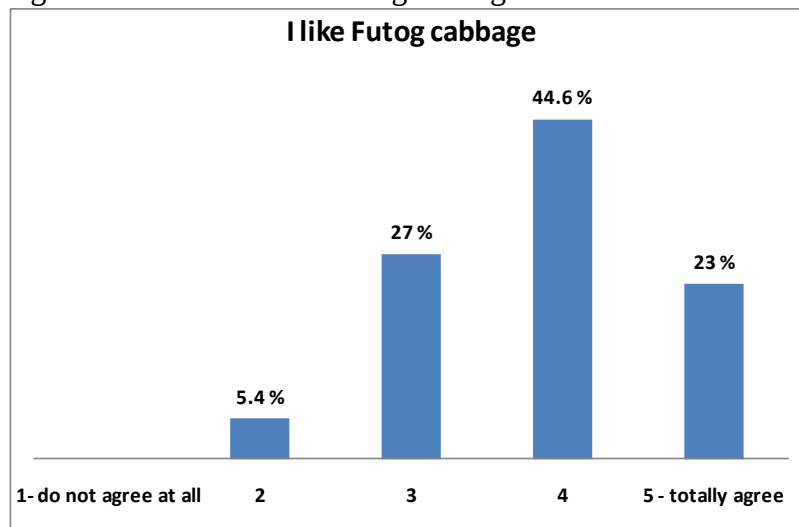


PDO Futog cabbage: Respondents have heard of Futog cabbage often (4.20), but they have eaten it sometimes. They also like it (3.85), but less in respect to people from the first cluster (4.82), and a little bit more than people from the second cluster (3.58). Furthermore, all respondents in the cluster have heard of Futog cabbage, and only 1.4% of them have never tried it. Comparing with other two clusters, it can be said that people from all clusters have heard of Futog cabbage, even often and frequently, and all of them have eaten it and like it. First cluster members have eaten it more often than people from the third and second clusters.

Table 6.24.: Awareness and consumption of Futog cabbage

	Never	Rarely	Sometimes	Often	Frequently
I have heard for Futog cabbage	-	1.4	17.6	40.5	40.5
I have eaten Futog cabbage	1.4	23	55.4	10.8	9.5

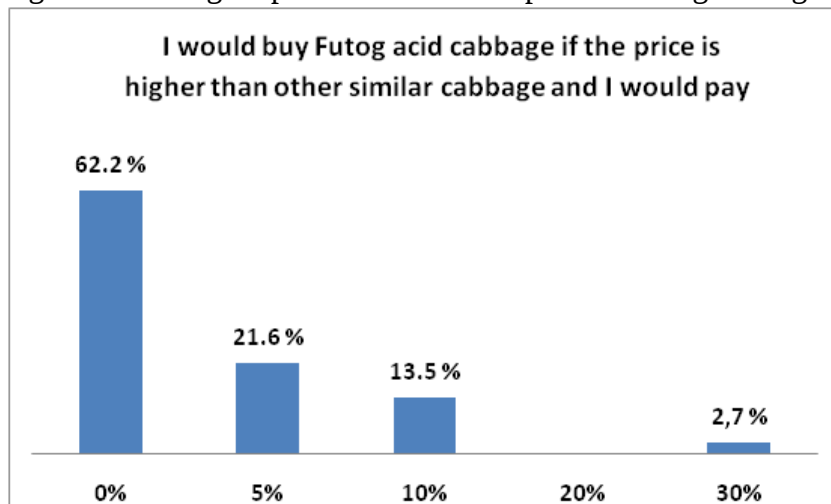
Figure 6.53.: Likeness of Futog cabbage



Respondents from the cluster agree that they would pay the same price for PDO Futog cabbage as for some other similar acid cabbage (4.04). 37.8% of the cluster responded with 5, and 35.1% with 4 for this statement. Therefore, it can be seen that 72.9% of the group agree with high level of agreement that they would pay the same price for PDO Futog cabbage as for some other similar cabbage.

People would not pay any higher price for PDO Futog cabbage (1.59). According to previously explained two clusters, where members were willing to pay some extra price, this is only cluster where members are not willing to pay more for PDO Futog cabbage. Moreover, 62.2% of the cluster would definitely not pay for it at a higher price. 21.6% would pay 5% more, 13.5% are willing to pay 10% more and 2.7% would pay 30% higher price. Reason for this can be found in level of income, as they are familiar with existence of Futog cabbage, and also they like its taste.

Figure 6.54.: Higher price that would be paid for Futog cabbage (in %)

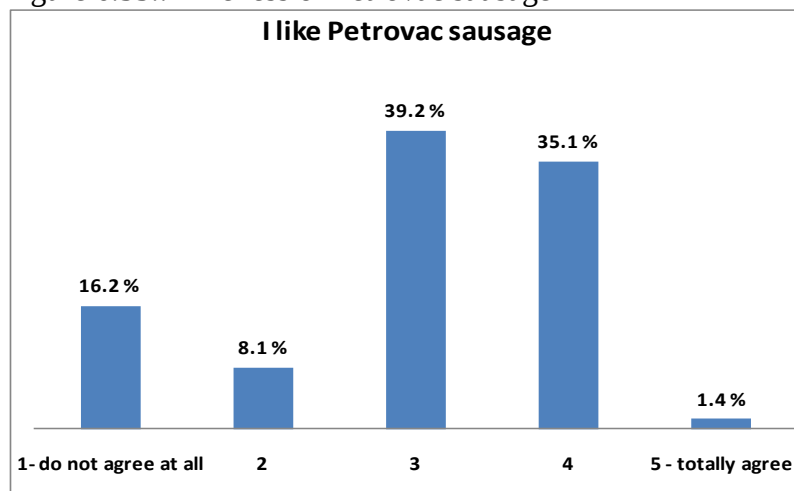


PDO Petrovac sausage: In this cluster people have sometimes heard of Petrovac sausage, and they have eaten it very rarely, less frequent than respondents from the first and second cluster. There is a huge percentage of people that have never heard of it (14.9%) and have never eaten it (32.4%). The rank of likeness for Petrovac sausage is 2.97, which is lower than level of second and especially the level of likeness of the first cluster.

Table 6.25.: Awareness and consumption of Petrovac sausage

	Never	Rarely	Sometimes	Often	Frequently
I have heard for Petrovac sausage	14.9	13.5	62.2	9.5	-
I have eaten Petrovac sausage	32.4	44.6	21.6	1.4	

Figure 6.55.: Likeness of Petrovac sausage



As in other two clusters, people from this cluster have heard of Futog cabbage more often than for Petrovac sausage. They have also consummated Futog cabbage more in respect to Petrovac sausage.

On the following graphs (6.56; 6.57; 6.58) already explained data are presented, but the focus is on the comparison between respondents of the cluster knowledge about its existence, diet habits and frequency of consumption, as well as level of appreciation regarding Petrovac sausage and Futog cabbage.

Figure 6.56.: Awareness of existence of PDO Futog cabbage and PDO Petrovac sausage

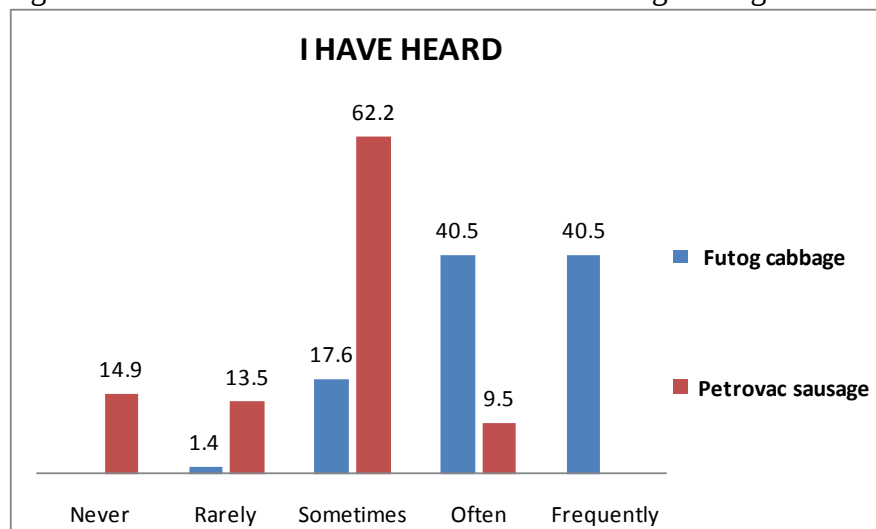


Figure 6.57.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

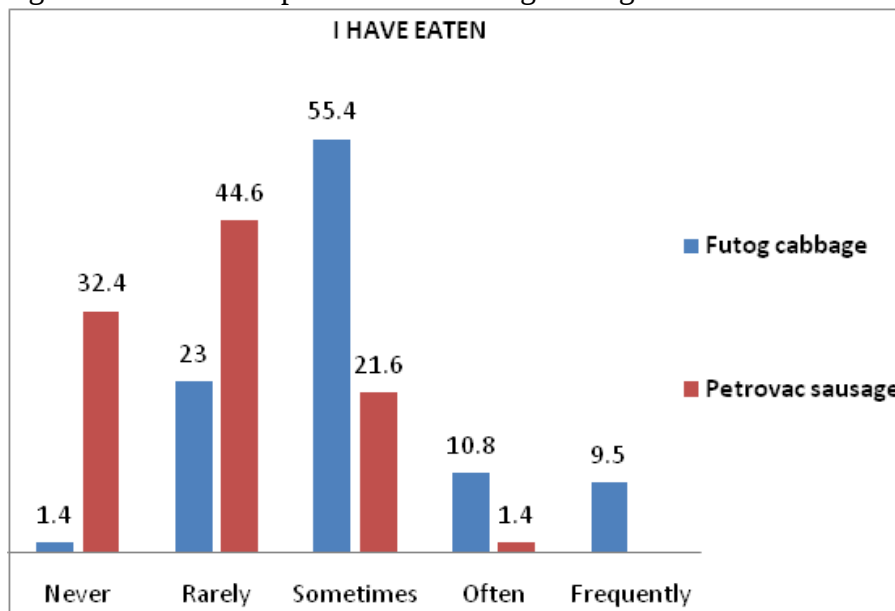
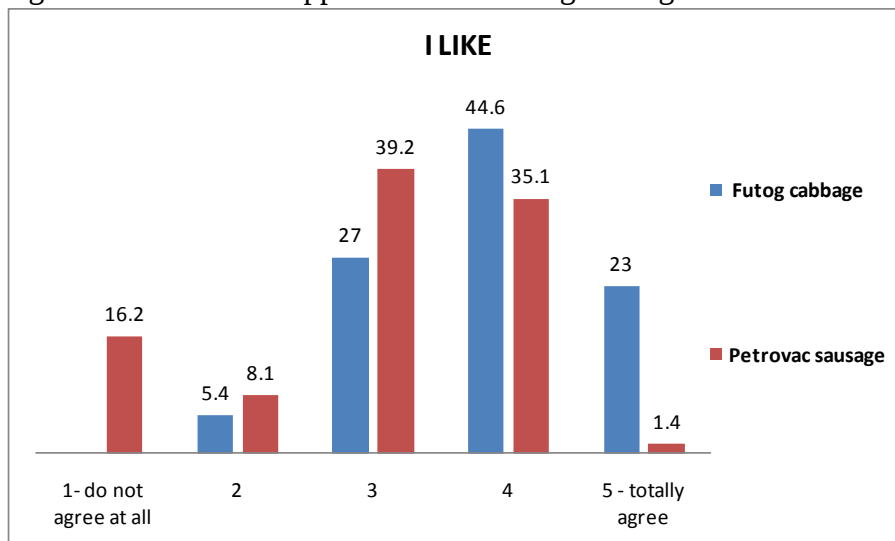


Figure 6.58.: Level of appreciation for Futog cabbage and Petrovac sausage



These respondents would buy PDO Petrovac sausage for the same price as for some other similar sausage (3.18), just as members from all clusters would. But the average for this statement was much higher in the first cluster.

People from the cluster would not pay any higher price for PDO Petrovac sausage (1.30). With more detailed explanation it can be seen that 77% of the cluster definitely would not pay any higher price compared to competition. 16.2% of the cluster would pay 5% more, and 6.8% would pay 10% higher price for it. Reason for missing willingness to pay any extra price

probably lies in low level of income. This is different regarding other two clusters, where respondents from the first cluster were willing to pay 10% higher price or even more, and second, where respondents would pay 5% higher price for Petrovac sausage.

Figure 6.59.: Higher price that would be paid for Petrovac sausage

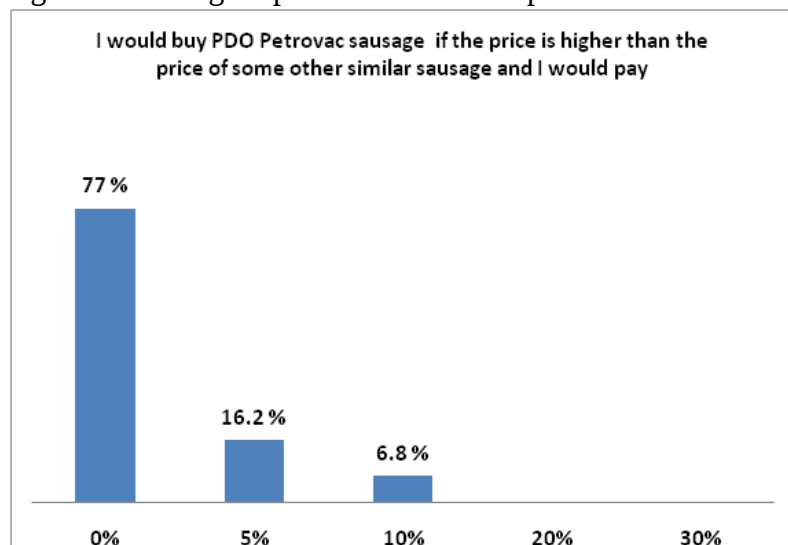
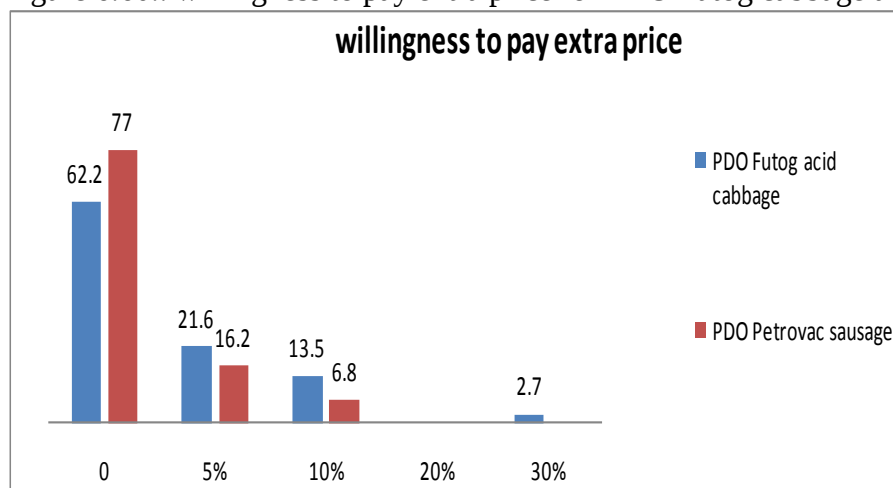


Figure 6.60.: willingness to pay extra price for PDO Futog cabbage and PDO Petrovac sausage



In the Figure 6.60 comparison of willingness to pay for PDO Petrovac sausage and PDO Futog cabbage is presented. As it was already stated, people from this cluster generally would not pay any extra price for either of these products. But there is smaller difference in favor of Futog cabbage, as some of the respondents would pay slightly higher price for it than for Petrovac sausage.

Summary: This cluster consists mostly of women, over 35 years old, with high school education, and families of 4 members. They work, but the salary between 21.000 and 40.000 Dinars is very low. Regarding the level of income, it is hard to expect that these people would purchase PDO Futog cabbage and PDO Petrovac sausage if it costs more than some other similar product.

They do not have high level of interest in typical products, as people from the first cluster do. They have lower level of awareness of PDO/PGI certification in respect to other two clusters, so again from this group it is hard to expect to pay for quality certificate for food, or for its typicality.

They eat both acid cabbage and dried sausages, but only sometimes, even if they like their taste very much. Acid cabbage is typical food dish that is usually eaten in winter period, which is why people stated that they like it very much, but do not eat it very frequently. According to these people, dried sausages are not very healthy and because of that, although they like them very much, they do not consume them very frequently.

These people like to eat both acid cabbage and dried sausages, and they would buy Futog cabbage and Petrovac sausage for the price that is similar and not higher than for some other similar products, because of the level of income they can not afford to pay more.

6.2.3. Concluding remarks, main differences and comparison between the clusters

Cluster analysis revealed the existence of three different groups of individuals with different daily diet habits and tastes, regarding dried sausages and acid cabbage, with a diverse degree of knowledge and interest in the typical attributes of foods and PDO/PGI certification, and different attitudes towards buying two selected PDO products. The first group includes people that like products, PDO Futog cabbage and PDO Petrovac sausage, and would pay higher price for both of them. The second group consists of people that do not show strong attitude, they consider the possibility to buy both PDO products and to pay higher price, but without defined interest and attitude. The third group is made of people that definitely would not pay any higher price for these two PDO products.

Clusters consist mostly of females, as usually they do household shopping in supermarkets and markets. Age of the people in all three clusters is significantly different. In the first and second cluster around half of the population are in age group between 35 and 49 years old, and the third cluster has larger share of persons older from 65 years old, in respect to other two clusters. Income of the people from the third cluster is lower than income from the people from the other two clusters, as well as level of education. People from the first cluster are mostly females, with high level of education, young, with level of income higher than average in Serbia, and they show strong interest for purchasing both products and to pay extra price for both of them. Opposed to that, people from the third cluster are ones with lower level of income, which contributes the most to their willingness to pay more. Also their level of education is lower than level of education of people from other two clusters, and also their awareness of the PDO scheme is lower. These demographic and socio-economic characteristics of clusters are in accordance to the literature that says, that female respondents are much more interested for purchasing quality labelled food products (Underhill, Figueroa, 1996); that the probability for purchasing quality labelled products decrease with the age (Underhill, Figueroa, 1996, Byrne et al., 1991) and that income and level of education have significant and positive impact on purchasing quality labelled food (Carbone et al., 2009, Byrne et al., 1991).

Looking at other characteristics and attitudes, clusters shows peculiarities of interest for the research. Regarding daily habits and attitudes towards dried sausages, people from the first cluster eat them often (4.10), from the second - rarely (2.69) and from the third - sometimes (3.58). Besides, time for preparing dried sausages is very important for people in the first cluster (4.18), less important for the people in third cluster (3.42) and definitely not important for people in the third cluster (1.09). Also, for people from the first cluster a very important thing for eating dried sausage is the fact that they are used to have them in the habitual diet, where respondents for other two clusters do not take this fact as important, especially people from the second cluster (1.83). Buying dried sausages for preparing them for the families is very important for respondents in the first cluster (4.19), less important to people from the third cluster (3.84), and not important for people from the second cluster (1.78).

People from all three clusters like to eat acid cabbage. And also all of them have similar opinion about its nutritional value. But respondents from the first cluster eat it more often than respondents from other two clusters, and they like its taste more, (4.71) regarding second (3.61) and third cluster (4.09). Respondents from second cluster found the reason of habitual diet, much less important for eating acid cabbage (1.82) regarding other two clusters (3.75 and 3.24).

People from all three clusters have similar habits for looking info labels while buying food. Respondents from third cluster have lower level of awareness of existence of PDO/PGI scheme and thus lower trust into it. Respondents from first cluster have higher level of knowledge about PDO/PGI products. But although they are familiar with the scheme, they have not often bought these products, as well as respondents from other two clusters. But people from the first cluster have bought them sometimes, from the second rarely and from the third almost never.

According to interest in typical products, variations and differences between clusters are not so big, but still differences exist. Respondents from the first cluster are more interested in typical products (4.31) than other two clusters (3.20 and 3.21). Less interest into typical products show the respondents from the second cluster.

People from all clusters have heard of Futog cabbage, even often and frequently, and all of them have eaten it and liked it. First cluster members have eaten it more often than other two. Respondents from the first cluster like Futog cabbage more (4.82), than follow people from the third cluster (3.85), and then from the second cluster (3.58).

All of the clusters would buy PDO Futog cabbage for the price that is equal as the price for some other acid cabbage. But, level of agreement in the first cluster (4.83) is higher than in third (4.04) and in the second (3.83). Differences exist in willingness to pay more for PDO Futog cabbage than for some other cabbage. Respondents from the first cluster would pay 10% higher price, from the second 5% and from the third would not pay any extra price.

Respondents from all three clusters have heard of Petrovac sausage, a little bit more often, respondents from the first cluster. Besides, respondents from all clusters have not eaten Petrovac sausage frequently, even more they have eaten it rarely, especially respondents from the third cluster that have eaten it very rarely. Respondents from the first cluster like Petrovac sausage much more (4.50) than respondents from the second (3.01) and third cluster (2.97). All clusters members would pay the same price for PDO Petrovac sausage as for any other similar sausage. Differences are, as for the Futog cabbage, in willingness to pay some extra price for it. People from the first cluster would pay additional 10%, from the second cluster 5% more and from the third cluster would not pay any higher price for PDO Petrovac sausage.

It can be concluded that daily habits and preferences towards acid cabbage and dried sausages influence very much on purchasing decision for PDO Petrovac sausage and Futog PDO cabbage. People from the first cluster eat acid cabbage more often and find its taste very important for buying. They also like Futog cabbage very much. They are very convinced that they would pay equal price for Futog cabbage; even they are willing to pay 10% higher price for it than for some other acid cabbage. But also, this group has income that can afford buying some products that cost more because of the quality. People from the third cluster also like to eat acid cabbage, as well as Futog cabbage, but this group does not have level of monthly income that can afford any additional purchasing of products that are not just for satisfaction of their needs. They can not afford buying extra quality products for higher prices. So, people from the third

cluster would not pay any additional price for Futog cabbage. People from the second group eat less acid cabbage than people from first and third clusters. They have awareness of PDO/PGI scheme which is higher than people in the third cluster acknowledge, and they also trust it. Even more, level of income of people from the second cluster is higher than level of income of the third cluster. Although, presence of the acid cabbage is lower in their habitual diet than for other two groups, they would pay 5% higher price for PDO Futog cabbage. Reason for that could be found in awareness in PDO/PGI scheme and willingness to eat products of higher quality. The same situation is with PDO Petrovac sausage.

In conclusion, it is also worth to underline that awareness of all three clusters about PDO Petrovac sausage is lower than awareness of Futog cabbage existence. The reason for this is smaller amount of Petrovac sausages production and impossibility to find them in supermarkets and other shops.

6.3. Evidences from Italian consumers

6.3.1. Introduction

This chapter will provide information about opinion and attitudes that respondents on questionnaire in Italy have, regarding typical food products, PDO/PGI scheme and foreign PDO products, with emphasis on two Serbian PDO products - Futog cabbage and Petrovac sausage.

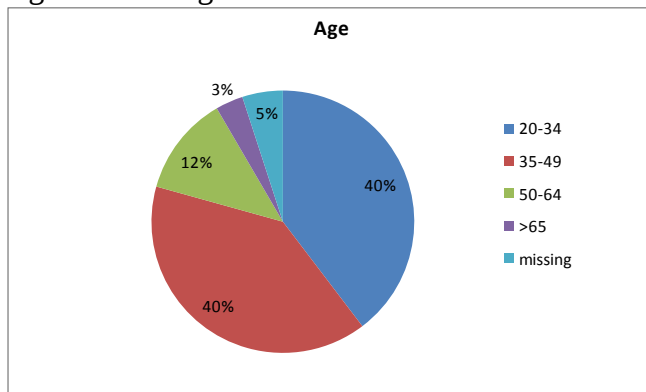
Sample is based on 179 interviews. As for the Serbian sample, interpretation of the results is based on calculated mean scores recorded and frequencies of answers. Graphs, pies and tables were made in excel program. As the survey was made with accent of interest for some question groups, interpretation of the results is provided in that way.

6.3.2. Description of the sample characteristics

Demographic characteristics: Sample size is 179 respondents, of which 54.2% are females and 45.8% males.

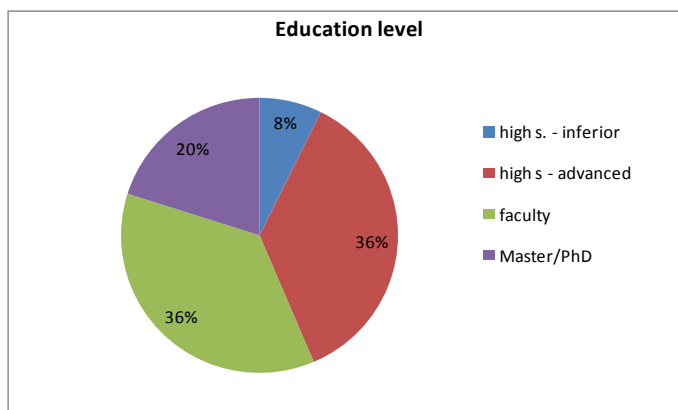
Analysing the age of respondents, 39.7% of the sample is between 20 and 34 years old, and 37.9% is between 35 and 49 years old. 12.3% between 50 and 64 years old, and only 3.4% is older than 65 years. 5% did not tell their age. Majority of the sample, almost 80%, are young people, younger than 50 years old. That is how we found our target group that could show interest for buying foreign PDO products, as according to the literature, younger people are more willing to buy and to pay for food quality products, and also with less ethnocentric attitude (Krystallis, Chryssochoidis, 2006; Underhill.Figueroa, 1996).

Figure 6.61.: Age



56.4% of the sample are respondents with a faculty degree, or even with higher degrees (20.1%). 36.3% have superior high school education, and 7.3% have inferior high school education. As majority of population is with high level of education the sample is not representative. But for this research it was positive, as our goal was to explore interest for buying two PDO product, and characteristic of consumers of PDO products is that they are well-educated (Giraud, 2004).

Figure 6.62.: Education



81.6% of the sample was born in Italy. Other 18.4% was born in various countries within and outside European Union. It makes the sample even more representative, because Italy is European country which is quite open for foreigners. There are many foreign students who live and study in Italy, for longer or shorter time. For example, 3.9% of the sample was born in Romania, 1.7% in Albania, 2.8% in Lebanon, and 1.1% in Serbia. Other countries of origin are Morocco, Check Republic, Slovakia, Germany, Greece, etc. 53.1% of the sample lives in

Viterbo. 12.3% in Rome, 7.9% in Bari, 2.2% in Terni, 2.2% in Treviso, and in other cities all around Italy. The fact that more than a half of the sample lives in Viterbo, is caused by the fact that area where 100 face to face interviews were conducted was in this city. 67.6% of the sample lives in urban and 32.4% in rural area. People from the sample have different food preferences, and different diet tradition. As majority of the people were born in Italy, it can be expected that they prefer Italian food in every day diet, but as they are from the different parts of Italy, there can be differences in preferences according to typical meals of each region. Besides, almost 20% of the sample was born in some other countries, and their diet habits could be different from Italians. Accordingly, one can expect to find different attitudes towards foreign products, which are not typical for Italy, as in this case towards Petrovac sausage and Futog cabbage from Serbia.

Analysing the travel experience, with accent on Eastern European countries, it can be said that people from the sample did not travel in these countries a lot. According to the statement, it can be concluded that they are not familiar with the culture and tradition, as well as food, typical for these countries. As it was explained in chapters of Literature review and Methodology, for purchasing new product, previous experience in tasting similar product, and/or having image of the country and culture and tradition influenced a lot. Moreover, respondents have traveled mostly in Czech Republic, and as it can be seen from the table, 50.8% of the sample was there. Main associations of the people connected to Czech Republic are capital city Prague and beer. Hungary has visited 45.3% of the sample, and the main associations about the country are connected to the food, thermal water, and capital, Budapest. 44.7% of the respondents have been in Croatia, and according to their associations, they have been there for the holidays at the seaside. Respondents from this sample have not traveled very much to Bulgaria, Romania and Serbia. Only 15.1% of the sample has been in Serbia, but according to their associations about the country, they were very excited about restaurants and food. It could be favourable for typical Serbian products and their potential positioning in Italy. Because, even they are very much different from Italian typical food products, Italians, as well as other nationalities, who have tried them, liked them very much.

Figure 6.63.: Eastern European countries visited

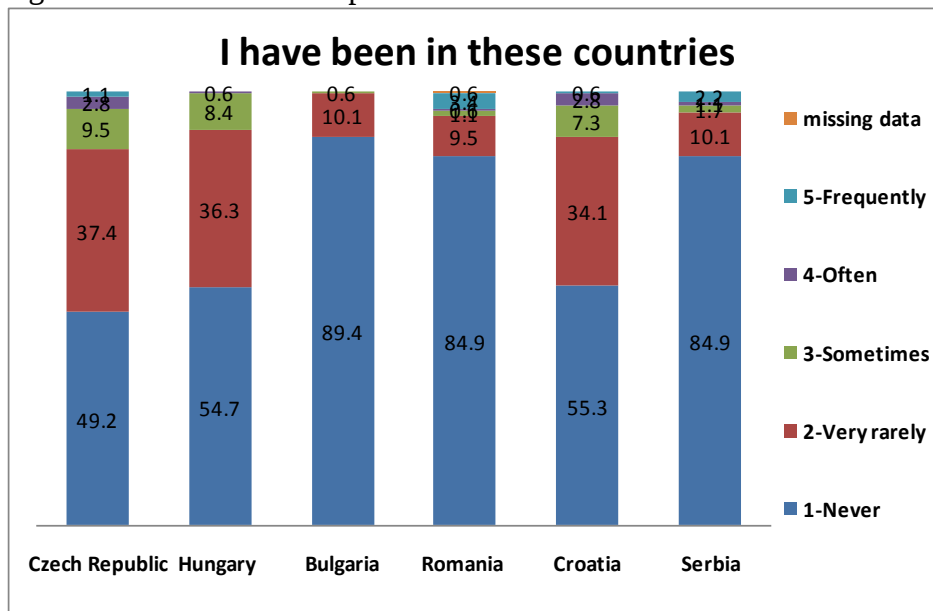
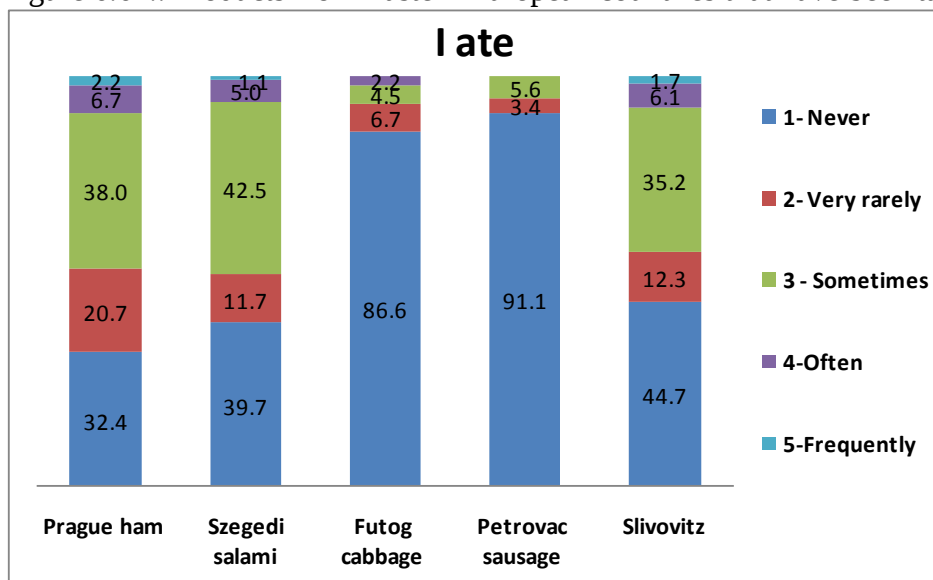


Figure 6.64.: Products from Eastern European countries that have been tasted



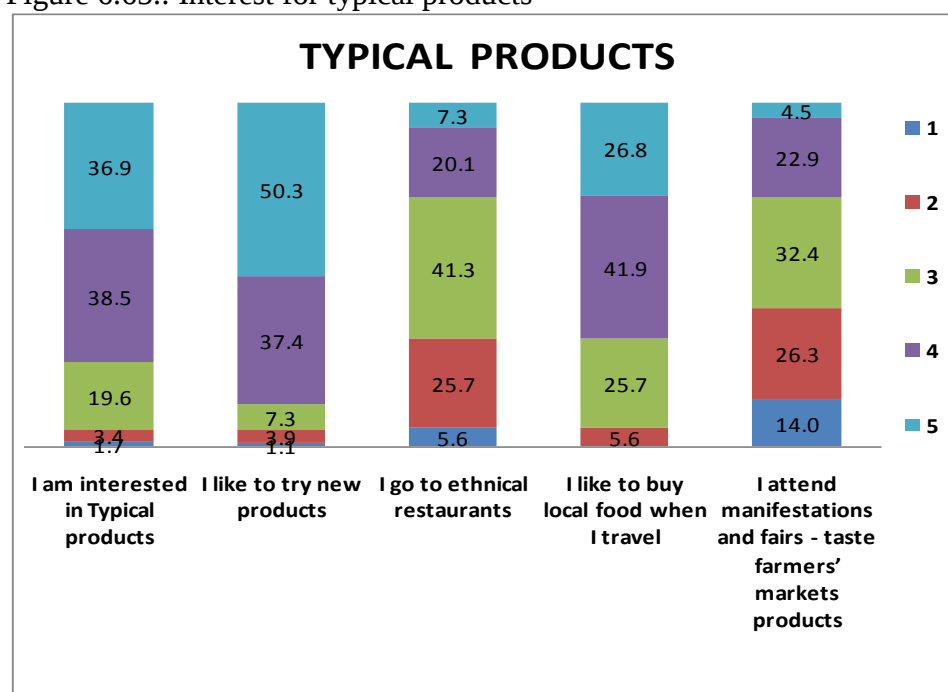
The graph 6.64. shows how much and how frequent people from Italian sample have tried Prague ham, Szegedi salami, Futog cabbage, Petrovac sausage, or alcholic drink called Slivovitz. Analysing the typical products from Eastern European countries, in order to have information about the products which have been tasted from the people in the sample and understand their attitudes towards typical foreign products, it can be said that majority of the sample have tried Prague ham, even if they have never been in Czech Republic. The same

conclusion can be made for typical Hungarian meat product Szegedi salami. From all offered products, Prague ham is the most eaten one, as 67.6% of the sample has tried it. Szegedi salami has been tried by 60.3%, and Slivovitz by 55.3%. Majority of the sample have not eaten Petrovac sausage (91.1%) as well as Futog cabbage (86.6%).

Taking these into a consideration, it can be expected that there would be people in the sample, interested in Petrovac sausage and eventually also willing to buy it, at least to some extent, as they were interested in buying other foreign meat products and they were satisfied with their taste. Besides, more than a half of the sample has tried alcoholic drink, made of plums, typical for Balkan countries – Slivovitz. Futog cabbage from Serbia, have been eaten by 13.4% of the sample, and Petrovac sausage by 8.9% of the sample. Besides, all respondents that have tried these two products have positive attitude towards their taste. Average rating of the likeness, on the scale from 1 to 5, for Futog cabbage is 3.42 and for Petrovac sausage is 3.38. This is also favourable fact, because all people that have tasted these two products liked their taste.

Interest and attitude towards typical food products: from the sample are very much interested in typical food products. As it can be seen from the table below, only 1.7% of the sample does not have interest in typical products, and even 75.4% have very high level of interest for these products. Almost all from the sample like to try out new products, and all of them like to buy and try out local food when they travel. Majority of the sample go to ethnic restaurants, but 25.7% of them rarely, 41.3% sometimes, 20.1% often and only 7.3% frequently. When attending of manifestations where can be tried products that were made on the farms, situation is following: 14% of the sample never goes to these types of fairs and manifestations, only 4.5% goes to these manifestations regularly and frequently. Majority of the sample (32.4%) only sometimes goes to these kind of fairs, 26.3% go rarely and 22.8% attend them often. As respondents have interest in typical products, they like to try out new products and even are willing to try out new products that are typical for the area when they travel, it is possible to aspect that at least some of them would show interest for two typical Serbian products.

Figure 6.65.: Interest for typical products

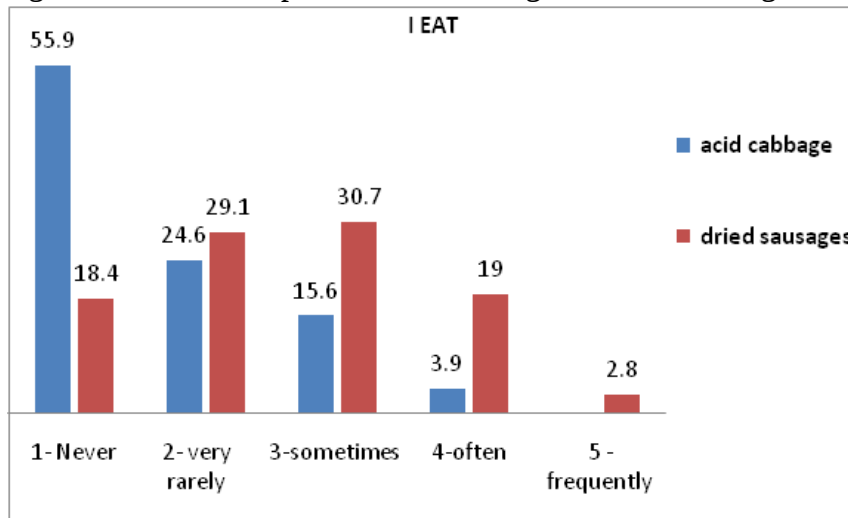


Awareness of existence of PDO/PGI certification and trust in it: 98.3% of the sample is familiar with existence of PDO/PGI certification, and only 1.1% of them do not trust that the certification is reliable. Level of their awareness is different as well as the level of trust, but the fact that they have heard of these products and in some level they trust in the scheme, can be positive from the aspect of PDO/PGI products. Maybe label would have some impact on motivation for purchasing products, especially if those products are from some foreign country, as the label would be assurance for some quality.

In order to see diet habits and **attitudes towards dried sausages and acid cabbage**, following facts can be concluded: acid cabbage is not present in daily diet of the sample. 55.9% of the sample never eats it, 24.6% eats it but very rarely, 15.6% sometimes eats it and 3.9% often. According to these, it can not be expected that many respondents from the sample would have high interest in purchasing Futog acid cabbage, as half of them do not eat acid cabbage at all. But, on the other hand, 44.1% of the cluster eats acid cabbage, and they could be seen as possible buyers of Futog acid cabbage. Besides, motivation for eating acid cabbage, people found in its taste, because they think it is healthy and because it can be eaten with other food. People from the sample eat much more dried sausages than it is the case with acid cabbage.

30.7% of the sample eats sometimes dried sausages, 29.1% rarely, 19% often, and 2.8% frequently. There is 18.4% of the sample that never eats dried sausages. Respondents eat dried sausages because they like the taste, they are easy to prepare, can be eaten with other food. As majority of the sample eats dried sausages, it can be good opportunity for Petrovac sausage, as they could show interest for it.

Figure 6.66.: Consumption of acid cabbage and dried sausages

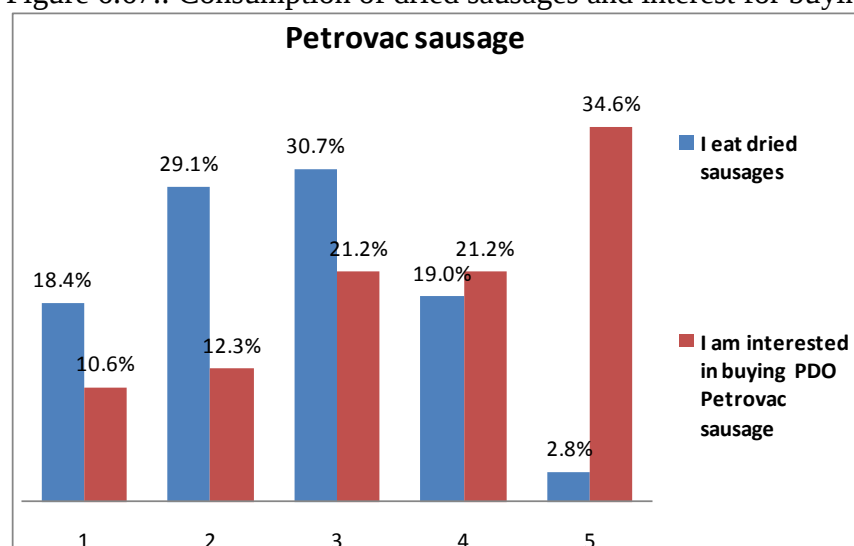


Interest for PDO Petrovac sausage: After brief description of the product presented in questionnaire, 89.4% expressed some level of interest for buying it. More detailed, 10.6% is not sure that they would buy it, 12.3% said they probably would not buy it. Among those who would not buy it, approximately one third said that they do not like sausages, 21.1% told that they like only products from their own country, 26.3% are not interested, 15.8% do not like foreign products. This part of the sample could not be seen as possible buyers of Serbian sausage, as their reasons seem quite strong and rooted. However, here is another third (34.6%) of the sample that affirmed that they would buy Petrovac sausage for sure, and remaining 42.4% that would consider buying it.

From the graph 6.67 it can be seen how often respondents from the sample eat dried sausages, and the level of interest for buying PDO Petrovac sausage from Serbia. This comparison was done on the same graph in order to see connections between diet habits and interest for purchasing specific product. As it was explained in Methodology chapter, during

analysis all variables had values from 1 to 5, both for frequencies and for level of agreement. That is why comparison was made in this way. Variable *I eat sausages* explains frequencies of use (from never to frequently, where never is 1 and frequently is 5) and variable *I am interested in buying Petrovac sausage* represents level of agreement (from I do not agree – 1 to totally agree – 5). It can be seen that although they do not eat very frequently dried sausages, they are interested in purchasing Petrovac sausage.

Figure 6.67.: Consumption of dried sausages and interest for buying PDO Petrovac sausage

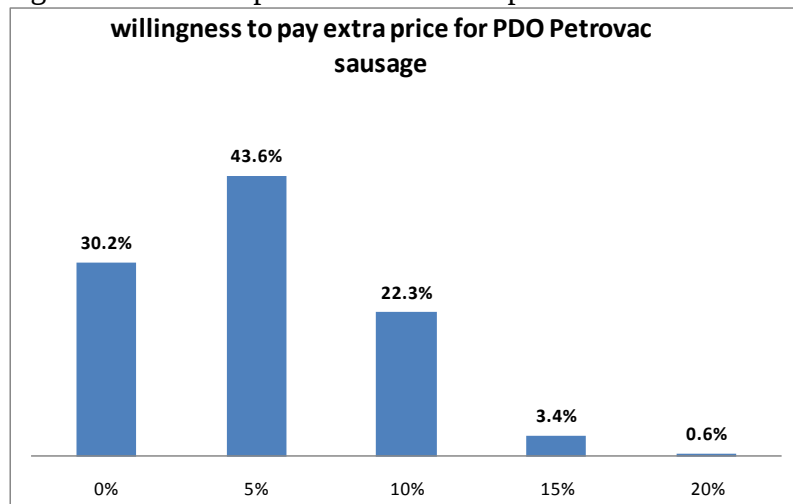


Considering the willingness to pay, it has to be mentioned that both for Petrovac sausage and Futog cabbage, results are less reliable than for Serbian sample. Reason for that is that both products are not familiar to Italian consumers, so it can be said that results are willingness to pay for trying product out for the first time. Regarding interviews, 30.2% of the sample would not pay any extra price. Other respondents would pay some extra price for the sausage. 43.6% of the sample indicates that they would pay 5% higher price in respect to some other sausage, and 22.3% would pay 10% higher price.

Table 6.26.: Interest for buying and willingness to pay more for PDO Petrovac sausage

I am interested in buying PDO Petrovac sausage product from SERBIA					
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
Percent (%)	10,6	12,3	21,2	21,2	34,6

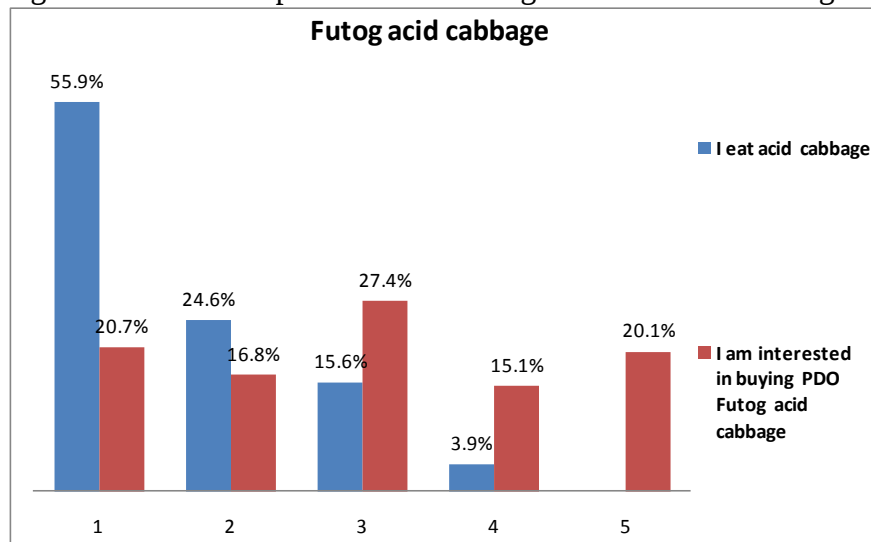
Figure 6.68.: Extra price that would be paid for Petrovac sausage



Interest for PDO Futog cabbage: Based on a short description of PDO Futog cabbage, 20.7% of the sample is definitely not interested in buying Futog cabbage. 16.8% probably would not buy it. As a reason for not buying Futog cabbage, for 46.4% of them is the fact that they do not like and eat acid cabbage. 28.8% of those who would not buy it would not do that because they are not interested, and 17.9% because they like only products that are produced in their country. Even 20.1% of the sample totally agrees that they would buy Futog cabbage.

The graph below compares diet habits connected with consumption of acid cabbage and interest for purchasing PDO Futog cabbage. Although acid cabbage is not too present in the Italian diet, as clearly shown by the sample, there is some interest for trying out (and eventually for buying) PDO Futog cabbage.

Figure 6.69.: consumption of acid cabbage and interest for Futog cabbage

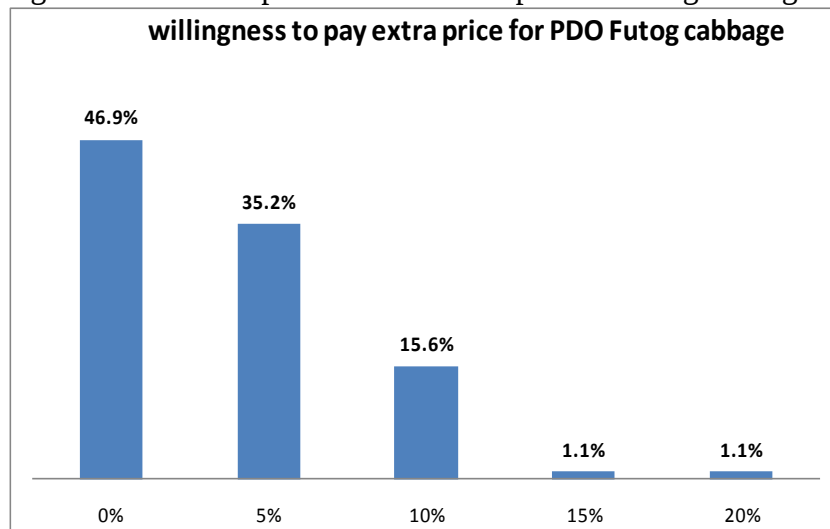


Analysing willingness to pay any extra price for Futog cabbage, it could be said that almost half of the cluster (46.9%) would not pay any higher price for it. It was expected according to the attitude towards buying it. But other half of the sample would pay some extra price for Futog cabbage. 35.5% of the sample would pay 5% higher price and 15.6% would pay 10% more. Only 1.1% would pay extra 15%, and 1.1% would pay 20% more in respect to some other similar product. It is important to underline that these figures are not reliable as those for Serbian sample, as mentioned before, just because respondents in Italy did not have clear idea what Futog cabbage is, while respondents in Serbia did. Willingness to pay for the Futog cabbage in Italian sample would be interpreted as willingness to pay for trying the product out for the first time and not a stable explanation of the market segment.

Table 6.27.: interest for buying and willingness to pay more for Futog cabbage

I am interested in buying PDO Futog acid cabbage product from SERBIA					
	1- do not agree at all	2- disagree	3- neutral	4- agree	5 - totally agree
Percent (%)	20,7	16,8	27,4	15,1	20,1

Figure 6.70. : Extra price that would be paid for Futog cabbage



According to the previous explanations, Italian sample is characterized with high level of awareness of PDO/PGI scheme, which have positive influence for interest in products with this label and not coming from Italy. Besides, sample shows also interest for typical products. But knowledge about Eastern European countries and culture, based on travelling experience, is not on the high level. Regarding products from Eastern Europe, which respondents have tasted, Prague ham and Szegedi salami were eaten the most. This interest for meat products from this area could be positive aspect for purchasing Petrovac sausage. Even, majority of the respondents are interested in purchasing and trying Petrovac sausage, and even willing to pay some extra price for it. Interest for buying and paying extra price for Futog cabbage is on the lower level.

6.4. Differentiation within the Italian consumers

6.4.1. Introduction

Segmentation of the sample was created to ascertain the existence of homogeneous groups of consumers characterized by different habitual daily diet attitudes, towards typical foods and towards two Analysed PDO products – PDO Futog cabbage and PDO Petrovac sausage.

From the applied methodology explained before, in the same way as for the Serbian sample, the decision to divide sample into 3 clusters proved the ideal solution, where homogeneity was maximised within the individual clusters and minimised between them.

6.4.2. Nature/ characteristics of clusters

Conducting k-means cluster analysis; as it was said before, lead to split the sample from Italy, into 3 groups of about, respectively 31.3%, 27.4% and 41.3% people each.

Mean values of variables were calculated in order to describe group profile, for each group. To better understand which aspects characterise each group cross-tabulation of ANOVA⁸ table and analysis to compare means was carried out. ANOVA table, with F test, were conducted for each variable to indicate how well the variable discriminates between clusters. According to ANOVA tests, all included variables proved significant in determining cluster groupings ($p < 0.05$). Variables that have the biggest influence on clustering are: *I am interested in buying PDO Futog cabbage*. And *I am interested in buying PDO Petrovac sausage*. Other variables that had big influence on clustering are variables where respondents indicate whether they would pay or not higher price for PDO Futog cabbage or PDO Petrovac sausage, and how much they would pay. Also variables that indicate habits and interests of people about typical products and trying

⁸ ANOVA table is presented in appendix

new food products out had influence on separation the respondents in clustering. These variables are shown in the table below

Table 6.28.: Variables that contributed the most on clustering

variable	F
I am interested in buying PDO Futog acid cabbage product from SERBIA	137.36
I am interested in buying PDO Petrovac sausage product from SERBIA	86.91
I am willing to pay for PDO Futog cabbage from Serbia higher price in comparison to very similar product	58.12
I am willing to pay for PDO Petrovac sausage from Serbia higher price in comparison to very similar product	54.52
I attend manifestations and fairs where I can taste farmers' markets products	47.12
I like to try out new products	44.08
I like to buy local food when I travel	41.71

Cluster analysis presented the existence of three different groups of individuals with a different interest in PDO/PGI products, interest in trying new products out, and buying food when they travel, and also different interest for purchasing PDO Petrovac sausage and PDO Futog cabbage. These three groups can be summarized as follows:

- The first group includes people not interested in two Serbian PDOs
- The second group is formed of respondents that show high level of interest into typical food products
- The third group gather people with high level of interest for typical products, that have interest for buying PDO Futog cabbage and PDO Petrovac sausage, even for the higher price.

In the following tables are presented average mean values, for every variable, for each cluster. According to them are visible differences between clusters. These differences are explained in following sections, for each cluster.

Table 6.29.: Attitudes towards typical products and PDO/PGI scheme

Statements	C1	C2	C3
I am interested in Typical products	3.34	4.51	4.30
I like to try new products	3.61	4.47	4.76
I go to ethnic restaurants	2.21	3.16	3.43
I like to buy local food when I travel	3.18	4.18	4.26
I attend manifestations and fairs where I can taste farmers' markets products	1.93	3.59	2.88
I have heard of EU PDO/PGI certification	2.89	4.35	3.92
Do you think that EU certification for typical products PDO/PGI is reliable with respect to product origin and way of production	3.29	4.02	4.18

Source: Our field interviews and elaboration

Table 6.30.: Eating habits, interest for buying PDO Futog cabbage, WTP

Statements	C1	C2	C3
I eat acid cabbage	1.20	1.53	2.13
I am interested in buying PDO Futog acid cabbage product from SERBIA	2.07	2.04	4.27
For buying PDO Futog cabbage from Serbia, I am willing to pay for it higher price in comparison to very similar product	1.20	1.43	2.36

Source: Our field interviews and elaboration

Table 6.31.: Eating habits, interest for buying PDO Petrovac sausage, WTP

Statements	C1	C2	C3
I eat dried sausages	2.20	2.47	2.96
I am interested in buying PDO Petrovac sausage product from SERBIA	2.79	2.75	4.70
For buying PDO Petrovac sausage from Serbia, I am willing to pay for it higher price in comparison to very similar product:	1.43	1.75	2.61

Source: Our field interviews and elaboration

Table 6.32.: I have eaten food products⁹ from Eastern Europe

<i>Value – Number of products</i>	Cluster 1	Cluster 2	Cluster 3
0	35.7	18,4	4.1
1	14.3	26,5	6.8
2	30.4	26,5	18.9
3	16.1	20,4	50.0
4	1.8	4,1	18.9
all	1.8	4,1	1.4

The table 6.32. presents frequencies whether respondents have eaten any of the products that were offered in questionnaire or not, and if they have eaten how much of them they have tried. If the respondent have never tried any of offered products the value is 1, if he had tried 1 of the products value is 2, and according to this if he had tried all of the products value is 6. Offered products are: Prague ham, Szegedi salami, Futog cabbage, Petrovac sausage, and alcoholic drink Slivovitz.

Overall, respondents from the first cluster have tried less of Eastern European typical products, and respondents from the third cluster have tried majority of the offered Eastern European food products. Furthermore, 35.7% of the first cluster has never tried any of these products, 14.3% have tried one of them, 14.3% have tried two products, and 30.4% have tried 3 products. In the second cluster 18.4% have not tried any of the offered products, 26.5% have tried one of them, 26.5% also have tried two of the products, and in the third cluster only 4.1%

⁹ If the interviewed person has never tried any of the food products, it takes value 1; if the person has tried one of the foods suggested it takes the value 2, etc. For further explanations in Chapter Research Methodology.

have never tried any of the products offered. Majority of the third cluster have eaten 3 offered products.

Table 6.33.: I have been in Eastern European countries¹⁰

Value – number of countries	Cluster 1	Cluster 2	Cluster 3
0	46.4	32,7	2.7
1	25.0	34,7	14.9
2	19.6	14,3	32.4
3	5.4	10,2	24.3
4	1.8	4,1	14.9
5	-	2,0	2.7
6	1.8	2,0	8.1

The table 6.33. presents frequencies whether respondents have been in any of the countries that were offered in questionnaire or not, and if they have been in any of them, how often it was. If the respondent have never been in any of countries that were offered the value is 1, if he had been in 1 of the countries value is 2, and according to this if he had been in all of the countries value is 7. Countries are: Czech Republic, Hungary, Bulgaria, Romania, Croatia and Serbia.

According to these results it can be concluded that respondents from the third cluster have traveled the most into Eastern European countries, and people from the first the less. 46.4% of the first cluster has never been in any of these countries, and 25% were in some of them. In the second cluster 32.7% have never been in any of these countries and in the third only 2.7% has never been in any of these countries. 32.4% of the third cluster has been in two of these countries and 8.1% in all of them.

¹⁰: If the interviewed person has never been in any of the countries, it takes value 1; if the person has been in one of the countries, it takes the value 2, etc. Frequencies are calculated afterwards. They are explained in Research Methodology chapter.

When looking into demographic characteristics, only in third cluster male population is more present. First and second clusters differ between themselves regarding the age, whilst first and third are similar ($p>0.05$), and second and third clusters are with small age difference.

Only in the third cluster there is a higher percentage of respondents that were born outside Italy. Demographic characteristics regarding gender, average age and average level of education are presented in the table.

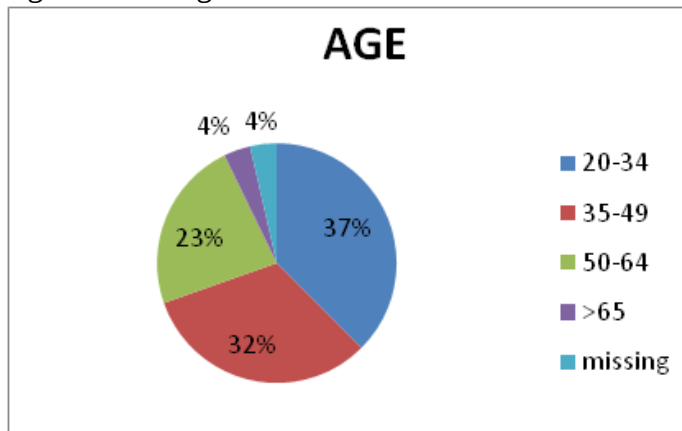
Table 6.34.: Demographic characteristics

	C1	C2	C3
Gender (% of female)	60.7%	55.1%	48.6%
Age	41 y	35 y	39 y
Education	High school	Faculty	faculty

6.4.2.1. Cluster 1 – Consumers not interested in two Serbian PDOs

Demographic characteristics: Cluster 1 consists of 56 respondents (31.3% of the sample). 60.7% are female, and 39.3% are males. 37.5% are young respondents between 20 and 34 years old; 32.1% are in the age between 35 and 49 years old, and 23.2% between 50 and 64. Only 3.6% of the cluster is made of people older than 65. 17.9% the sample has only a high school degree; 44.6% have finished “high school”; 32.1% of the cluster has a university degree and another 5.4% have Master or PhD certificate.

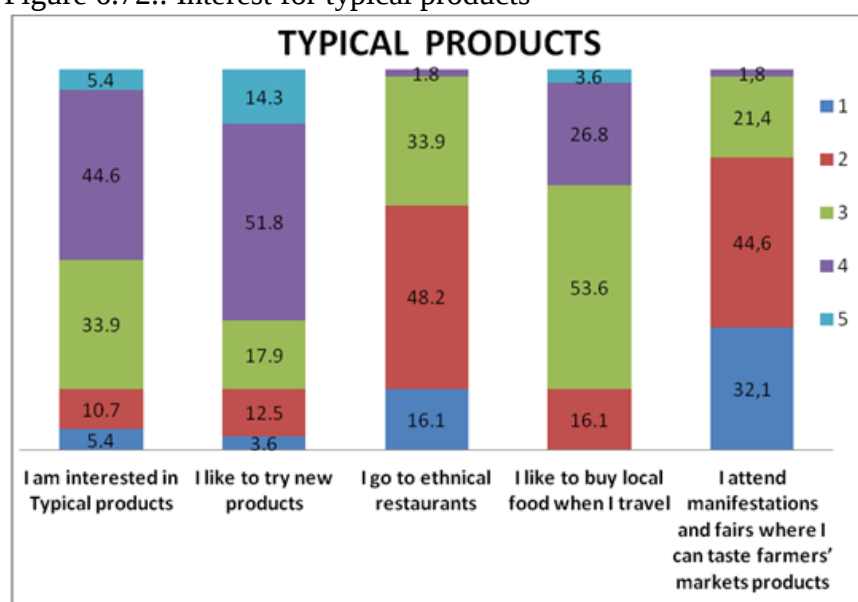
Figure 6.71.: Age of the cluster



Looking at the country of origin, 89.3% were born in Italy, others live in Italy, but were born in some other countries, such as Lebanon (3.6%); Croatia, Albania, Spain, Colombia. Majority of the cluster, 60.7% live in Viterbo, 10.7% in Rome, while the remaining 28.6% lives in different part of the country. 46.4% of respondents live in rural area and 53.6% in town.

Interest in Typical food products: Respondents from this group are not very much interested in typical food products (3.33). They do not have high interest for trying new food products out (3.61). Besides, they go rarely to ethnic restaurants and they attend manifestations and fairs where food can be tasted only very rarely. When they travel they may buy local products but do not particularly appreciate it (3.18).

Figure 6.72.: Interest for typical products



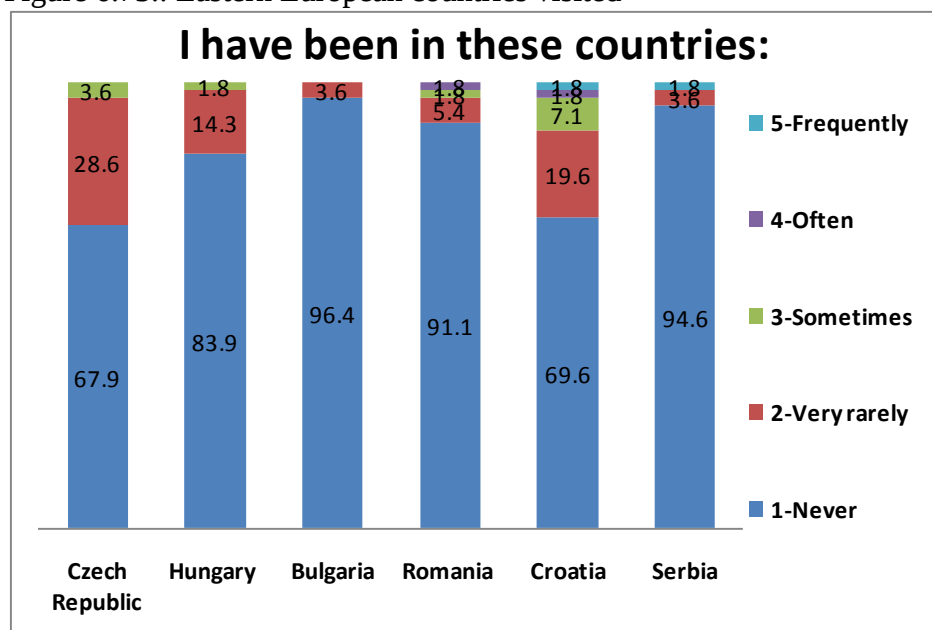
Awareness of existence of PDO/PGI certification and trust in it: Majority of the respondents have heard sometimes about PDO/PGI certification. Even 5.4% of the group has never heard about it. The level of trust into the certification is 3.29. This can be related to the literature and age of the respondents in the cluster. Mostly they are young people, and their level of awareness is higher.

According to these attitudes towards typical products, and PDO/PGI certification, as respondents do not have high level of interest and awareness of it, it would be hard to expect from them to be interested in some foreign typical food products, and even harder to expect that they would pay any higher price for these products.

If we are Analysing attitudes towards traveling and visiting foreign countries, with accent on Eastern European countries, it can be seen that very high percentage, 46.4% of the group have never been in any of these countries. 25% of the respondents from this group have visited only one of the countries that were offered in questionnaire. So, this group of people has not travelled very much to Eastern European countries, and is not familiar with their culture. As interest for foreign products is predicted on sound knowledge of national culture (Hyllegard et al., 2005) it is understandable that this group do not have interest for both Serbian PDO products. From the data

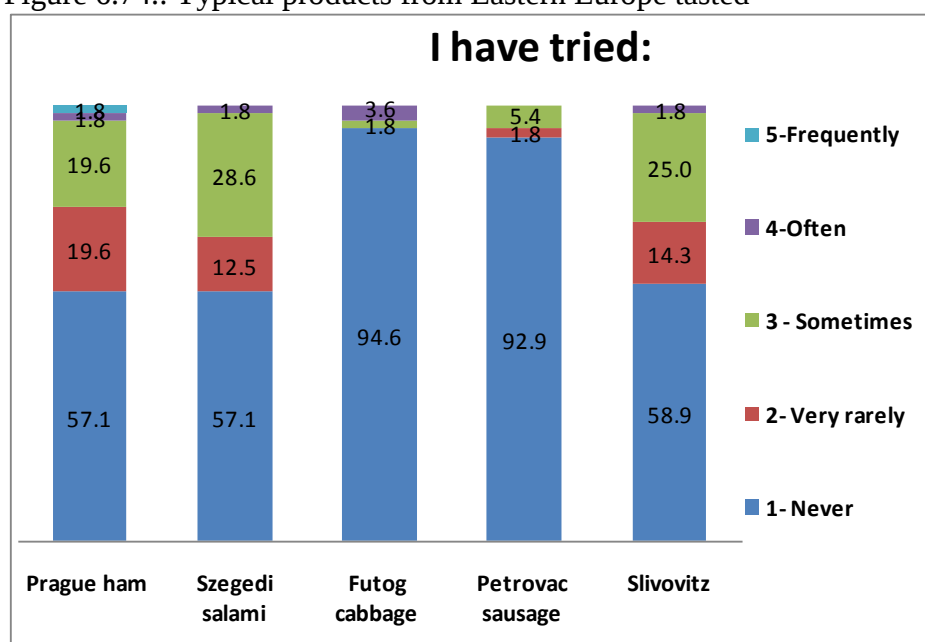
presented in the table below it can be seen that respondents of the cluster have traveled to Czech Republic and Croatia, and really small percentage of the cluster has visited other listed countries.

Figure 6.73.: Eastern European countries visited



Besides, 35.7% of the group has never tried any of the offered foreign products. 14.3% have tried one of them and 30.4% have tried 2 products offered. From the table it can be seen which products respondents have tried. Futog cabbage has been tasted from 5.4% of the group and Petrovac sausage from 7.1% of the group.

Figure 6.74.: Typical products from Eastern Europe tasted

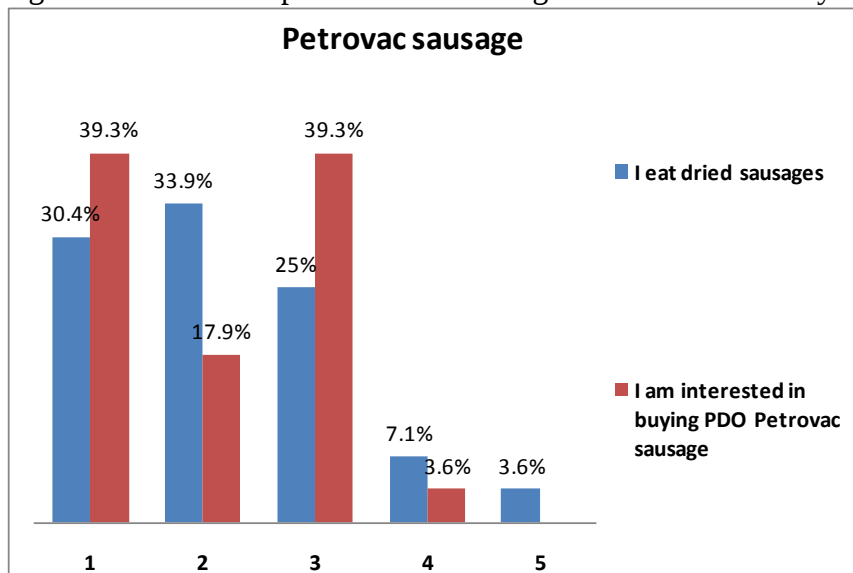


According to this it can be said that respondents from this cluster have traveled very rarely in Eastern Europe, and even haven't eaten products typical for this part of the Europe. Because of that they are not familiar with the Eastern European culture and food. It is hard to expect from them to show interest in two typical Serbian products, as they have never been in Serbia or never tried these products.

Consumption of dried sausages: Respondents from this group eat dried sausages very rarely. Moreover, 33.9% of them eat them rarely and 30.4% never eat them. 25% of the respondents sometimes have dried sausages in their diet, only 7.1% eats them often and 3.6% of the group eats them frequently.

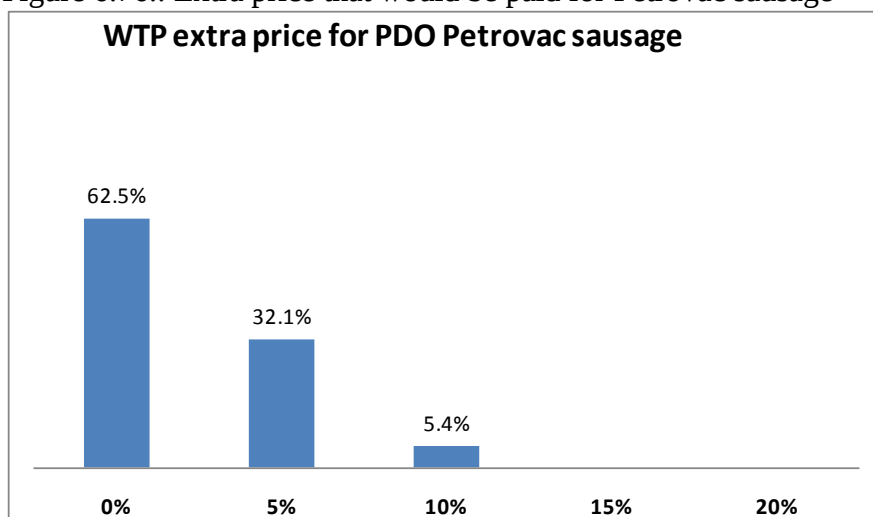
Interest for PDO Petrovac sausage: Respondents from this cluster are not interested very much in buying PDO Petrovac sausage, as average level of interest is 2.79. Analysing deeper, it can be seen that only 8.9% of the group totally agree that they would buy Petrovac sausage, and 21.4% would not definitely buy it. On the graph the comparison is presented between diet habits about eating dried sausages and interest in buying PDO Petrovac sausage. As respondents from this cluster eat dried sausages rarely, they do not have high level of interest for buying PDO Petrovac sausage.

Figure 6.75.: Consumption of dried sausages and interest for buying Petrovac sausage



People in this cluster are not willing to pay any premium price for Petrovac sausage, with respect to generic substitutes. Moreover, 62.5% of the cluster would not definitely pay any higher price for it. 32.4% of the respondents would pay 5% more, and 5.4% would pay 10% higher price.

Figure 6.76.: Extra price that would be paid for Petrovac sausage

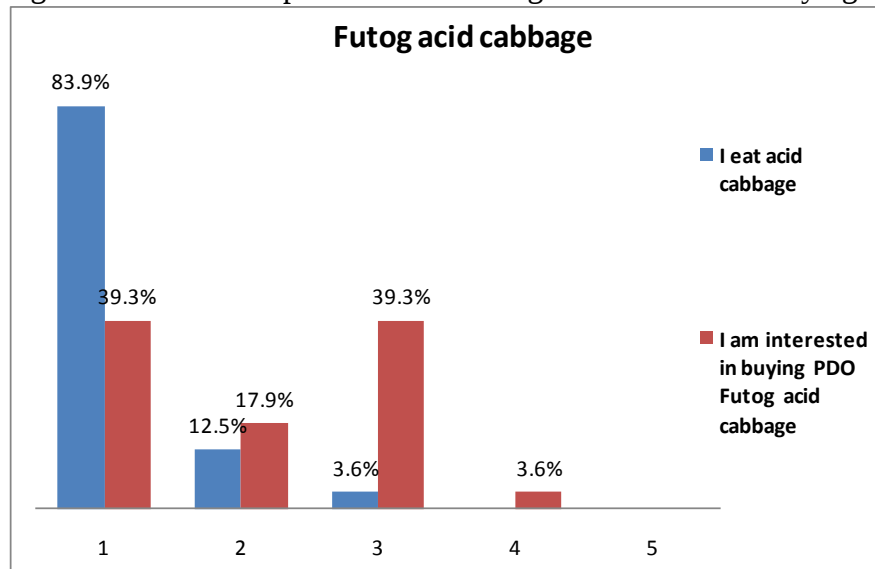


This attitude towards Petrovac sausage purchasing is expected, because respondents from the cluster eat dried sausages rarely. So obviously, they do not have habit to eat them and do not like their taste.

Consumption of acid cabbage: People from this group do not have habit to eat acid cabbage and almost never eat it. Moreover, 83.9% of them have never eaten acid cabbage, 12.5% of them eat it rarely, and only 3.6% sometimes have it in their diet.

Interest for PDO Futog cabbage: Respondents from the cluster are not interested in purchasing PDO Futog cabbage, as an average answer on that is 2.07. 39.3% of the respondents would definitely not buy Futog acid cabbage. It is connected with their eating habits. As they do not have acid cabbage in their diet, they are not interested in buying it. Graph presented below shows connection between eating acid cabbage and interest for buying it. As majority of respondents do not eat acid cabbage, the interest for buying Futog cabbage is low.

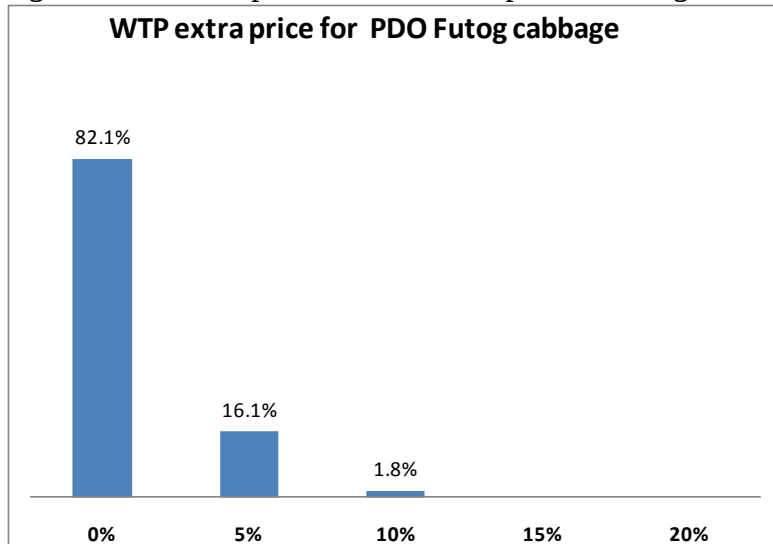
Figure 6.77.: Consumption of acid cabbage and Interest for buying Futog acid cabbage



Even for paying higher price for the Futog cabbage, there is not positive attitude in this cluster. Even 82.1% of them would not pay any higher price. Other 16.1% would pay 5% more, and only 1.8% would pay 10% higher price. As it was said before, this group do not eat acid

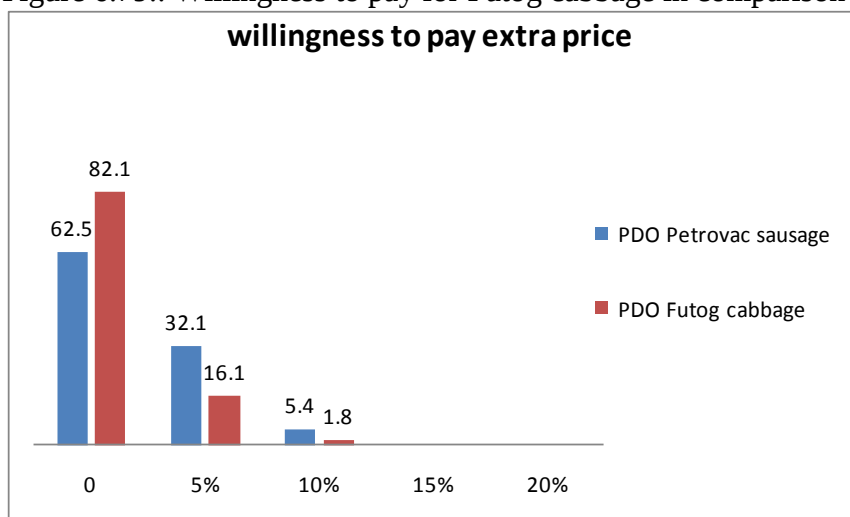
cabbage, is not interested in purchasing, and thus, there does not exist a possibility to pay more for Futog acid cabbage.

Figure 6.78.: Extra price that would be paid for Futog cabbage



In general, respondents from this cluster would not pay any higher price either for Futog cabbage or for Petrovac sausage. If we look frequencies for the every single response, there is slightly more interest for purchasing and willingness to pay and Petrovac sausage in respect to Futog acid cabbage. This is presented on the graph 6.79.

Figure 6.79.: Willingness to pay for Futog cabbage in comparison to Petrovac sausage



Summary: Majority of consumers in this cluster are young people, both men and women, with secondary school education. They are Italians, and live in Italy. They haven't traveled in Eastern European countries, and haven't tried Eastern European typical products. Besides, their interest in typical food products is not high. They do not have interest in attending fairs and manifestations where these products could be tried. Their interest in trying out new products is not at high level. Furthermore, awareness of PDO/PGI scheme existence and trust in it is not high. Facts that these people have not been in Eastern European countries and have not eaten products from that part of the world can have implication on interest for Futog cabbage and Petrovac sausage from Serbia. Besides, the fact that the cluster do not have high level of interest in typical products, and the level of awareness in trust in PDO/PGI scheme, could influence low interest for some foreign typical products, such are Futog cabbage and Petrovac sausage.

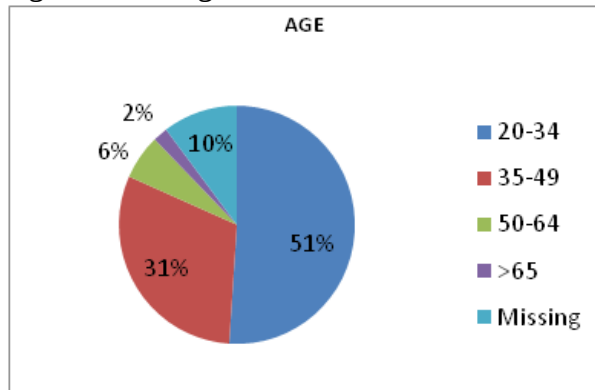
Respondents in this cluster have never eaten acid cabbage, so it can not be expected that this cluster would buy PDO Futog cabbage.

People within the cluster eat dried sausages rarely. Obviously, that is not in their habitual diet and is not a favorite food for this cluster. Again, looking at their attitude towards typical products and their habitual diet, it is hard to expect that this cluster would buy PDO Petrovac sausage. In this cluster, respondents would not pay any higher price for PDO Petrovac sausage, regarding some similar product.

6.4.2.2. Cluster 2 – Consumers interested in typical food

Demographic characteristics: Cluster consists of 49 respondents (27.4% of the sample). 55.1% are female and 44.9% are males. About half of the cluster, are people from 20 to 34 years old. 30.6% are respondents in the age group from 35 to 49 years old, 6.1% are respondents from 50 to 65 years old, and 2% older than 65 years old. Overall, this cluster contains younger people than the first one.

Figure 6.80.: Age of the cluster



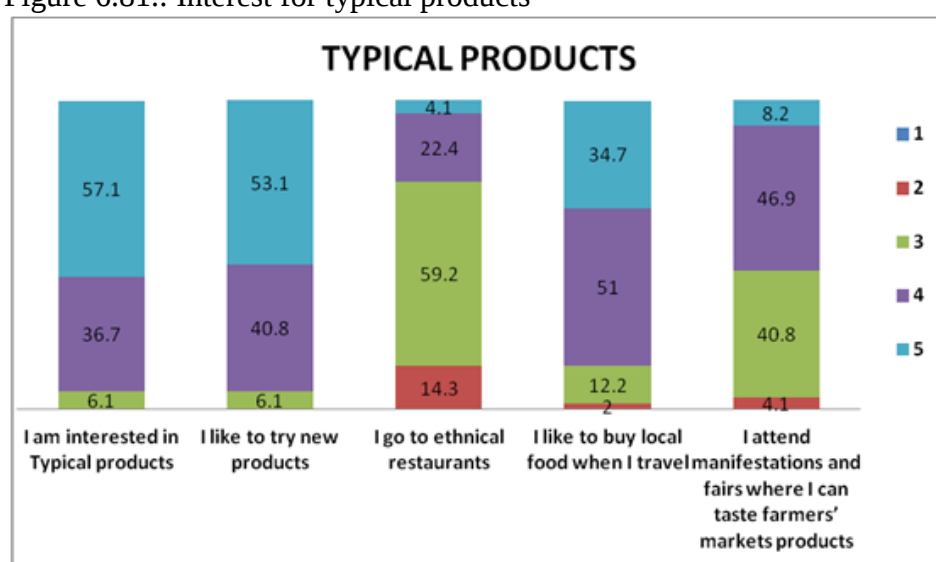
In this cluster majority of the respondents are highly educated people, graduated at faculty (34.7%) and with higher faculty degree (36.7%), which is significantly higher level of education in respect to the first cluster. 28.6% are with high school degree.

87.7% of the group was born in Italy. Other respondents were born in some other foreign countries, such as Greece (4.1%), Albania (2%), Morocco (2%), France (2%). Nobody from the cluster was born in any Eastern European country. 65.3% of the respondents live in urban area and 34.7% in rural area. 34.7% of the cluster lives in Viterbo, 14.3% in Rome, 10.2% in Bari, 6.1% in Treviso, 4.1% in Terni, and others are from various towns all over the Italy.

Interest for typical food products: This group has very high level of interest for typical food products (4.51), higher than the first cluster. More than half of the group (57.1%) expressed the highest level of interest for typical products and there is nobody that does not have interest in these products. They would also like to try new products out very much (4.47), and generally like to try them out when they travel (4.18). In this group all people go to ethnic restaurants,

most of them sometimes, and also all of them like to attend fairs and manifestations where food products can be tasted, what is more, they do it often (46.9%). 51% of the cluster often buys product when they are on the trip and 34.7% does it very frequently. People rating local production and typical products as important or very important were expected to respond positively to the PDO labelled products. Their interest in typical products is higher in respect to the people from the first cluster, and can have positive impact on interest for two typical Serbian products. Besides, it is in accordance with the literature which states that level of education is positively connected with interest for typical products.

Figure 6.81.: Interest for typical products

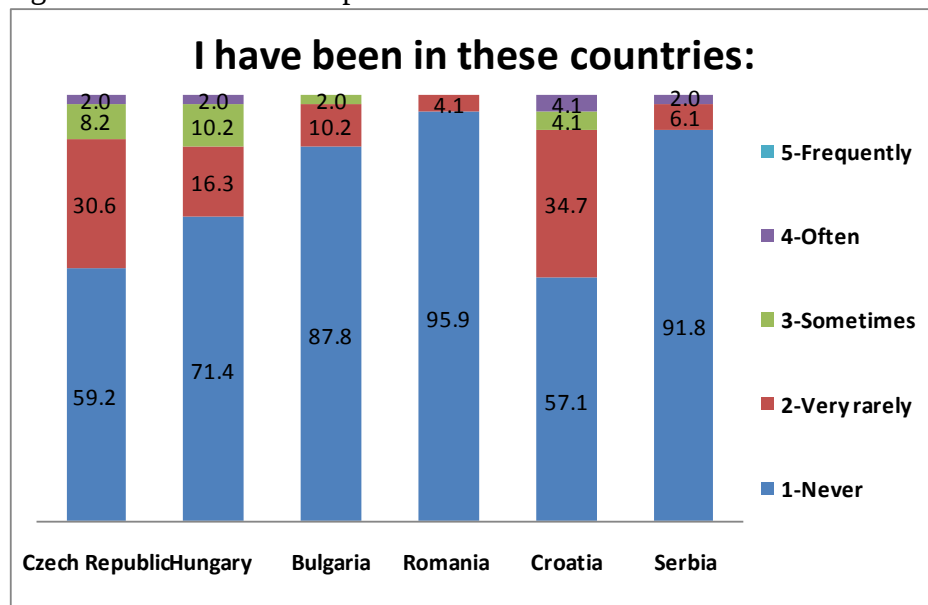


Awareness of existence of PDO/PGI certification and trust in it: Respondents from the cluster are familiar with PDO/PGI certification, and they have often heard of it. They are much familiar with the certification from both other clusters, and even more, their trust in the certification is on the high level (4.02). The fact that they trust in the certification could be important for decision towards buying two Serbian products, as they believe that certificate means quality, they would not have doubts whether it is true, and whether Futog cabbage and Petrovac sausage really satisfy quality demands.

This group of people has travelled more with respect to the group of people from the first cluster. 68.3% of the group has visited some of the countries from Eastern Europe that were offered in the questionnaire. 34.7% of the group has been in one of the countries. Only 2% has

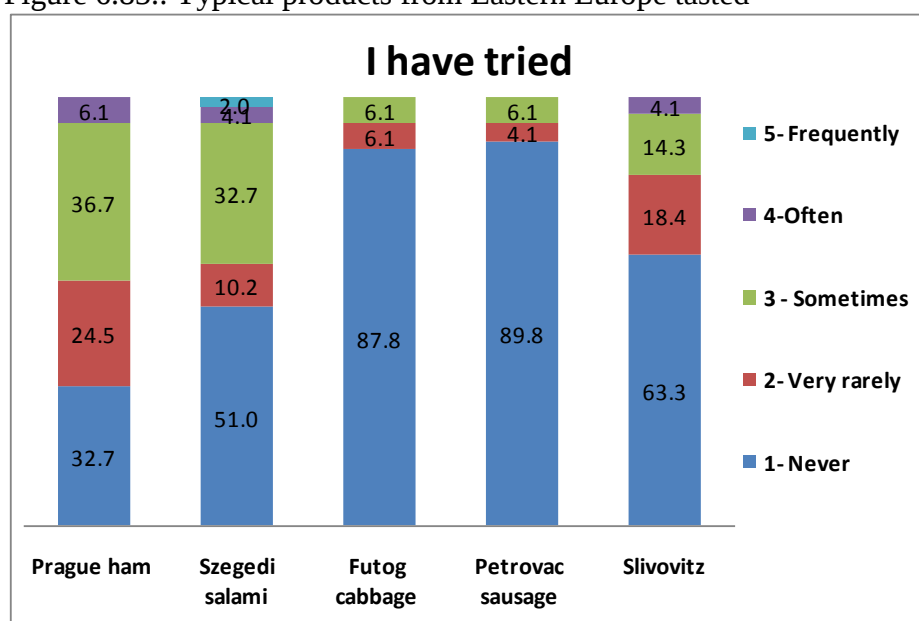
visited all countries listed. Countries that have been visited the most are Croatia and Czech Republic. Only 8.2% of the cluster has visited Serbia.

Figure 6.82.: Eastern European countries visited



Higher share of people from this cluster have tried some typical products from Eastern Europe, which were offered in questionnaire, in comparison to the first cluster. 82.6% of the cluster has tried some of the typical products from Eastern Europe, which were mentioned in the survey. 26.5% have tried one and 26.5% have tried two of the products. Only 4.1% of the group has tried all of the products mentioned. It can be seen from the table that 68.3% of the respondents have eaten Prague ham and 49% Szegedi salami. Even more than 10% of the cluster has tried Petrovac sausage and Futog cabbage.

Figure 6.83.: Typical products from Eastern Europe tasted



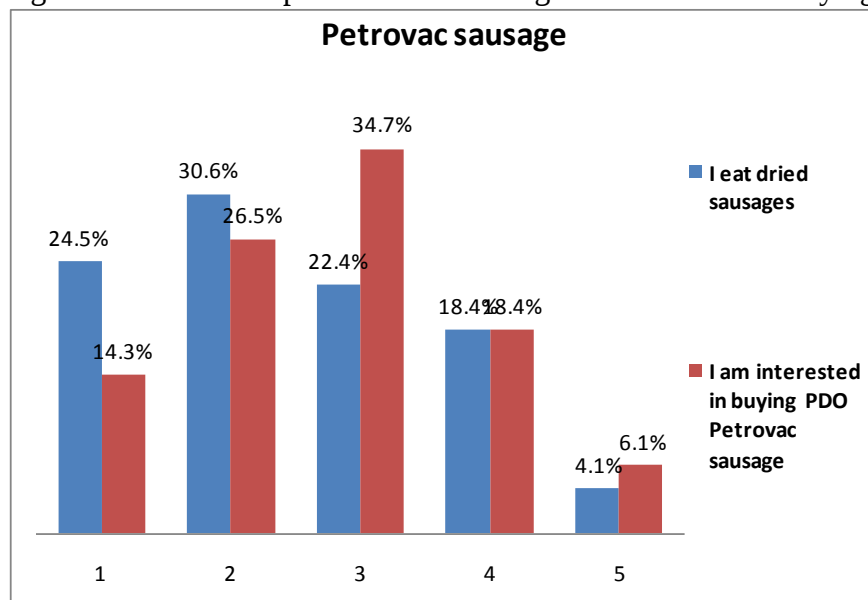
According to their interest in typical products and habits, especially that they like to try out new products, and also considering their awareness and trust into PDO/PGI scheme, it can be expected that this group of people could be potential buyers of foreign PDO/PGI products. They haven't been in Eastern Europe often, and thus, they are not familiar with life style and tradition, but they have tried some of Eastern European products. Especially because around 30% of the group sometimes eats Prague ham and Szegedi salami, it could be possible that they would also buy Petrovac sausage, as it is a meat product. Because of these facts, it could be expected that this group of people show interest in trying out Petrovac sausage and Futog cabbage.

Consumption of dried sausages: Respondents eat dried sausages rarely. With further analysis it can be seen that 30.6% of the cluster eats dried sausages rarely, 24.5% never eat them, 22.4% eat them sometimes and 18.4% eat them often. Only 4.1% eats them frequently.

Interest for PDO Petrovac sausage: Respondents from the cluster do not have very high interest for purchasing PDO Petrovac sausage from Serbia, an average interest for purchasing Petrovac sausage is 2.75, which is similar to attitude of the first cluster. With further analysis it can be seen that 14.3% is convinced that they do not want to buy Petrovac sausage, and 6.1% would definitely buy it.

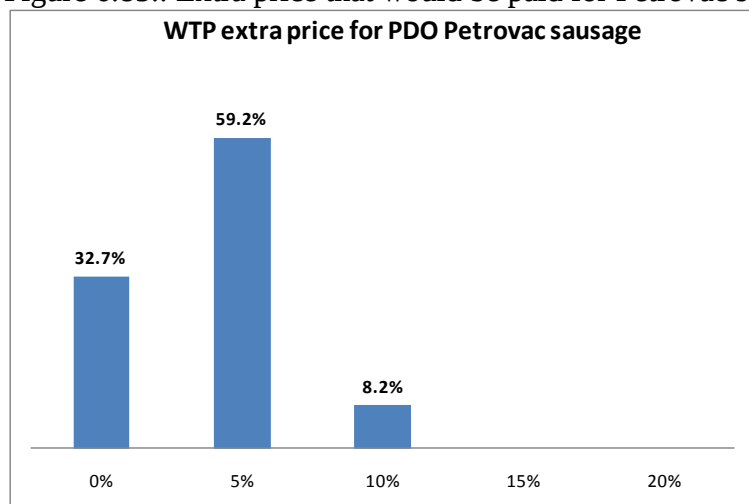
Connection between eating dried sausages and interest for purchasing PDO Petrovac sausage is presented on the graph below. Respondents from the cluster eat dried sausages rarely. And average interest for buying Petrovac sausage is 2.75.

Figure 6.84.: Consumption of dried sausages and interest for buying PDO Petrovac sausage



Respondents from the cluster would pay 5% higher price for PDO Petrovac sausage, than for some other sausage. 59.2% of the cluster is willing to pay 5% higher price, 8.2% would pay 10% more, and 32.7% of the cluster would not give any higher price for it.

Figure 6.85.: Extra price that would be paid for Petrovac sausage



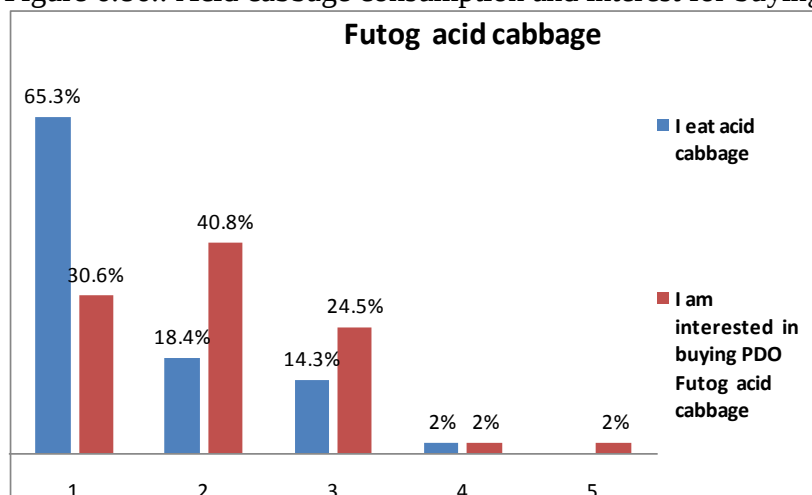
According to these results, it can be concluded that people from this cluster probably would buy PDO Petrovac sausage, and would even pay 5% higher price for it. This is because this group of people has high level of interest for typical products and trying out new food. In that way, they show interest even to pay some slightly higher price for trying typical Serbian PDO product - Petrovac sausage, which is something new for them.

Consumption of acid cabbage: People from this cluster do not have habit to eat acid cabbage. 65.3% of the group never eats it, and 18.4% rarely eats it, 14.3% eats it sometimes. According to the fact that they do not have acid cabbage in their habitual daily diet, it would be difficult to expect that they would buy Futog cabbage.

Interest for PDO Futog cabbage: Interest for buying PDO Futog cabbage is not on the high level (2.04), which is similar for the first cluster. When looking into responses more thoroughly, in the interest for buying Futog cabbage, 40.8% responded with level 2; 24.5% with level 3, and 30.6% of the cluster does not have intention of buying PDO Futog cabbage.

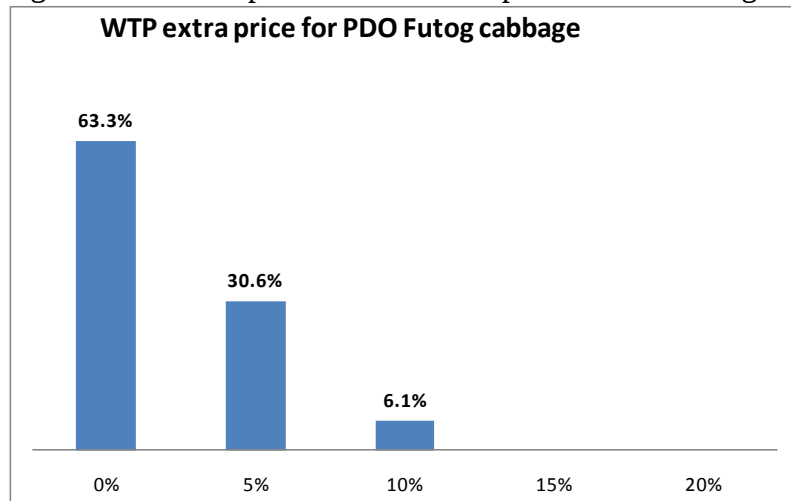
Figure 6.86 presents frequency of eating acid cabbage in the cluster, compared with level of interest for buying PDO Futog cabbage. It is graphical explanation of previously presented data. As it was mentioned before, an average interest for buying Futog cabbage is 2.04, and respondents do not have acid cabbage in their habitual diet.

Figure 6.86.: Acid cabbage consumption and interest for buying Futog cabbage



As the interest for buying PDO Futog cabbage is at a lower level, the cluster is not willing to pay any higher price for it. Moreover, looking into more detailed frequencies of the responses, even 63.3% of the cluster would not pay any higher price for Futog cabbage in respect to some other acid cabbage. But, there is 30.6% of the cluster that would pay 5% more for Futog cabbage and 8.2% that would pay 10% higher price.

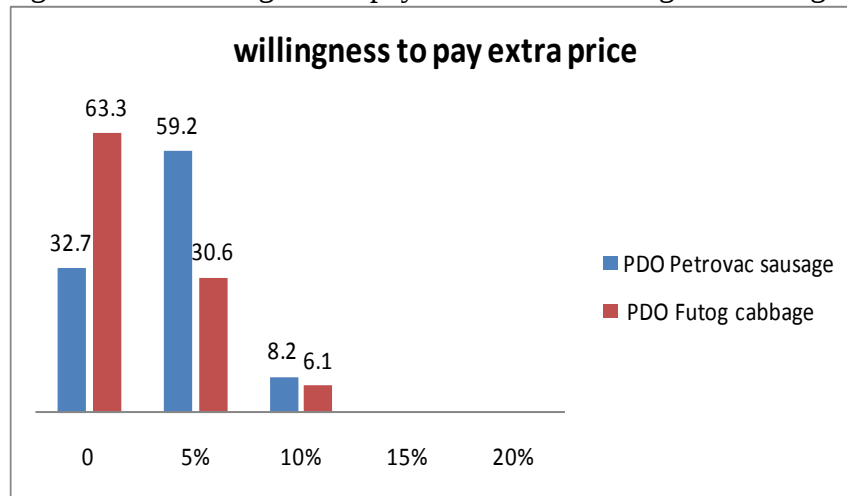
Figure 6.87.: extra price that would be paid for PDO Futog cabbage



The reason for low level of interest for Futog cabbage purchase lays in the fact that people from this group do not eat acid cabbage. But even as they do not eat acid cabbage, because of the high interest in typical products and trying new food out, they would buy it in order to try out, but not for the higher price.

In the graph below, a comparison between willingness to pay extra price for Futog cabbage and Petrovac sausage, within the cluster, can be seen. There is slightly higher interest for buying and paying 5% higher price for Petrovac sausage.

Figure 6.88.: Willingness to pay for Petrovac sausage and Futog cabbage



Summary: This cluster is populated by both males and females. They are young people, highly educated, and live in Italy.

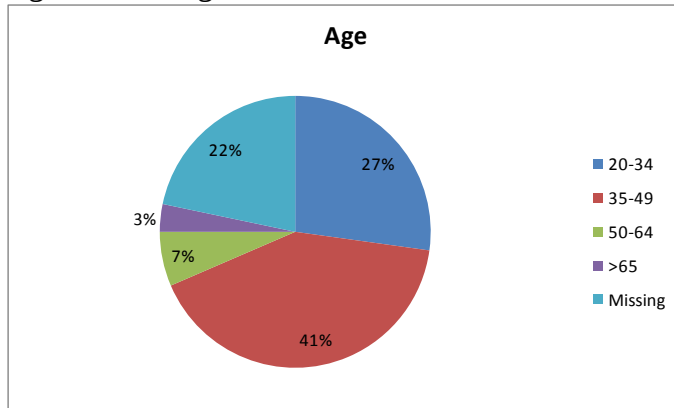
People here have very high level of interest for typical products, they like to try out new products when they travel, and also they often go to the fairs and manifestations where it is possible to try out food products. Their level of awareness about PDO/PGI certification and trust in it is high. Their interest in typical food from foreign countries could also be seen in the fact that they have tried some typical foreign products, although they have never been, or have rarely visited, countries where these products are from.

Because of interest for typical products, they are interested in buying PDO Futog cabbage and PDO Petrovac sausage, although these types of products are not in their habitual diet. But their willingness to pay any higher price is not the same for these two products. For PDO Petrovac sausage, respondents would pay 5% higher price than for some other dried sausage, but for PDO Futog cabbage they are not willing to pay any higher price. Motivation for this can be found in diet habits of the cluster. People from the cluster almost never eat acid cabbage, and even they would buy it, they do not want to pay any extra price. As respondents eat dried sausages sometimes, they accept to pay higher price in maximum of 5%.

6.4.2.3. Cluster 3 – Consumers very interested in two Serbian PDOs

Demographic characteristics: This cluster consists of 74 respondents, mostly equally divided by gender. 51.4% are men and 48.6% are women. It is cluster with the most respondents, and it represents 41.3% of the whole sample. 33.7% of the cluster is made of respondents younger than 34 years of age, majority of the cluster, 51.3%, are in the age from 35 to 49. 8.1% are respondents that are between 50 and 65, and only 4.1% of the cluster is made of people that are over 65.

Figure 6.89.: Age of the cluster



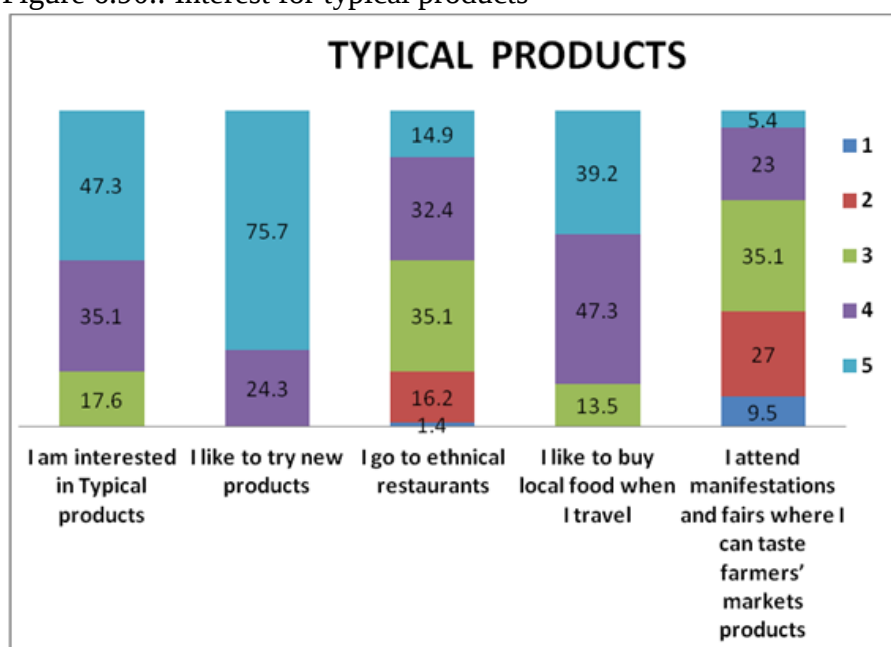
More than half of the cluster, 60.8%, is people that are faculty graduates, moreover, 40.5% of them have finished faculty, and 20.3% withhold Master or PhD degree.

In this group, about one quarter of the respondents were not born in Italy, which is a higher share regarding other two clusters. Others are from other European and non-European countries. 9.5% of the respondents were born in Romania, 4.1% in Germany, and others were born in Albania, Slovakia, Check Republic, Serbia, and Lebanon. According to this data it can be expected that respondents are familiar with various food products from different countries. 59.5% of them live in area of Viterbo, 12.2% in Rome, 8.5% in Bari, 2.7% in Naples, others live in Treviso, Siena and other cities.

Interest in Typical food products: Respondents from the cluster have high level of interest for typical food products (4.24), especially higher in respect to the first cluster, even if

slightly lower in respect to the first. They like to try out new products very much (4.76), more than respondents from other two clusters. Considering the attitude towards the statement that they like to try out new products, it can be seen that on the scale from 1 to 5, where 5 was the highest level of agreement, 75.7% of the people responded with 5 and other 24.3% responded with 4. Respondents also like very much to buy local food when they travel (4.26). In this cluster there is none who doesn't like to try out new products and to buy local products. Respondents go sometimes to ethnic restaurants, and sometimes attend local fairs and manifestations where are exposed farmers products that could be tasted. According their interests towards typical products, it could be expected that this group would like to try out Serbian typical products.

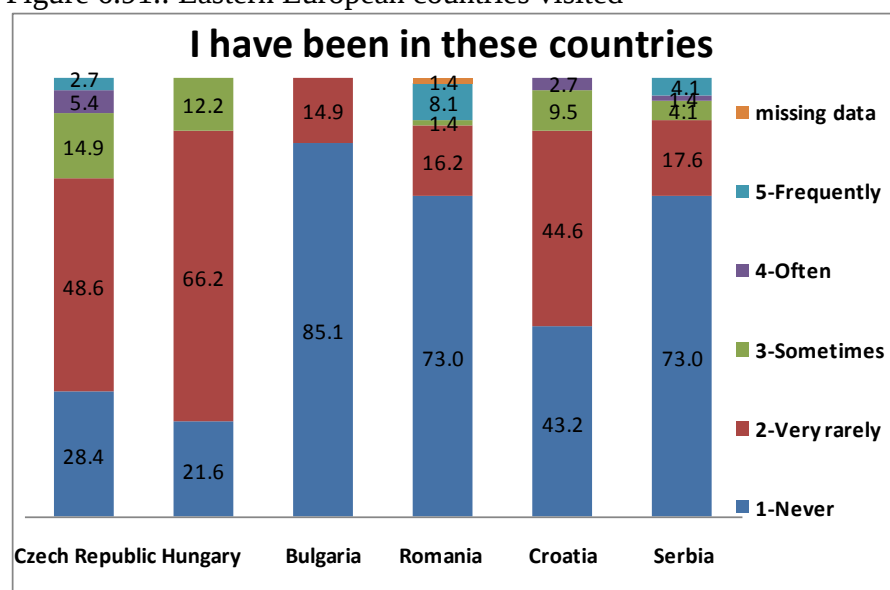
Figure 6.90.: Interest for typical products



Awareness of existence of PDO/PGI certification and trust in it: Respondents from the cluster have often heard about PDO/PGI certification, and all of them are familiar with it. Also, there isn't anyone that does not trust the scheme, and even level of trust is higher (4.18), in respect of the first and second cluster. Their level of awareness of the scheme is indicated by high level of education, and age of the group. This could affect decision of buying PDO products from Serbia. As the cluster is familiar with certification and trust in it, they would not have doubts for quality of two Serbian PDO products.

This group of people has travelled to countries in Eastern Europe. Only 2.7% of the cluster has never been in any of the countries that were listed in the survey. All other respondents have been in some of them; even 8.1% of the group has been in all of the countries listed. Respondents have been traveled mostly to Hungary and Czech Republic. Respondents from this cluster have travelled to Eastern European countries much more than respondents from other two clusters. Because of knowledge about these countries, their culture and tradition, possibility that these respondents would buy any or even both Serbian PDO products is higher.

Figure 6.91.: Eastern European countries visited

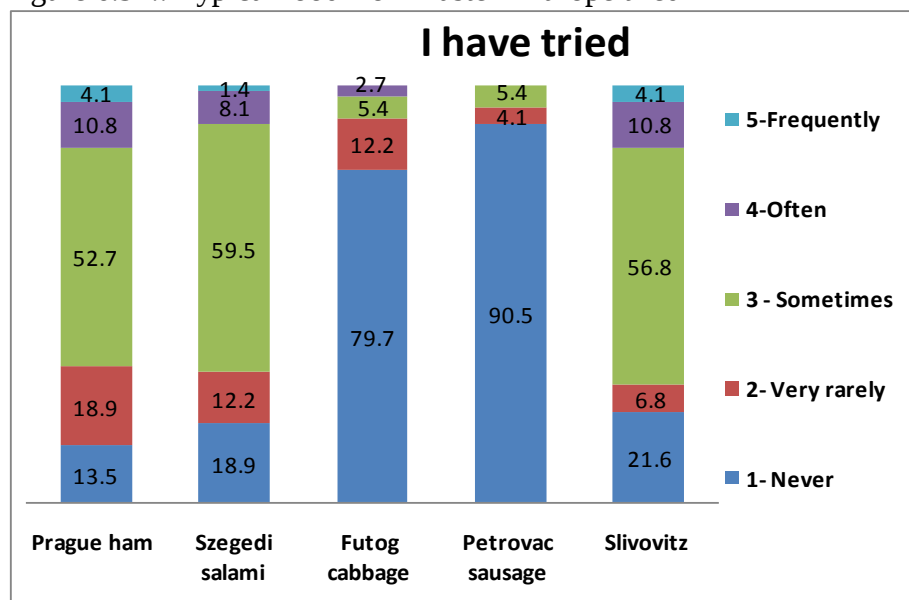


95.9% of the cluster has eaten some typical products that were offered in the questionnaire, which is very different in comparison to respondents from the first and second cluster. 50% of the respondents have tried 3 of them. Respondents mostly eat Prague ham and Szegedi salami. They indicated that they buy these products sometimes, which is very positive as they do not do that only when they travel to these countries. Literature reports significantly higher likelihood of preference of trying new product out, for those who had previously purchased items similar to the product (Evans, 2007).

As success in international market is predicted on the basis of knowledge of national culture, consumers' perceptions and behaviour that influence consumer decision making and impact acceptance of products (Hyllegard, et al., 2005), this group of people have previous

knowledge about Eastern European countries and their food, likes to try out new foreign food products, especially if they are connected with typicality and quality. These facts can influence on consumers interest for Futog cabbage and Petrovac sausage, and also to their introduction to Italian market.

Figure 6.92.: Typical food from Eastern Europe tried



According to these characteristics, that respondents are interested in typical food, that they like to try out new products, and that they are familiar with PDO/PGI scheme, as well as the fact that they were born in different countries, and have traveled a lot, it can be expected that they would show interest for 2 products from Serbia.

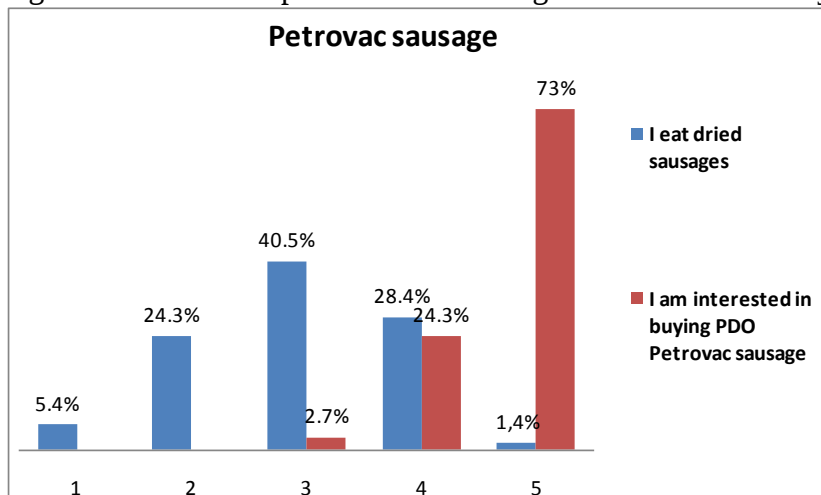
Consumption of dried sausages: People in this cluster sometimes eat dried sausages. They eat it a little bit more frequent than respondents from other two clusters. Moreover, only 5.4% never eats them, 40.5% eats them sometimes and even 28.4% eats them often. As they eat dried sausages, they could show interest for buying Petrovac sausage.

Interest for PDO Petrovac sausage: Respondents from this cluster are very much interested in PDO Petrovac sausage buying, as it can be seen from the average response which is 4.70. Furthermore, 73% are respondents with highest level of agreement on the same scale, and

all of them are very interested in purchasing this product. This is very big difference regarding people from other two clusters.

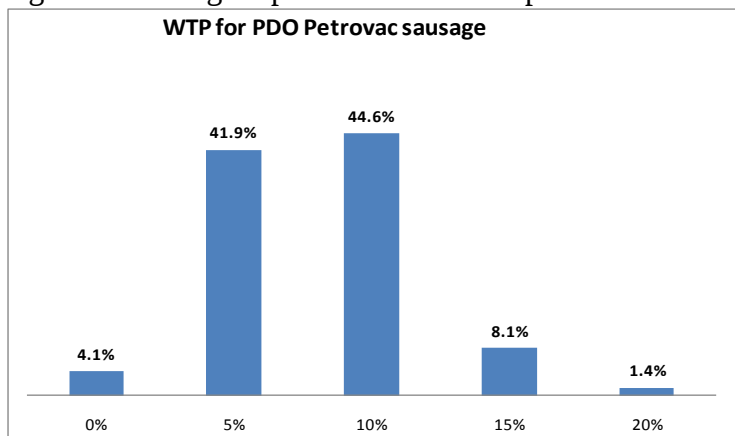
The diet habits of the cluster compared to interest for buying PDO Petrovac sausage are presented in the graph 6.93. As people from this cluster have dried sausages in their diet only sometimes, they show higher interest for buying Petrovac sausage.

Figure 6.93.: Consumption of dried sausages and interest for buying PDO Petrovac sausage



According their interest, they would also pay 10% more for purchasing Petrovac sausage. This attitude is different from attitudes of people from other two clusters, as people from the first cluster would not pay any higher price, and people from the second would pay 5% more. With deeper analysis it can be seen that 44.6% of the cluster would pay 10% higher price and 41.9% would pay 5% more. Only 4.1% of the cluster would not pay any extra price for it.

Figure 6.94.: Higher price that would be paid for Petrovac sausage

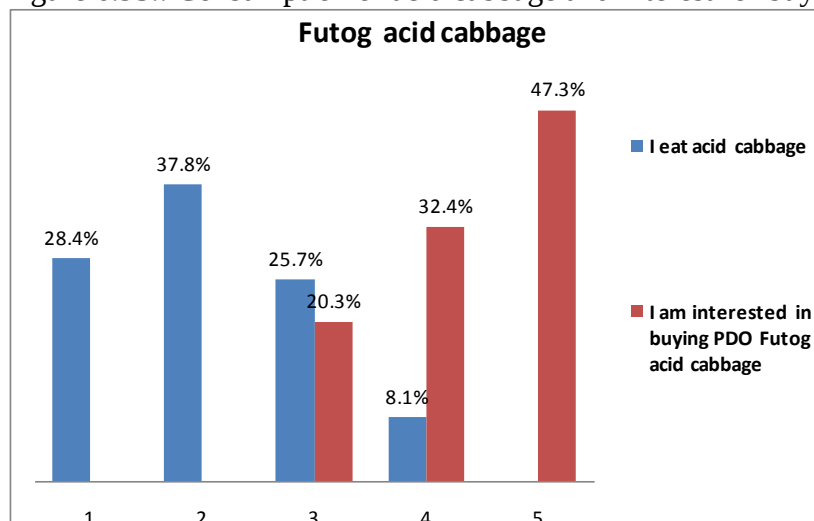


Consumption of acid cabbage: Respondents from the cluster eat acid cabbage rarely. Anyway, it is more frequent in respect to respondents from other two clusters that do not eat it. Analysing deeper, 28.4% of them do not eat it never, and others do it rarely (37.8%) or sometimes (25.7%). Only 8.1% of the group eats it often. As this group have in diet acid cabbage, it is possible that these respondents would like to try out and buy PDO Futog acid cabbage.

Interest for PDO Futog cabbage: People from the cluster are highly interested in buying PDO Futog cabbage. All respondents are interested, and their level of interest is 4.27, which is much higher than level of interest of people from other two clusters. Furthermore, almost half of the cluster (47.3%) is interested at the highest level of interest.

The graph 6.95, shows data on diet habits towards acid cabbage and frequency of eating it and interest of the cluster for buying PDO Futog acid cabbage.

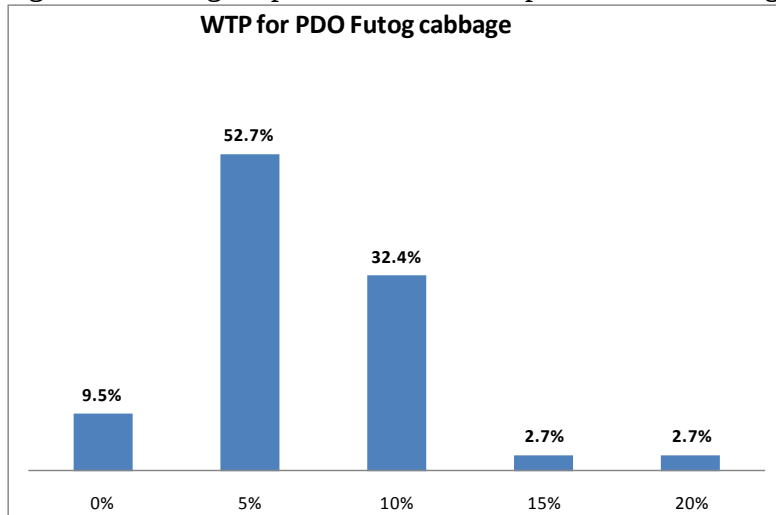
Figure 6.95.: Consumption of acid cabbage and interest for buying Futog cabbage



As respondents from the cluster show high level of interest for buying Futog cabbage, they are also willing to pay some extra price, in range of 5% more. If we analyse responses more thoroughly, it can be seen that 52.7% would pay 5% more, and 32.4% of the cluster would pay 10% more for Futog cabbage, compared to some other acid cabbage. There are also 2.7% of the cluster that would pay 15% more and 2.7% that would pay even 20% higher price for it.

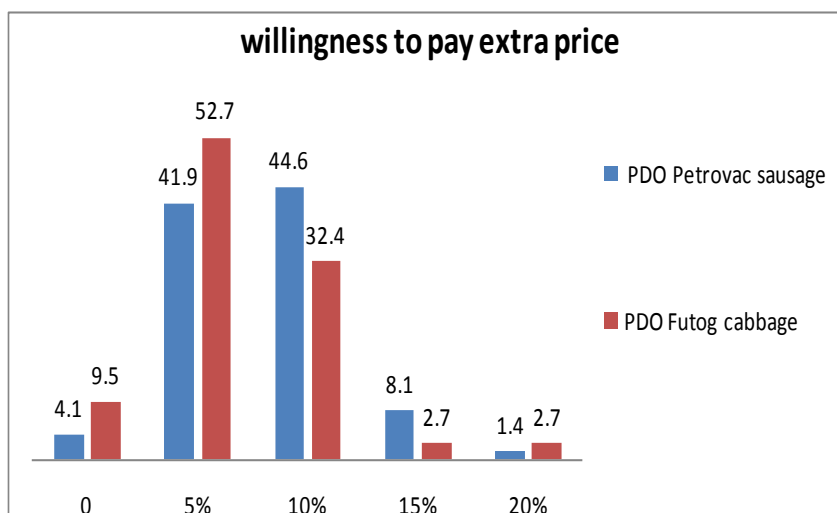
Willingness to pay extra price for Futog cabbage exists in this cluster, which is not a case for other two clusters.

Figure 6.96.: Higher price that would be paid for PDO Futog cabbage



In the Figure 6.97 are shown differences between willingness to pay for Petrovac sausage and Futog cabbage. As it can be seen, more people are willing to pay 5% more for Futog cabbage. But, 10% higher price would rather be paid for the sausage.

Figure 6.97.: Willingness to pay for Futog cabbage and for Petrovac sausage



Summary: This cluster consists of both female and male respondents equally distributed. They are young, well educated respondents. Respondents from the cluster were born in Italy, but also in many other countries from and outside Europe. This fact influence their diet and interest in food. They have been in some of the Eastern European countries and have tried typical food from these countries. These could be very important for arising interest for buying PDO products from Serbia. As they have traveled in various countries and have tried different food products, they could have higher interest and preferences towards Serbian products.

One more important feature of the cluster is that people are very much interested in typical products, trying new products out and buying local food when they travel. These characteristics have influence on attitude of the respondents towards two Serbian products.

Respondents from the cluster are very much interested in buying both PDO Petrovac sausage and PDO Futog cabbage. Even they use them in their diets; they are not eating acid cabbage and sausages frequently. But they would pay some extra price for both products. For Petrovac sausage they are willing to pay 10% more in respect to some other sausage. For Futog cabbage, this percentage is a little bit lower, and it is 5%.

6.4.3. Concluding remarks, main differences and comparison between clusters

Cluster analysis was helpful in highlighting three different kind of attitudes among consumers with respect to PDO Petrovac sausage and PDO Futog cabbage and, more generally, with respect to PDO/PGIs, typical products and even any kind of new food.

The sample was more homogenous regarding demographic features, which depends on the way that interviewers were selected. As a consequence, clusters are not very much different regarding them. Demographic characteristics were already explained in previous sections.

In the first cluster respondents do not have high level of interest in typical products; level of interest for buying new products when they travel is lower than in other two clusters. People from the first group have not visited Eastern European countries or tried their typical food, so they are not familiar with it and do not have idea which kind of taste they can expect. Furthermore, awareness of PDO/PGI scheme existence and trust is lower than in other two clusters. Because all these facts, respondents from the first cluster are not interested in buying any of two Serbian products.

Respondents from the second cluster are characterized by very high level of interest for typical products. They like to try new products out when they travel, and also, they often go to the fairs and manifestations where it is possible to try out food products. Their level of awareness about PDO/PGI certification and trust in it is high. All these facts influenced on their interest in PDO Futog cabbage and PDO Petrovac sausage. These respondents would buy both products for the same price as for some other similar products. But in this case preferences towards type of food and habitual diet have influence on willingness to pay more for these products. For the sausage they are willing to pay 5% extra price, because they have it in diet more than acid cabbage, which is not in their habitual diet and would not pay any extra price for it.

And, finally, respondents from the third cluster, who present the largest share of the sample, are very much interested in typical products, trying new products out and buying local food when they travel, which have influenced on attitudes of the respondents towards two

Serbian products and high level of interest for buying them, even with paying some extra price, in range of 10%, for both of these products. These respondents also have traveled more to Eastern European countries, and have tried typical food from these countries more than people in other two clusters. Knowledge about the culture, and previous experience of tasting similar products, have influence on their willingness to buy and even to pay extra price for PDO Petrovac sausage and PDO Futog cabbage. Also, interest for purchasing these products is the consequence of the higher level of trust in PDO/PGI scheme. This can be interpreted as a premise for trusting analogous kind of certification from third countries that follow similar schemes like Serbia.

6.5. Differences between Serbian and Italian samples clusters

Surveys show that Italian and Serbian consumers have different eating habits regarding acid cabbage and dried sausages, attitudes and habits towards typical products, level of awareness and trust in PDO/PGI scheme, interest for buying and paying extra price for PDO Futog cabbage and PDO Petrovac sausage. As differences in diet are already known, it can be said that in Serbia people would more likely buy Futog acid cabbage and pay a higher price for it, and in Italy, respondents are more interested in purchasing Petrovac sausage. These differences are presented in graphs that follow for all clusters both in Serbia and Italy.

Furthermore, analysing the interest for typical products, it can be said that respondents have similar level of interest in these products in Italy and in Serbia. Statistical values for interest of respondents in Serbia for all three clusters respectively are 4.31, 3.20, 3.22 and in Italy 3.34, 4.51, 4.28. Interest for typical products is slightly higher in Italy. The high level of interest for typical products is important for making a decision to buy Futog cabbage and Petrovac sausage. The higher level of interest for typical products is, the higher is the possibility to buy and to pay for them.

The awareness of existent of PDO/PGI scheme is higher in all clusters in Italy, than in Serbia. Results for this statement in Italian clusters are (2.89; 4.35; 3.92) and in Serbian cluster (2.71; 2.25; 1.77). This is consequence of two circumstances. Firstly, the PDO/PGI certification in Serbia does not have long tradition, and although there are promotions, the level of knowledge is lower than in Italy. Secondly, Italy is the country with the most PDO/PGI products in Europe, so respondents are much more familiar with the scheme. Also the level of trust into this certification is higher in clusters in Italy than in Serbia. That can lead to a conclusion that for Serbian clusters the product quality certification is less important for purchasing these products than in Italy, or people in Serbia do not have high level of trust into the food labeling. For Italian clusters trust in the certification can mean the possibility for purchasing certificated products more than others, because they are sure in quality.

All this have impact on interest for buying both PDO Futog cabbage and PDO Petrovac sausage and willingness to pay some extra price for them. Futog cabbage is familiar for respondents from Serbian clusters, and they also have acid cabbage in their diet. So, the level of interest for buying this cabbage is high if it costs as the other acid cabbages that could be found on market (4.83; 3.83; 4.04). As respondents from Italian clusters do not have acid cabbage in their diet, or have it rarely as in the third cluster, their interest for buying it is lower, except in the third cluster where respondents have significantly higher interest for buying PDO Futog cabbage, than in other two clusters (2.07; 2.04; 4.27). Consequently, also willingness to pay extra price for Futog cabbage is higher in Serbian clusters. Moreover, in Serbia first cluster would pay 10-20% more, second 5% more for Futog cabbage. In Italy, first and second cluster would not pay any extra price, and third cluster would pay 5% higher price for it. The same situation is for Petrovac sausage.

References

- Anić , I.D. (2010): Attitudes and purchasing behavior of consumers in domestic and foreign food retailers in Croatia, Zbornik radova Ekonomski. Fakultet Rijeka, vol. 28, No.1, pg. 113-133
- Bonnet C., Simoni M. (2001): Assessing consumer response to Protected Designation of Origin labeling: a mixed multinomial logit approach, Eur Rev AgricEcon 28 (4), pg. 433-449
- Byrne, P., Toensmeyer, U. , German, C., Muller, H.R. (1991): Analysis of consumer attitudes toward organic produce and purchase likelihood. Journal of Food Distribution Research, 22(2): 46-62, available at <http://ageconsearch.umn.edu/bitstream/27608/1/22020049.pdf>
- Carbone A., Gaito M., Senni S. (2009): Consumer Attitudes towards Ethical Food: Evidence from Social Farming in Italy, Journal of Food Products Marketing, 15:337-350
- Evans, J. (2007): Determining Consumer Perceptions of and Willingness to Pay for Appalachian Grass-fed Beef: An Experimental Economics Approach, doctoral thesis, Davis College of Agriculture, Forestry, and Consumer Sciences, West Virginia University
- Hyllegard, K. et al. (2005) “Spanish consumers’ perceptions of US apparel specialty retailers’ products and services”, Journal of Consumer Behaviour, Vol. 4, No. 5, pg. 345-362
- Lusk, J., Fox, J., Schroeder, T., Mintert, J., Koohmaraie, M. (2001): In-store valuation of steak tenderness. American Journal of Agricultural Economics, 83(3): 539-550, available at <http://naldc.nal.usda.gov/download/29816/PDF>
- Maynard, L., K. Burdine, and A. Meyer. 2003. Market potential for locally produced meat products. Journal of Food Distribution Research, 34(2): 26-37, available at <http://ageconsearch.umn.edu/bitstream/27321/1/34020026.pdf>
- Michael R. (1975): Education and Consumption; Education, Income, and Human Behavior, available at <http://www.nber.org/chapters/c3699.pdf>

- Underhill, S., Figueroa, E. (1996): Consumer preferences for non-conventionally grown Produce, *Journal of Food Distribution Research*, 27(2): 56-66, available at <http://ageconsearch.umn.edu/bitstream/27067/1/27020056.pdf>

7. CONCLUSIONS AND FUTURE PERSPECTIVES

In order to analyze potential in the market for two Serbian products with geographical indication, and to understand who the consumers of these products are and whether they would pay for them, two parallel surveys were conducted. One was conducted in Serbia, where these products are from, and another in Italy, a country which was seen as a potential future market. Being aware of the consumer attitudes, producers can develop their strategies for positioning the products on the market. Besides demand side analysis, a supply side was analyzed as well. Supply side analysis was done in order to collect data of the two products, and to understand better position of the products on the market. Matching supply and demand side analysis together, i.e. strengths and weaknesses of the products, and their possible opportunities and threats on the market, with consumers' attitudes and preferences, some future indications for market positioning of these products could be proposed.

Before explaining demand side, some basic conclusions of the supply side should be mentioned, as they are very important for possibilities of positioning on the market. Both products, Petrovac sausage and Futog cabbage, have many strong sides and potential opportunities, such as old tradition, experience, good quality. But for both products, there is a limitation of expansion of produced quantity. Petrovac sausage production is still ongoing within small households with small capacities only, and producers cannot produce bigger quantities. Due to the small quantity of the Petrovac sausage production, market demand cannot be satisfied. With building a production plant, which will unify all production in one place, production process will be simplified, and it will be possible to produce bigger quantities. With just one household which prepares acid PDO Futog cabbage, and its capacity of 2000 t, it is difficult to answer the demand that exists, or can exist, for acid cabbage outside of Serbia. Because of the small capacities, most of the cabbage is sold as fresh. That brings lower income to producers. Majority of fresh cabbage is sold in short time period, in order to retain its quality. Acid cabbage, when prepared and packaged, can stay and be sold in longer time periods, and can also be transported to further destinations.

On a base of data collected from surveys in Italy and Serbia, some general conclusions about market and consumers can be made.

Petrovac sausage and Futog cabbage are products very well recognized by the consumers in Serbia. But they are famous not because of the certification, but because of tradition. Futog cabbage is very famous as “variety of cabbage” and Petrovac sausage as a type of dried spicy sausages. Anyway, the name of Futog cabbage is more familiar to Serbian consumers. It is a consequence of small amount of production of Petrovac sausage, and impossibility to find it in supermarkets and retail chains in Serbia. But the level of appreciation of Petrovac sausage is very high, and willingness to buy it and pay more for it, is connected with it. As in Serbian traditional diet both acid cabbage and dried sausages are present, majority of the respondents would buy both PDO products for the price similar to some other similar products. Moreover, more than half of the sample would pay higher price, to some extent, for both products. Furthermore, there is interest for typical products in Serbia. These products are mostly linked to tradition. Although PDO/PGI scheme is relatively new on Serbian market, people are aware of its existence. Considering other prices and expenses that people have, monthly income for sure can be one limit factor for PDO/PGI products consumption and purchase in Serbia.

Italian sample is characterized with high level of awareness of PDO/PGI scheme and interest for typical products, which have positive influence for interest in products with this label and not coming from Italy. But knowledge about Eastern European countries and culture, based on travelling experience, is not on the high level. Regarding products from Eastern Europe that respondents have tasted, Prague ham and Szegedi salami were eaten the most. This interest for meat products from this area could be positive aspect for purchasing Petrovac sausage. Majority of the respondents are interested in purchasing and trying Petrovac sausage, and even willing to pay some extra price for it. Interest for buying and paying extra price for Futog cabbage is on the lower level.

Cluster analysis was done in order to identify meaningful market segments. It revealed three diverse consumer clusters, both in Serbia and Italy.

Clusters in Serbia are different regarding daily diets and tastes, with a diverse degree of knowledge and interest in typical attributes of foods and PDO/PGI certification, and attitudes towards buying and paying for two selected PDO products differ (related also with income levels). These three different consumer groups can be identified as “consumers with strong interest in Futog cabbage and Petrovac sausage”, which represents 28.7% of the sample; “consumers moderately interested in Futog cabbage and Petrovac sausage”, that represents the largest part of the sample, 41.8%; and the third group “consumers interested but not WTP more for Futog cabbage and Petrovac sausage” , with 29.5% of the sample.

Cluster analysis has shown that demand in Serbia for both products exists. With adequate strategy 70% of the population would pay higher price for Futog cabbage and Petrovac sausage. It should be made more efforts to convince respondents from the second cluster, which represents almost 42% of the population, to buy these products.

First cluster, which consists of consumers strongly interested in Futog cabbage and Petrovac sausage, is characterized by very high level of interest for buying both products, and paying extra price in range 10-20% for them. These respondents are mostly females, younger, between 35 and 45 years old, highly educated. Income of these respondents is on higher level and they can permit themselves additional expenses for food. They express high level of interest for typical products, and, also, they are aware of PDO/PGI scheme. They consume acid cabbage and dried sausages often, mostly because they like the taste.

Producers should focus on this group of consumers. As for this group both products are already familiar, and they have already purchased them, producers should keep them as consumers. Futog acid cabbage can be found also in supermarkets, and in packaging that is convenient for these respondents, in order to satisfy personal needs. As they work and live in town, more probably that they are buying food in supermarkets than on markets. But, Petrovac sausage cannot be found in supermarkets. Going to the village Backi Petrovac for these respondents could be a problem, because they do not have time, or it is simply easier to buy food immediately in the shop. As they appreciate traditional products and are willing to pay more, producers of Petrovac sausage should use this opportunity, and should find a way to sell the

product in some of the supermarkets in town of Novi Sad. As their weakness is the small quantity of the production, because of the lack of production capacity, it should be necessary that government intervenes with some subsidies. The reason for this should be the fact that even this group of people is interested to buy Petrovac sausage, and they like its taste, if it is not present on the market, or if it is difficult to buy, there is threat that consumers would buy some other similar product.

Second cluster consists of “consumers moderately interested in Futog cabbage and Petrovac sausage”. It represents the largest part of the sample, 41.8%. “Moderately interested” means that these consumers would pay the same price for PDO sausage and Futog cabbage as for some other similar products, although there is possibility that they would pay slightly more for both PDO Futog cabbage and PDO Petrovac sausage, than for generic substitutes. But this willingness to pay is lower than for respondents from the first cluster. They eat dried sausages and acid cabbage but less frequently than respondents from the first cluster do. They are young people, with very high level of education, live in town, and with a work that brings income that can be considered as high in Serbia. From a producers point of view these group of people should be market segment with a high potential. As it was already mentioned, from a literature view, people who are young, highly educated, and live in town, are more likely to buy PDO products. Also, income of this group would not be limitation factor. Besides, they like to eat these products. They are not so much interested into typical products, and marketing strategy for this group should be oriented on food quality. It is necessary to promote PDO/PGI scheme, as with higher level of awareness of the PDO/PGI scheme, their interest for these two products would increase. Besides, as this group of people has families and also prepare meals for them, and buy sausage and acid cabbage, because members of the family eat them, promotions that underline food quality addressed to children health can be taken. For example, some supermarkets organize programmes for children in order to complete the weekend purchasing, when the whole family is present. In these programmes, it can be interesting to do some promotions, which will underline healthy way of production of these two products and have positive impact on children’s health.

The third cluster consists mostly of women, older than 35 years old, with high school education, and families with 4 members. They work, but their salaries are very low. They eat both acid cabbage and dried sausages, but only sometimes, even if they like their taste very much. Acid cabbage is typical food dish that is usually eaten in winter period, which is why people stated that they like it very much, but do not eat it very frequently. According to these respondents, dried sausages are not very healthy and because of that, although they like them very much, they do not consume them very frequently. Because of their diet habits, they would buy both products, but for the price which is not higher than for other similar products. Because of the low income they would not pay any extra price. Besides, also their awareness of PDO/PGI scheme is lower than in other two clusters. They do not show high interest towards typical products as respondents from the first cluster do.

Regarding lower interest towards typical products and level of awareness for the PDO/PGI scheme, as well as low income, this group of people is not market segment that would pay higher price for Petrovac sausage and Futog cabbage. From the producers' point of view, there is no marketing strategy that would make this group to pay some extra price. But if the price of the products would be at the same level of the other products, this group of people is the buyers.

Clusters in Italy are different regarding interest in PDO/PGI products, interest in trying new products, and buying food when they travel, and also different interest for purchasing PDO Petrovac sausage and PDO Futog cabbage. These three groups can be summarized as follows: "Consumers not interested in two Serbian PDOs", which represent 31.3% of the sample, "Consumers interested in typical food", 27.4% of the sample, and "Consumers very interested in two Serbian PDOs", that represents the largest part of the sample, 41.3%. Regarding these results, it can be said that market potential for Serbian PDO products in Italy exists. Around 70% of our sample is interested in trying these products. But market segments are different, and there is a need for different market strategies.

Respondents from the first cluster are not interested in buying either of two Serbian products. They represent one third of the sample. Some of the main characteristics of this market

segment are that they are young people, with secondary school education. They are Italians, and live in Italy. These respondents have not traveled in Eastern European countries, and have not tried Eastern European typical products, so even their knowledge about these types of products is low and they do not have interest in trying them out. Besides, their interest in typical food products is not high. They do not attend fairs and manifestations where these products could be tried out. Furthermore, awareness of PDO/PGI scheme exists and trust in it is not high. Also, they do not have acid cabbage in their diets, and they eat dried sausages rarely. Because of their interests and attitudes, it would be difficult with any type of strategy, to target them as consumers. So, we can say, that around one third of population in Italy, that have these characteristics, is not market potential for Serbian PDO products.

Other two thirds of the sample are potential consumers of PDO products from Serbia. But, they are different among each others, and have need for different approaches. Second cluster is represented by people with very high level of interest for typical products. They are young, highly educated people. They like to try out new products when they travel and also they often go to the fairs and manifestations where is possible to try out food products, and also new products. Their level of awareness about PDO/PGI certification and trust in it is high. Their interest in typical food from foreign countries could be seen also in the fact that they have tried some foreign typical products, although they have never been, or have rarely visited, countries from where these products are from.

Because of these interests, they are willing to buy and to taste PDO Futog cabbage and PDO Petrovac sausage, although these types of products are not in their habitual diet. But, their willingness to pay any higher price is not the same for these two products. For PDO Petrovac sausage, respondents would pay 5% higher price than for some other dried sausage, but for PDO Futog cabbage they are not willing to pay any higher price. Motivation for this can be found in diet habits of the cluster.

According to interests of the second cluster, we can say that this group of people are potential consumers of two products. As they trust in PDO/PGI labelling, and like typical food, typical foreign products with PDO label, are interesting for them. In order to attract this group of

people, and to present them their products, producers should expose products on food fairs and manifestations, especially on fairs, where typical products are exposed. Beginning with promotion on fairs, targeted groups of consumers can be reached. Furthermore, some retailers that sell typical products should be found on the fairs, and contracts with them could be signed. In the beginning, producers should sell their products for the price that is equal as for similar products. In that case, respondents from this group would buy products, at least to try them out. These consumers are more interested into Petrovac sausage, because of diet habits. For the sausage they would even pay 5% higher price in order to try it.

The third cluster, which represents the highest share of the sample with around 42%, are people with high level of interest for typical products, that have interest for buying PDO Futog cabbage and PDO Petrovac sausage, even for the higher price. They are young, well educated people. Respondents from the cluster were born in Italy, but also in many other countries from and outside Europe. This fact influence their diet and interest in food, as well as knowledge about other types of food and countries. They have been in some of the Eastern European countries and have tried typical food from these countries. This is very important for arising interest for buying PDO products from Serbia. As they have travelled in various countries and have tried different food products, they have higher interest and preferences towards Serbian products. One more important feature of the cluster is that these people are very much interested in typical products, trying out new products and buying local food when they travel. Because of these attitudes and interests, respondents from this cluster are very much interested in buying both PDO Petrovac sausage and PDO Futog cabbage, and are even willing to pay some extra price. As well as respondents from the second cluster, this group is willing to pay more for Petrovac sausage than for Futog cabbage. For the sausage they would pay 10% higher price, and for the cabbage 5% more in respect to similar products.

Producers can have the same strategy as with the second cluster, in order to reach this market segment. They should expose their products on food fairs and manifestations. And there they could find shops of local food where they will sell products. But, to this group of people they can place products even for the higher price, as they already have an idea of what these products are.

It can be concluded that Italian market is a potential market for Serbian PDO products, but more favourable for Petrovac sausage. The best way for starting promotion in Italy, is to attend fairs where food and typical products are exposed. Another possibility is to improve their Internet promotion. Producers of both products already have web sites and already sell products via Internet. As majority of interested consumers in Italy are young people, who use Internet, by adequate Internet marketing, these people can become aware of existent of two products. Besides, also owners of typical food shops could become interested in the products in this way, and also typical food restaurants. Promotion by Internet has lower costs, so it could be convenient part of marketing mix for producers.

According to the results, and possibility to enlarge market in and out of borders of Serbia, which can also have an influence and effect for other PDO/PGI products, that were not studied in this research, it could be concluded that more intensive Serbian government intervention is necessary for several reasons. Firstly, there is still need to inform Serbian consumers more about benefits that PDO/PGI certification brings. With greater knowledge about the PDO/PGI certification, demand for two PDO products, and also willingness to pay for them, could increase. By more intensive promotion of the PDO/PGI scheme, from the Government and its bodies, consumers will be more aware about quality benefits of the products. Thus, they will be more interested in purchasing these products, and also, willing to pay more for them. That could have a positive impact on increasing producers' income, also on involvement of other actors, and as a consequence it can enhance rural economy and rural development.

Secondly, producers of both products are small, with small quantity of production, because of small capacities. It is limitation for selling and especially for exporting products, in order to have continuous supply. There is a threat that there will not be enough quantity of products to satisfy demand of the markets, both in Serbia and Italy, or in the future in some other country. Intervention of Ministry and Government should be in providing some subsidies, or loans, for improving process of production, and capacities, in order to be able to produce more. As demand for quality products is increasing, both in Serbia and in Italy, with higher amount of production, and possibility to have continuous supply, and to export products, benefits in income

of producers could be gained. Also, especially with export of these two products, possibilities for demand of other Serbian PDO/PGI products, in Italy would be increased.

Thirdly, as producers are small, they do not have enough money for promotional activities, especially out of Serbia. And marketing activities are necessary, especially in foreign countries. In Serbia, these two products are already well-known by the name, and mostly sold because of that. In fact, in Italy, respondents do not know these products, and they do not have them in habitual diet. But, in Italy large part of consumers trust into PDO labels, and all benefits that it brings with it, and show interest to try two Serbian PDO products. In order to reach these consumers, it is necessary that Serbian PDO producers attend and expose on food and typical products fairs and manifestations. Governmental organizations, such are Ministry of Agriculture, Chamber of Commerce, and even extension services, should provide more information to producers which manifestations they could attend, and also to help them organize their exposition there. Governmental institutions could also provide them with financial support for travel and/or exposition on these types of manifestations. Besides, benefits that would gain producers of Petrovac sausage and Futog cabbage could also bring benefits to other PDO producers. These manifestations could be organized for several products producers at the same time. It could lead to higher export orientation of the producers, and increase of Serbian PDO products on Italian, and EU market.

It has to be mentioned that in order to remain on market and especially to use market possibilities and potential that we explored during the research, besides producers, it is necessary active participation of other actors, such are government, ministry of Agriculture, Chamber of Commerce, public local and non-local institutions, research institutions, consumers associations, tourism organizations.

This study and results can be beneficial for the future market studies for other Serbian PDO/PGI products, and also other quality label products. On the base results obtained in the research, clearer picture about market of typical, quality and especially PDO/PGI products in Serbia is gained. On the other hand, results showed that market possibilities for these products, out of Serbian borders, exist. As research was based in Italy, as a foreign country, where these

products are not familiar for consumers and different from their traditional diet, interest for two Serbian products is positive in terms of possibility of expanding market of two products.

APPENDIX

Questionnaire for Serbian consumers

Uputstvo: Odgovore na pitanja dajete jednostavnim klikom na ponuđene opcije. U slučaju gde je ponuđen odgovor u skali od 1 do 5, treba da kliknete na broj koji izražava nivo vaše saglasnosti sa ponuđenom izjavom, u rangu od nisam saglasan(1) do saglasan sam u potpunosti(5).

*1. Jedem kiseli kupus

- ☐ nikad
- ☐ veoma retko
- ☐ ponekad
- ☐ često
- ☐ vrlo često

*2. Jedem kiseli kupus jer mi se sviđa ukus

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

*3. Jedem kiseli kupus jer je zdrav

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

*4. Jedem kiseli kupus jer se lako priprema

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

*5. Jedem kiseli kupus jer sam navikao da je u mojoj svakodnevnoj ishrani

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

*6. Jedem kiseli kupus jer ga pripremam za moju porodicu

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

*** 14. Najčešće gledam etiketu za sledeće proizvode**

- ☐ mleko
- ☐ jogurt
- ☐ sir
- ☐ meso
- ☐ suhomesnati proizvodi
- ☐ sveže voće
- ☐ sveže povrće
- ☐ konzervisano povrće za zimnicu
- ☐ pekmez
- ☐ kompot
- ☐ sok
- ☐ leks
- ☐ čokolada

Drugo (navedite)

15. Ne gledam uvek etiketu jer

- ☐ ne zanima me
- ☐ ne verujem
- ☐ nemam vremena

Drugo (navedite)

*** 16. Čuo sam za proizvode sa zaštićenim geografskim poreklom (PDO i PGI)**

- ☐ Da, i znam šta su
- ☐ Da, ali nisam siguran šta su
- ☐ Ne
- ☐ Ne znam

*** 17. Kupio sam PDO/PGI proizvod**

- ☐ nikad
- ☐ jako retko
- ☐ ponekad
- ☐ često
- ☐ veoma često

18. Nekih se sećam**19. Verujem u PDO/PGI sertifikaciju**

1- ne uopšte	2	3	4	5 - da, u potpunosti
☐	☐	☐	☐	☐

*** 20. Zanimaju me tipični prehrambeni proizvodi**

1- ne uopšte	2	3	4	5 - da veoma
☐	☐	☐	☐	☐

*** 21. Tipični proizvodi imaju / su:**

	1-nisam saglasan uopšte	2	3	4	5-saglasan sam potpuno
bolji ukus	☐	☐	☐	☐	☐
bolji izgled	☐	☐	☐	☐	☐
tradicionalni	☐	☐	☐	☐	☐
zdravi	☐	☐	☐	☐	☐
sveži	☐	☐	☐	☐	☐
podstiču lokalnu ekonomiju	☐	☐	☐	☐	☐

Drugo (navedite)

*** 22. Bio sam u Vojvodini**

- ☐ nikad
- ☐ jednom
- ☐ nekoliko puta
- ☐ često idem tamo
- ☐ živim u Vojvodini

*** 23. Čuo sam za Futoški kupus**

- ☐ vrlo često, i znam šta je
- ☐ često, i znam šta je
- ☐ ponekad, i znam šta je
- ☐ veoma retko, i ne znam šta je
- ☐ nikad, i ne znam šta je

***24. Jeo sam Futoški kupus**

- ☐ nikad
☐ retko
☐ ponekad
☐ često
☐ jako često

25. Sviđa mi se Futoški kupus

ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

***26. Kupio bih PDO Futoški kiseli kupus po ceni istoj kao za neki drugi kiseli kupus**

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

***27. Kupio bih PDO Futoški kiseli kupus i ukoliko je skuplji od nekog drugog kiselog kupusa**

- ☐ da
☐ ne

28. Ako ste odgovorili sa DA koliko više biste platili?

- ☐ 5%
- ☐ 10%
- ☐ 20%
- ☐ 30%

***29. Čuo sam za Petrovačku kobasicu (kulen)**

- ☐ nikad, i ne znam šta je
- ☐ veoma retko, i ne znam šta je
- ☐ ponekad, i znam šta je
- ☐ često, i znam šta je
- ☐ veoma često, i znam šta je

***30. Jeo sam Petrovačku kobasicu (kulen)**

- ☐ nikad
- ☐ veoma retko
- ☐ ponekad
- ☐ često
- ☐ veoma često

31. Sviđa mi se Petrovačka kobasica (kulen)

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

***32. Kupio bih PDO Petrovačku kobasicu (kulen) po ceni istoj kao za neku drugu sličnu kobasicu**

1 - ne, nisam saglasan	2	3	4	5 - saglasan sam u potpunosti
☐	☐	☐	☐	☐

***33. Kupio bih PDO Petrovačku kobasicu (kulen) i ukoliko je skuplja od neke druge slične kobasice**

- ☐ da
- ☐ ne

34. Ako ste odgovorili sa DA koliko više biste platili?

- ☐ 5%
- ☐ 10%
- ☐ 20%
- ☐ 30%

*** 35. Pol**

- ☐ muški
- ☐ ženski

36. Koliko imate godina?

37. Nivo obrazovanja

- ☐ osnovna škola
- ☐ srednja škola
- ☐ viša škola / fakultet
- ☐ master / doktorat

*** 38. Država u kojoj sam rođen**

*** 39. Država u kojoj živim**

*** 40. Živim u**

- ☐ gradu
- ☐ selu

41. Ime najbližeg grada

42. Zanimanje

43. Broj članova porodice

44. Prosečna mesečna zarada

- ☐ < 20.000 din
- ☐ 20.000-39.999 din
- ☐ 40.000-59.999 din
- ☐ >60.000 din

***45. Kuvam porodične obroke**

- ☐ nikad
- ☐ veoma retko
- ☐ ponekad
- ☐ često
- ☐ uvek

Questionnaire for Serbian consumers (English translation) Questionnaire

The present questionnaire is part of a field survey performed within a PhD research project of Università della Tuscia-Viterbo, Italy. The research is focused on two typical products from Serbia recently recognized as Protected Designation of Origin by Serbian Law.

The purpose of the research is purely scientific. Your personal data and responses will not be use in any other purpose than for this research project and will be held strictly confidential.

We thank You very much for being available to answer to the following questions and we inform you that if you will be anyhow interested in the research findings you will find them after April 2013 at [www. Dafne.unitus.it](http://www.Dafne.unitus.it). In filling in the questionnaire you are mainly asked to choose from multiple choice questions by clicking the case that better suites you. Please note that when answers are numerical they are on a scale of 5: 1being total disagreement with the proposed statement and 5 total agreements. The numbers in between represents intermediate situations between the two extremes.

1. I eat acid cabbage

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

2. I eat acid cabbage because I like its taste

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

3. I eat acid cabbage because it is healthy

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

4. I eat acid cabbage because it is easy/quick to prepare

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

5. I eat acid cabbage because it is in my habitual diet

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

6. I eat acid cabbage because I prepare it for the family

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

7. I eat smoked sausages

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

8. I eat smoked sausages because I like their taste

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

9. I eat smoked sausages because they are healthy

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

10. I eat smoked sausages because they easy/quick to prepare

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

11. I eat smoked sausages because they are in my habitual diet

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

12. I eat smoked sausages because I serve them for the family

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

13. When I buy food products I look at info labels

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

14. More often I check labels for following products

- a) milk
- b) yoghourt
- c) cheese
- d) meat
- e) meat products
- f) fresh fruit
- g) fresh vegetables
- h) processed vegetables
- i) jam
- j) processed fruit
- k) juice
- l) biscuits
- m) chocolate
- n) other.....

15. I do not look more often at info labels because:

- a) I don't care
- b) I don't trust
- c) I don't have time
- d) Other

16. I have heard of PDO/PGI products

1- never 2- very rarely 3- sometimes 4- often 5- frequently

17. I have bought PDO/PGI products

1- never 2- very rarely 3- sometimes 4- often 5- frequently

18. I remember some:

- a)
- b)
- c)
- d)

19. I trust PDO/PGI certification

1- do not agree at all 2 3 4 5 - totally agree

20. I am interested in Typical products

1- do not agree at all 2 3 4 5 - totally agree

21. Typical products are/have:

- a) better taste

1- do not agree at all 2 3 4 5 - totally agree

- b) better aspect

1- do not agree at all 2 3 4 5 - totally agree

- c) traditional

1- do not agree at all 2 3 4 5 - totally agree

- d) genuin/healthy

1- do not agree at all 2 3 4 5 - totally agree

- e) fresh

1- do not agree at all 2 3 4 5 - totally agree

- f) Sustain local economy

1- do not agree at all 2 3 4 5 - totally agree

other (specify).....

22. I have been to Voivodina

1- never 2 - once 3-few times 4-often 5-I live there

23. I have heard of Futog cabbage

1- never 2- very rarely 3- sometimes 4- often 5- frequently

24. I have eaten Futog cabbage

1- never 2- very rarely 3- sometimes 4- often 5- frequently

25. If yes, I like Futog cabbage

1- do not agree at all 2 3 4 5 - totally agree

26. I would buy PDO Futog acid cabbage at equal price than other similar cabbage

1- do not agree at all 2 3 4 5 - totally agree

27. I would buy Futog acid cabbage if the price is higher than other similar cabbage

- a) yes
- b) no

28. If the answer is YES how much more would you pay?

- a) Extra 5%
- b) Extra 10%
- c) Extra 20%
- d) Extra 30%

29. I have heard of Petrovac sausage

1- never 2- very rarely 3- sometimes 4- often 5- frequently

30. I have eaten Petrovac sausage

1- never 2- very rarely 3- sometimes 4- often 5- frequently

31. If yes, I like Petrovac sausage

1- do not agree at all 2 3 4 5 - totally agree

32. I would buy PDO Petrovac sausage at equal price than other similar sausage

1- do not agree at all 2 3 4 5 - totally agree

33. I would buy PDO Petrovac sausage if the price is higher than other similar sausage

- a) yes
- b) no

34. If the answer is YES how much more would you pay?

- a) Extra 5%
- b) Extra 10%
- c) Extra 20%
- d) Extra 30%

SOME PERSONAL INFO

35. Gender

- a) male
- b) female

36. Age

37. Education level

- a) primary school
- b) high school
- c) graduate
- d) master, PhD

38. Country of origin

39. Country where you actually live

40. I live in

- a) urban area
- b) countryside

41. Name of closest town/city

42. Job

43. Number of family members

44. Average monthly net income

- a) <20.000 din
- b) 20.000-39.999 din
- c) 40.000-59.999 din
- d) >60.000 din

45. I cook for the family meals

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

Questionnaire for Italian consumers

QUESTIONARIO SU DUE PRODOTTI TIPICI DELLA SERBIA

Il questionario che ti chiediamo cortesemente di compilare è parte di un progetto di ricerca del Dottorato in Economia e territorio presso l'Università della Tuscia-Viterbo, Italia. La ricerca è focalizzata su due prodotti tipici provenienti dalla Serbia che recentemente hanno il riconoscimento della Denominazione di Origine Protetta. Lo scopo della ricerca è puramente scientifico. I tuoi dati personali e le risposte non saranno utilizzati per scopi diversi da quelli di questo progetto di ricerca, ed in ogni caso tutte le informazioni verranno trattate anonimamente e nel più totale rispetto della riservatezza (D. Lgs. 196/2003).

Ti ringraziamo molto per la disponibilità a rispondere alle seguenti domande e ti informiamo che chiunque sia interessato ai risultati di questa ricerca li potrà trovare a partire da aprile 2013 al sito www.dafne.univ.it. Nella compilazione del questionario è principalmente chiesto di scegliere fra domande con risposta multipla; non dovrai far altro che cliccare sulla risposta che meglio rispecchia il tuo pensiero. Ti prego di notare che quando le risposte sono numeriche, su una scala da 1 a 5, la risposta contrassegnata da 1 significa che sei totalmente in disaccordo con l'affermazione proposta, viceversa 5 significa che sei completamente d'accordo. I numeri centrali (2-3-4) rappresentano situazioni intermedie che vanno gradualmente da un estremo all'altro. Nelle domande aperte ti preghiamo di rispondere brevemente con parole tue. GRAZIE.

* 1. Sono interessato ai prodotti tipici

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

* 2. Mi piace provare nuovi prodotti

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

* 3. Vado nei ristoranti etnici

mai	molto raramente	a volte	spesso	abituamente
☐	☐	☐	☐	☐

* 4. Mi piace comprare prodotti tipici quando sono in viaggio

mai	molto raramente	a volte	spesso	abituamente
☐	☐	☐	☐	☐

* 5. Frequento manifestazioni e fiere dove poter gustare i prodotti agroalimentari

mai	molto raramente	a volte	spesso	abituamente
☐	☐	☐	☐	☐

* 6. Mangio il cavolo acido

mai	molto raramente	a volte	spesso	abituamente
☐	☐	☐	☐	☐

7. Mangio cavolo acido, perché è:

- ☐ saporito
- ☐ sano
- ☐ buon abbinamento con altri cibi
- ☐ facile / veloce da preparare
- ☐ nella mia dieta abituale
- ☐ lo preparo per la famiglia

* 8. Mangio le salsiccie secche

mai	molto raramente	a volte	spesso	abituamente
☐	☐	☐	☐	☐

9. Mangio le salsiccie secche perchè sono:

- ☐ saporite
- ☐ sane
- ☐ buon abbinamento con altri cibi
- ☐ facile / veloce da preparare
- ☐ nella mia dieta abituale
- ☐ le preparo per la famiglia

*** 10. Ho mangiato Prosciutto di Praga (prosciutto tipico di Repubblica Ceca)**

mai	una volta	qualche volta	spesso	abituamente
☐	☐	☐	☐	☐

11. Mi piace il Prosciutto di Praga

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

*** 12. Ho mangiato il salame Szegedi (salame tipico ungherese)**

mai	una volta	qualche volta	spesso	abituamente
☐	☐	☐	☐	☐

13. Mi piace il salame Szegedi

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

*** 14. Ho mangiato il cavolo Futog (cavolo acido tipico Serbo)**

mai	una volta	qualche volta	spesso	abituamente
☐	☐	☐	☐	☐

15. Mi piace il cavolo Futog

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

*** 16. Ho mangiato la salsiccia Petrovac (salsiccia secca tipica Serba)**

mai	una volta	qualche volta	spesso	abituamente
☐	☐	☐	☐	☐

17. Mi piace la salsiccia Petrovac

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

*** 18. Ho bevuto l'acquavite Slivovitz (l'acquavite tipica per i Paesi dei Balcani)**

mai	una volta	qualche volta	spesso	abituamente
☐	☐	☐	☐	☐

19. Mi piace l'acquavite Slivovitz

1- non sono d'accordo per niente 2 3 4 5 - totalmente d'accordo

☐ ☐ ☐ ☐ ☐

*** 20. Sono stato in questi Paesi:**

	mai	molto raramente	a volte	spesso	abituamente
Repubblica Ceca	☐	☐	☐	☐	☐
Ungheria	☐	☐	☐	☐	☐
Bulgaria	☐	☐	☐	☐	☐
Romania	☐	☐	☐	☐	☐
Croazia	☐	☐	☐	☐	☐
Serbia	☐	☐	☐	☐	☐

21. Scrivi brevemente a cosa associ i seguenti paesi: può essere una immagine, una parola, un ricordo, un tuo pensiero/giudizio, qualcosa che hai sentito dire, ecc.

Repubblica Ceca	
Ungheria	
Bulgaria	
Romania	
Croazia	
Serbia	

*** 22. Ho sentito parlare dei prodotti Dop/IGP**

mai molto raramente a volte spesso abitualmente

☐ ☐ ☐ ☐ ☐

*** 23. Ritengo che la certificazione UE per i prodotti tipici DOP / IGP sia affidabile per quanto riguarda l'origine del prodotto e il modo di produzione**

1- non sono d'accordo per niente 2 3 4 5 - totalmente d'accordo

☐ ☐ ☐ ☐ ☐

Breve presentazione della salsiccia Petrovac

La Salsiccia Petrovac è fatta di carne di manzo di produzione locale e preparata artigianalmente. La carne è mescolata con il tipico peperoncino rosso, molto piccante, anch'esso di produzione locale. La carne viene seccata e affumicata con una lunga esposizione al fumo del camino a legna. Le Salsicce Petrovac sono senza additivi e senza ingredienti artificiali. Il colore è rosso scuro con parti grasse bianche con un delicato odore di fumo. Il gusto è piccante, non acido. La salsiccia essiccata è pronta da mangiare senza cottura, come un salame.

La Salsiccia è originaria di Bački Petrovac, villaggio in Vojvodina, nei pressi di Novi Sad, nel nord della Serbia. Il metodo di produzione in questo villaggio è rimasto lo stesso dal 18° secolo.

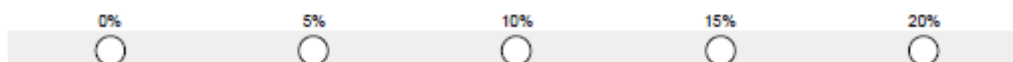
La Salsiccia Petrovac è ufficialmente riconosciuta come prodotto DOP in Serbia dal 2007., con le stesse norme per i prodotti UE.



*** 24. Sono interessato ad acquistare il prodotto DOP salsiccia Petrovac dalla Serbia**

1- non sono d'accordo per niente	2	3	4	5 - totalmente d'accordo
☐	☐	☐	☐	☐

25. Per acquistare il prodotto DOP salsiccia Petrovac dalla Serbia sono disposto a pagare un prezzo maggiore rispetto ai prodotti simili del:



26. Non sono interessato al prodotto DOP salsiccia Petrovac dalla Serbia perchè:

- ☐ Non mi piace provare cose nuove
- ☐ Non mi piaceono salsiccie
- ☐ Non mi piace il cibo straniero
- ☐ Mi piacciono solo prodotti dal mio paese
- ☐ Non credo che la qualità è buona
- ☐ Non mi interessa

Breve presentazione del cavolo acido Futog

Il cavolo acido Futog può essere utilizzato per preparare una insalata fredda oppure può essere cucinato e mangiato caldo. Questo prodotto si ottiene mettendo il cavolo fresco di varietà Futog, in acqua e sale senza ulteriori additivi e conservanti. La fermentazione del cavolo ha bisogno di pochi mesi. Il cavolo è pronto quando diventa giallo ambrato. Il cavolo acido Futog ha un gusto morbido e aromatico, non è forte, non troppo salato, non troppo acido. La confezione del cavolo acido Futog è fatta di poliammide e polietilene. Può essere confezionato un cavolo intero nella sua forma quasi sferica, oppure in foglie intere o in piccoli pezzi, in ogni caso è sottovuoto.

Il cavolo acido Futog è originario del villaggio Futog, vicino a Novi Sad, nel nord della Serbia. La tradizione di produrre e preparare cavolo acido Futog è invariata dal 17° secolo.

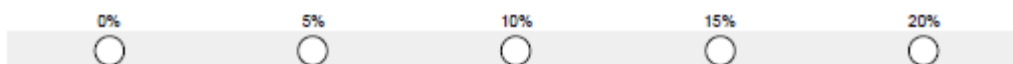
Il Cavolo Futog è ufficialmente riconosciuto come prodotto DOP in Serbia dal 2008., con le stesse norme per i prodotti UE.



***27. Sono interessato ad acquistare il prodotto DOP cavolo acido Futog dalla Serbia**



28. Per acquistare il prodotto DOP cavolo acido Futog dalla Serbia sono disposto a pagare un prezzo maggiore rispetto ai prodotti simili del:



29. Non sono interessato al prodotto DOP cavolo acido Futog dalla Serbia perchè:

- ☐ Non mi piace provare cose nuove
- ☐ Non mi piace il cavolo acido
- ☐ Non mi piace il cibo straniero
- ☐ Mi piacciono solo prodotti dal mio paese
- ☐ Non credo che la qualità è buona
- ☐ Non mi interessa

ALCUNE INFORMAZIONI PERSONALI

***30. Genere**

- ☐ maschio
- ☐ femmina

31. Che età hai?

***32. Titolo di studio**

- ☐ scuola media inferiore
- ☐ scuola media superiore
- ☐ laurea
- ☐ titolo post-laurea

***33. Quale è il tuo Paese d'Origine?**

***34. Vivi in**

- ☐ zona rurale, paese
- ☐ città

35. Qual è il nome della città/ città più vicina?

GRAZIE MILLE PER LA TUA PARTECIPAZIONE

Questionnaire for Italian consumers (English translation)

Questionnaire

The present questionnaire is part of a field survey performed within a PhD research project of Università della Tuscia-Viterbo, Italy. The research is focused on two typical products from Serbia recently recognized as Protected Designation of Origin by Serbian Law.

The purpose of the research is purely scientific. Your personal data and responses will not be used in any other purpose than for this research project and will be held strictly confidential.

We thank You very much for being available to answer to the following questions and we inform you that if you will be anyhow interested in the research findings you will find them after April 2013 at www.Dafne.unitus.it. In filling in the questionnaire you are mainly asked to choose from multiple choice questions by clicking the case that better suits you. Please note that when answers are numerical they are on a scale of 5: 1 being total disagreement with the proposed statement and 5 total agreements. The numbers in between represent intermediate situations between the two extremes.

1. I am interested in typical products

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

2. I like to try new products

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

3. I go to ethnical restaurants

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

4. I like to buy local food when I travel

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

5. I attend manifestations and fairs where I can taste farmers' markets products

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

6. I eat acid cabbage

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

7. I eat acid cabbage because it is

- a) tasty
- b) healthy
- c) match good with other food
- d) easy/quick to prepare
- e) in my habitual diet
- f) I prepare it for the family

8. I like to eat dried sausages

1-do not agree at all	2	3	4	5 - totally agree
-----------------------	---	---	---	-------------------

9. I eat dried sausages because they are:

- a) tasty
- b) healthy
- c) match good with other food
- d) easy/quick to prepare
- e) in my habitual diet
- f) I prepare it for the family

10. I ate Prague ham

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

11. I like Prague ham

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

12. I ate Szegedi salami

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

13. I like Szegedi salami

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

14. I ate Futog cabbage

1- never	2- very rarely	3- sometimes	4- often	5- frequently
----------	----------------	--------------	----------	---------------

15. I like Futog cabbage

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

16. I ate Petrovac sausage

1- never 2- very rarely 3- sometimes 4- often 5- frequently

17. I like Petrovac sausage

1- do not agree at all 2 3 4 5 – totally agree

18. I drank Slivovitz

1- never 2- very rarely 3- sometimes 4- often 5- frequently

19. I like Slivovitz

1- do not agree at all 2 3 4 5 - totally agree

20. I have been in these countries:

Czech Republic

1- never 2- very rarely 3- sometimes 4- often 5- frequently

Hungary

1- never 2- very rarely 3- sometimes 4- often 5- frequently

Bulgaria

1- never 2- very rarely 3- sometimes 4- often 5- frequently

Romania

1- never 2- very rarely 3- sometimes 4- often 5- frequently

Croatia

1- never 2- very rarely 3- sometimes 4- often 5- frequently

Serbia

1- never 2- very rarely 3- sometimes 4- often 5- frequently

21. What are your main associations when you hear about these countries?

Czech Republic.....
Hungary
Bulgaria
Romania
Croatia.....
Serbia

22. I have heard of EU PDO/PGI certification

1- never 2- very rarely 3- sometimes 4- often 5- frequently

23. Do you think that EU certification for typical products PDO/PGI is reliable with respect to product origin and way of production?

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

Short presentation of Petrovac Sausage

Petrovac sausage is made from minced pork meat locally grown and locally prepared. Meat is mixed with typical, very hot, red hot pepper; this also is locally produced. Meat is preserved by slow smoking. Petrovac sausages have no additives no artificial ingredients. Color is dark red with white grass parts, with a delicate smell of smoke. Taste is piquant chilly, no acid. It is dried and ready to eat without cooking, as salami. Sausage is from Bački Petrovac village in Vojvodina, near Novi Sad, northern Serbia. Production method in this village remained the same from 18th century. Petrovac sausage is officially recognized as PDO product in Serbia, with the same regulations as for EU products.

24. From what you read and/or from previous experience you had, do you think you would be interested in buying PDO Petrovac sausage product from SERBIA?

1- do not agree at all	2	3	4	5- totally agree
------------------------	---	---	---	------------------

25. If you answered YES, how much would you pay for it in comparison to very similar product?

- a) Extra 0%
- b) Extra 5%
- c) Extra 10%
- d) Extra 15%
- e) Extra 20%

26. If no, can you say why not?

- a) I don't like to try new things
- b) I don't like sausages
- c) I don't like foreign food
- d) I like just products from my country
- e) I don't think quality is good
- f) I am not interested and that's it

Short presentation of Futog acid cabbage

Futog acid cabbage can be used as a salad or for cooking. It is obtained by putting fresh Futog variety cabbage, in water and salt for fermentation, without any additional additives and conservants. Fermentation of cabbage needs a few months. When ready, color becomes amber yellow. Futog acid cabbage has soft, not strong aromatic taste, not too salty, not too acid. Packaging of Futog acid cabbage is in polyamide and polyethylene bags in vacuum conditions. And it can be packaged either as a whole cabbage, or entire leafs or small pieces. Futog Acid Cabbage is from village Futog near Novi Sad, northern

Serbia. The tradition of producing and preparing Futog acid cabbage is preserved from 17th century. Futog cabbage is officially recognized as PDO product in Serbia, with the same regulations as for EU products.

27. From what you read and/or from previous experience you had, do you think you would be interested in buying PDO Futog acid cabbage product from SERBIA?

1- do not agree at all	2	3	4	5 - totally agree
------------------------	---	---	---	-------------------

28. If you answered YES, how much would you pay for it in comparison to very similar product?

- a) Extra 0%
- b) Extra 5%
- c) Extra 10%
- d) Extra 15%
- e) Extra 20%

29. If no, can you say why not?

- a) I don't like to try new things
- b) I don't like acid cabbage
- c) I don't like foreign food
- d) I like just products from my country
- e) I don't think quality is good
- f) I am not interested and that's it

SOME PERSONAL INFO

30. Gender

- a) male
- b) female

31. How old are you?

32. Education level

- a) high school
- b) graduate
- c) master, PhD

33. Where are you from?

34. I live in

- a) rural area
- b) urban area

35. What is the name of the nearest town?

THANK YOU VERY MUCH FOR YOUR PARTICIPATION

ANOVA Table - Serbian cluster

	Cluster		Error		F	Sig.
	M.S.	df	M.S.	df		
1. I eat acid cabbage	16.535	2	0.596	248	27.758	.000
2. I eat acid cabbage because I like its taste	25.823	2	1.210	248	21.332	.000
3. I eat acid cabbage because it is healthy	8.071	2	1.142	248	7.066	.001
4. I eat acid cabbage because it is easy/quick to prepare	15.873	2	1.227	248	12.937	.000
5. I eat acid cabbage because it is in my habitual diet	90.272	2	.858	248	105.262	.000
6. I eat acid cabbage because I prepare it for the family	76.591	2	1.363	248	56.199	.000
7. I eat smoked sausages	44.574	2	0.599	248	74.400	.000
8. I eat smoked sausages because I like their taste	20.484	2	0.962	248	21.291	.000
9. I eat smoked sausages because they are healthy	46.987	2	0.825	248	56.967	.000
10. I eat smoked sausages because they easy/quick to prepare	233.087	2	1.475	248	158.062	.000
11. I eat smoked sausages because they are in my habitual diet	134.104	2	0.821	248	163.244	.000
12. I eat smoked sausages because I serve them for the family	154.556	2	0.933	248	165.720	.000
13. when I buy food products I look at info labels	11.328	2	0.765	248	14.800	.000
14.. I have heard of PDO/PGI products	16.063	2	0.514	248	31.236	.000
15. I have bought PDO/PGI product	28.001	2	0.743	248	37.662	.000
16. I trust PDO/PGI certification	36.715	2	1.012	248	36.295	.000
17. I am interested in Typical products	31.006	2	0.785	248	39.510	.000
18. Typical products have better taste	32.155	2	0.872	248	36.881	.000
19. Typical products have better aspect	13.677	2	0.741	248	18.449	.000
20. Typical products are traditional	30.821	2	0.898	248	34.313	.000
21. Typical products are genuin/healty	30.796	2	0.745	248	41.353	.000
22. Typical products are fresh	11.537	2	0.803	248	14.371	.000
23. Typical products sustain local economy	14.739	2	0.977	248	15.090	.000
24. I have heard for Futog cabbage	6.606	2	0.519	248	12.718	.000
25. I have eaten Futog cabbage	24.362	2	1.037	248	23.482	.000
26. .I like Futog cabbage	34.178	2	1.022	248	33.426	.000
27. I would buy PDO Futog acid cabbage at equal price than other similar cabbage	22.570	2	1.048	248	21.545	.000
28. I would buy Futog acid cabbage if the price is higher than other similar cabbage	78.966	2	1.116	248	70.777	.000
29. I have heard for Petrovac sausage	18.919	2	1.183	248	15.988	.000
30. I have eaten Petrovac sausage	9.990	2	0.961	248	10.399	.000
31 .I like Petrovac sausage	58.225	2	1.463	248	39.786	.000
32. I would buy PDO Petrovac sausage at equal price as some other similar sausage	65.189	2	1.344	248	48.498	.000
33. I would buy PDO Petrovac sausage if the price is higher than the price of some other similar sausage	83.972	2	0.989	248	84.935	.000

Average means, standard deviations and t-test for Serbian clusters

variable		C1	C2	C3
1. I eat acid cabbage	Mean	3.8472	2,9810	3.4730
	Std.dev	0.59717	0,87685	0.76253
	Std.error mean	0.07038	0,08557	0.08864
2. I eat acid cabbage because I like its taste	Mean	4.7083	3,6095	4.0946
	Std.dev	0.56761	1,42434	0.95328
	Std.error mean	0.06689	0,13900	0.11082
3. I eat acid cabbage because it is healthy	Mean	4.3194	3,7048	3.9459
	Std.dev	0.76594	1,26281	1.01889
	Std.error mean	0.09027	0,12324	0.11844
4. I eat acid cabbage because it is easy/quick to prepare	Mean	3.1944	2,3429	2.8108
	Std.dev	0.91373	1,18345	1.16661
	Std.error mean	0.10768	0,11549	0.13562
5. I eat acid cabbage because it is in my habitual diet	Mean	3.7500	1,8190	3.2432
	Std.dev	0.94571	0,92799	0.90373
	Std.error mean	0.11145	0,09056	0.10506
6. I eat acid cabbage because I prepare it for the family	Mean	3.7639	1,9810	3.2838
	Std.dev	1.11952	1,20081	1.16478
	Std.error mean	0.13194	0,11719	0.13540
7. I eat smoked sausages	Mean	4.0972	2,6952	3.5811
	Std.dev	0.69525	0,84494	0.74036
	Std.error mean	0.08194	0,08246	0.08606
8. I eat smoked sausages because I like their taste	Mean	4.7222	3,7524	4.2703
	Std.dev	0.50969	1,31399	0.74571
	Std.error mean	0.06007	0,12823	0.08669
9. I eat smoked sausages because they are healthy	Mean	3.0694	1,7524	2.9054
	Std.dev	0.84464	0,88558	0.99545
	Std.error mean	0.09954	0,08642	0.11572
10. I eat smoked sausages because they easy/quick to prepare	Mean	4.1806	1,0952	3.4189
	Std.dev	1.41746	0,47076	1.65527
	Std.error mean	0.16705	0,04594	0.19242
11. I eat smoked sausages because they are in my habitual diet	Mean	4.1806	1,8286	3.5676
	Std.dev	0.86116	0,93497	0.90782
	Std.error mean	0.10149	0,09124	0.10553

12. I eat smoked sausages because I serve them for the family	Mean	4.1944	1,7810	3.8378
	Std.dev	0.95886	0,99015	0.93672
	Std.error mean	0.11300	0,09663	.10889
13. when I buy food products I look at info labels	Mean	3.9306	3,9048	3.2568
	Std.dev	.71850	0,96600	.87681
	Std.error mean	0.08468	0,09427	0.10193
14.. I have heard of PDO/PGI products	Mean	2.7083	2,2476	1.7703
	Std.dev	0.56761	0,79398	0.73181
	Std.error mean	0.06689	0,07748	0.08507
15. I have bought PDO/PGI product	Mean	2.6528	2,4190	1.5000
	Std.dev	0.79007	0,97843	0.74485
	Std.error mean	0.09311	0,09549	0.08659
16. I trust PDO/PGI certification	Mean	3.8472	3,2095	2.4324
	Std.dev	0.85018	1,12400	0.96630
	Std.error mean	0.10019	0,10969	0.11233
17. I am interested in Typical products	Mean	4.3056	3,2000	3.2162
	Std.dev	0.72460	1,02282	0.81544
	Std.error mean	0.08539	0,09982	0.09479
18. Typical products have better taste	Mean	4.3889	3,1619	3.6486
	Std.dev	0.84845	1,02960	0.86693
	Std.error mean	0.09999	0,10048	0.10078
19. Typical products have better aspect	Mean	3.8333	3,0476	3.2297
	Std.dev	0.88811	0,89207	0.78596
	Std.error mean	0.10466	0,08706	0.09137
20. Typical products are traditional	Mean	4.6111	3,5048	4.3784
	Std.dev	0.79710	1,07528	0.88678
	Std.error mean	0.09394	0,10494	0.10309
21. Typical products are genuin/healty	Mean	4.3333	3,1333	3.6622
	Std.dev	0.83918	0,85560	0.89561
	Std.error mean	0.09890	0,08350	0.10411
22. Typical products are fresh	Mean	3.7361	3,0857	3.0405
	Std.dev	0.94932	0,86729	0.88270
	Std.error mean	0.11188	0,08464	0.10261
23. Typical products sustain local economy	Mean	4.4444	3,6762	3.7027
	Std.dev	0.80297	1,14770	0.90250
	Std.error mean	0.09463	0,11200	0.10491
24. I have heard for Futog cabbage	Mean	4.6528	4,7333	4.2027
	Std.dev	0.50796	0,79984	0.77601
	Std.error mean	0.05986	0,07806	0.09021

25. I have eaten Futog cabbage	Mean	4.0556	3,1143	3.0405
	Std.dev	0.78523	1,22721	0.88270
	Std.error mean	0.09254	0,11976	0.10261
26. .I like Futog cabbage	Mean	4.8194	3,5810	3.8514
	Std.dev	0.45429	1,34294	0.83883
	Std.error mean	0.05354	0,13106	0.09751
27. I would buy PDO Futog acid cabbage at equal price than other similar cabbage	Mean	4.8333	3,8286	4.0405
	Std.dev	0.50351	1,30426	0.94273
	Std.error mean	0.05934	0,12728	0.10959
28. I would buy Futog acid cabbage if the price is higher than other similar cabbage and I would pay....% higher price	Mean	3.6389	2,3048	1.5946
	Std.dev	0.92395	1,21785	0.92038
	Std.error mean	0.10889	0,11885	0.10699
29. I have heard for Petrovac sausage	Mean	3.6667	3,0286	2.6622
	Std.dev	0.76912	1,38298	0.84848
	Std.error mean	0.09064	0,13497	0.09863
30. I have eaten Petrovac sausage	Mean	2.6250	2,4381	1.9189
	Std.dev	0.86297	1,16787	0.77206
	Std.error mean	0.10170	0,11397	0.08975
31 .I like Petrovac sausage	Mean	4.5000	3,0095	2.9730
	Std.dev	0.78722	1,50317	1.07235
	Std.error mean	0.09277	0,14669	0.12466
32. I would buy PDO Petrovac sausage at equal price as some other similar sausage	Mean	4.7778	3,1905	3.1757
	Std.dev	0.50969	1,46166	1.12698
	Std.error mean	0.06007	0,14264	0.13101
33. I would buy PDO Petrovac sausage if the price is higher than the price of some other similar sausage and I would pay....% higher price	Mean	3.4167	2,0857	1.2973
	Std.dev	0.91544	1,24123	0.59056
	Std.error mean	0.10789	0,12113	0.06865

Anova table-Italian clusters

	Cluster		Error		F	Sig.
	Mean Square	df	Mean Square	df		
1 Sono interessato ai prodotti tipici	21.592	2	0.615	176	35.103	.000
2 Mi piace provare nuovi prodotti	21.833	2	0.495	176	44.076	.000
3 Vado nei ristoranti etnici	24.813	2	0.706	176	35.138	.000
4 Mi piace comprare prodotti tipici quando sono in viaggio	21.254	2	0.510	176	41.709	.000
5 Frequento manifestazioni e fiere dove poter gustare i prodotti agroalimentari	36.803	2	0.781	176	47.122	.000
6 Mangio il cavolo acido	14.757	2	0.612	176	24.118	.000
7 Mangio le salsiccie secche	9.743	2	1.068	176	9.125	.000
8 Ho sentito parlare dei prodotti Dop/IGP	30.248	2	0.773	176	39.153	.000
9 la certificazione UE per i prodotti tipici DOP / IGP sia affidabile perquanto riguarda l'origine del prodotto e il modo di produzione	13.550	2	0.768	176	17.648	.000
10 Sono interessato ad acquistare il prodotto DOP salsiccia Petrovac	80.964	2	0.932	176	86.915	.000
11 Per acquistare il prodotto DOP salsiccia Petrovac sono disposto pagare un prezzo maggiore	24.292	2	0.446	176	54.525	.000
12 Sono interessato ad acquistare il prodotto DOP cavolo acido Futog	106.317	2	0.774	176	137.357	.000
13 Per acquistare il prodotto DOP cavolo acido Futog sono disposto a pagare un prezzo maggiore	25.095	2	0.432	176	58.125	.000

Average means, standard deviations and t-test for Italian clusters

variable		C1	C2	C3
1 Sono interessato ai prodotti tipici	Mean	3.3393	4.5102	4.2973
	Std.dev	0.93957	0.61652	0.75362
	Std.error mean	0.12556	0.08807	0.08761
2 Mi piace provare nuovi prodotti	Mean	3.6071	4.4694	4.7568
	Std.dev	1.00324	0.61583	0.43197
	Std.error mean	0.13406	0.08798	0.05022
3 Vado nei ristoranti etnici	Mean	2.2143	3.1633	3.4324
	Std.dev	0.73148	0.71726	0.98037
	Std.error mean	0.09775	0.10247	0.11397
4 Mi piace comprare prodotti tipici quando sono in viaggio	Mean	3.1786	4.1837	4.2568
	Std.dev	0.74118	0.72668	0.68368
	Std.error mean	0.09904	0.10381	0.07948
5 Frequento manifestazioni e fiere dove poter gustare i prodotti agroalimentari	Mean	1.9286	3.5918	2.8784
	Std.dev	0.78293	0.70470	1.04623
	Std.error mean	0.10462	0.10067	0.12162
6 Mangio il cavolo acido	Mean	1.1964	1.5306	2.1351
	Std.dev	0.48316	0.81910	0.92639
	Std.error mean	0.06456	0.11701	0.10769
7 Mangio le salsiccie secche	Mean	2.1964	2.4694	2.9595
	Std.dev	1.06889	1.17442	0.89808
	Std.error mean	0.14284	0.16777	0.10440
8 Ho sentito parlare dei prodotti Dop/IGP	Mean	2.8929	4.3469	3.9189
	Std.dev	0.92792	0.72316	0.93276
	Std.error mean	0.12400	0.10331	0.10843
9 la certificazione UE per i prodotti tipici DOP / IGP sia affidabile perquanto riguarda l'origine del prodotto e il modo di produzione	Mean	3.2857	4.0204	4.1757
	Std.dev	0.80259	0.87773	0.92689
	Std.error mean	0.10725	0.12539	0.10775
10 Sono interessato ad acquistare il prodotto DOP salsiccia Petrovac	Mean	2.7857	2.7551	4.7027
	Std.dev	1.24629	1.10925	0.51630
	Std.error mean	0.16654	0.15846	0.06002
11 Per acquistare il prodotto DOP salsiccia Petrovac sono disposto pagare un prezzo maggiore	Mean	1.4286	1.7551	2.6081
	Std.dev	0.59870	0.59619	0.75521
	Std.error mean	0.08000	0.08517	0.08779

12 Sono interessato ad acquistare il prodotto DOP cavolo acido Futog	Mean	2.0714	2.0408	4.2703
	Std.dev	0.96967	0.91194	0.78159
	Std.error mean	0.12958	0.13028	0.09086
13 Per acquistare il prodotto DOP cavolo acido Futog sono disposto a pagare un prezzo maggiore	Mean	1.1964	1.4286	2.3649
	Std.dev	0.44393	0.61237	0.80366
	Std.error mean	0.05932	0.08748	0.09342

List of figures

Figure 2.1.: Registration procedure

Figure 2.2.: Wholesale value of agricultural products and foodstuffs (excluding wines and spirit drinks; includes beers and other beverages) sold under PDO and PGI designations

Figure: 3.1.: Republic of Serbia - production

Figure 3.2.: Republic of Serbia - foreign trade in agriculture

Figure 3.3.: Republic of Serbia - Import

Figure 3.4.: Republic of Serbia - export

Figure 4.1.: SWOT analysis matrix

Figure 4.2.: Questionnaire for Serbian consumers

Figure 4.3. : Questionnaire for Italian consumers

Figure 6.1.: Level of education

Figure 6.2.: Average income

Figure 6.3.: Diet habits regarding acid cabbage

Figure 6.4.: Attitudes and habits towards acid cabbage

Figure 6.5.: Consumption of dried sausages

Figure 6.6.: Attitude and habits towards dried sausages

Figure 6.7.: Products for which info labels are usually looked for

Figure 6.8.: Level of interest towards typical food products

Figure 6.9.: Opinions about attributes of typical products

Figure 6.10.: Awareness of PDO/PGI scheme

Figure 6.11.: Higher price that would be paid for PDO Futog cabbage

Figure 6.12.: Higher price that would be paid for PDO Petrovac sausage

Figure 6.13.: Age of the cluster

Figure 6.14.: Income

Figure 6.15.: Consumption habits regarding dried sausages

Figure 6.16.: Attitude and habits towards dried sausages

Figure 6.17.: Consumption habits regarding acid cabbage

Figure 6.18.: Attitude and consumption habits towards acid cabbage

Figure 6.19.: Opinions about typical products

Figure 6.20.: Awareness of PDO/PGI scheme

Figure 6.21.: Likeness of Futog cabbage

Figure 6.22.: Higher price that would be paid for Futog acid cabbage

Figure 6.23.: Likeness for Petrovac sausage

Figure 6.24.: Awareness of existent of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.25.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.26.: Level of appreciation for Futog cabbage and Petrovac sausage

Figure 6.27.: Higher price that would be paid for PDO Petrovac sausage

Figure 6.28.: Willingness to pay extra price for Futog cabbage and Petrovac sausage

Figure 6.29.: Age of the cluster

Figure 6.30.: Income

Figure 6.31.: Consumption habits regarding dried sausages

Figure 6.32.: attitude towards dried sausages and consumption habits

Figure 6.33.: Consumption habits regarding acid cabbage

Figure 6.34.: Table: attitude towards acid cabbage and consumption habits

Figure 6.35.: Opinions for typical products

Figure 6.36.: Knowledge about PDO/PGI products

Figure 6.37.: Likeness of Futog cabbage

Figure 6.38.: Higher price that would be paid for Futog cabbage

Figure 6.39.: Likeness of Petrovac sausage

Figure 6.40.: Awareness of existence of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.41.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.42.: Level of appreciation for Futog cabbage and Petrovac sausage

Figure 6.43.: Higher price that would be paid for Petrovac sausage

Figure 6.44.: Willingness to pay extra price for Futog cabbage and Petrovac sausage

Figure 6.45.: Age of the cluster

Figure 6.46.: Income

Figure 6.47.: Consumption habits regarding dried sausages

Figure 6.48.: Attitudes towards dried sausages and consumption habits

Figure 6.49.: Consumption habits regarding acid cabbage

Figure 6.50.: Attitude towards acid cabbage and consumption habits

Figure 6.51.: Opinion about typical products

Figure 6.52.: Knowledge about PDO/PGI products

Figure 6.53.: Likeness of Futog cabbage

Figure 6.54.: Higher price that would be paid for Futog cabbage

Figure 6.55.: Likeness of Petrovac sausage

Figure 6.56.: Awareness of existence of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.57.: Consumption of PDO Futog cabbage and PDO Petrovac sausage

Figure 6.58.: Level of appreciation for Futog cabbage and Petrovac sausage

Figure 6.59.: Higher price that would be paid for Petrovac sausage

Figure 6.60.: willingness to pay extra price for PDO Futog cabbage and PDO Petrovac sausage

Figure 6.61.: Age of the cluster

Figure 6.62.: Education

Figure 6.63.: Eastern European countries visited

Figure 6.64.: Products from Eastern European countries that have been tasted

Figure 6.65.: Interest for typical products

Figure 6.66.: Consumption of acid cabbage and dried sausages

Figure 6.67.: Consumption of dried sausages and interest for buying PDO Petrovac sausage

Figure 6.68.: Extra price that would be paid for Petrovac sausage

Figure 6.69.: consumption of acid cabbage and interest for Futog cabbage

Figure 6.70. : Extra price that would be paid for Futog cabbage

Figure 6.71.: Age of the cluster

Figure 6.72.: Interest for typical products

Figure 6.73.: Eastern European countries visited

Figure 6.74.: Typical products from Eastern Europe tasted

Figure 6.75.: Consumption of dried sausages and interest for buying Petrovac sausage

Figure 6.76.: Extra price that would be paid for Petrovac sausage

Figure 6.77.: Consumption of acid cabbage and Interest for buying Futog acid cabbage

Figure 6.78.: Extra price that would be paid for Futog cabbage

Figure 6.79.: Willingness to pay for Futog cabbage in comparison to Petrovac sausage

Figure 6.80.: Age of the cluster

Figure 6.81.: Interest for typical products

Figure 6.82.: Eastern European countries visited

Figure 6.83.: Typical products from Eastern Europe tasted

Figure 6.84.: Consumption of dried sausages and interest for buying PDO Petrovac sausage

Figure 6.85.: Extra price that would be paid for Petrovac sausage

Figure 6.86.: Acid cabbage consumption and interest for buying Futog cabbage

Figure 6.87.: extra price that would be paid for PDO Futog cabbage

Figure 6.88.: Willingness to pay for Petrovac sausage and Futog cabbage

Figure 6.89.: Age of the cluster

Figure 6.90.: Interest for typical products

Figure 6.91.: Eastern European countries visited

Figure 6.92.: Typical food from Eastern Europe tried

Figure 6.93.: Consumption of dried sausages and interest for buying PDO Petrovac sausage

Figure 6.94.: Higher price that would be paid for Petrovac sausage

Figure 6.95.: Consumption of acid cabbage and interest for buying Futog cabbage

Figure 6.96.: Higher price that would be paid for PDO Futog cabbage

Figure 6.97.: Willingness to pay for Futog cabbage and for Petrovac sausage

List of the tables

Table 2.1. : Objectives of the PDO/PGI schemes as indicated by the recitals of Reg. 510/06

Table 2.2. : Wholesale value of agricultural products and foodstuffs (excluding wines and spirit drinks; includes beers and other beverages) sold under PDO and PGI designations, by sectors

Table 3.1.: Employed in agriculture, forestry and fishing sector (from age 15 to 65 years old)

Table 3.2.: GDP and added value from agriculture in Serbia

Table 3.3. : Share of agriculture and food industry in Serbia

Table 3.4.: Share of agriculture in Serbia in export and import

Table 4.1. : Differences between hierarchical and non-hierarchical clustering

Table 5.1. : Production of Petrovac sausage

Table 5.2.: Prices of Petrovac sausage

Table 5.3.: Price difference with competition

Table 5.4.:SWOT analysis – Petrovac sausage

Table 5.5.: Alive pig production and prices in Serbia

Table 5.6.: Production (years)

Table 5.7.: Production costs for 1 ha

Table 5.8.: Prices of fresh and acid cabbage

Table 5.9.: SWOT analysis – Futog cabbage

Table 6.1.: Attitudes and habits towards acid cabbage

Table 6.2.: Attitude and habits towards dried sausages

Table 6.3.: Trust in PDO/PGI certification

Table 6.4.: Interest for buying PDO Futog acid cabbage at equal price than other similar cabbage

Table 6.5.: I would buy PDO Petrovac sausage at equal price as some other similar sausage

Table 6.6.: variables that contributed the most on 3 clusters formation

Table 6.7.: Daily habits and attitudes towards dried sausages

Table 6.8.: Daily habits and attitudes towards acid cabbage

Table 6.9.: Habits and attitude regarding labeling and PDO/PGI certification

Table 6.10.: Interest for typical products

Table 6.11.: Awareness of existent of Futog cabbage, attitudes and consumption habits, interest for buying PDO Futog cabbage

Table 6.12.: Awareness of existent of Petrovac sausage, attitudes and consumption habits, interest for buying PDO Petrovac sausage

Table 6.13.: Demographic characteristics

Table 6.14.: Attitude and habits towards dried sausages

Table 6.15.: Attitude and consumption habits towards acid cabbage

Table 6.16.: Awareness of existence and likeness of Futog cabbage

Table 6.17.: awareness and consumption of Petrovac sausage

Table 6.18.: Attitude towards dried sausages and consumption habits

Table 6.19.: attitude towards acid cabbage and consumption habits

Table 6.20.: Awareness and consumption of Futog cabbage

Table 6.21.: Awareness and consumption of Petrovac sausage

Table 6.22.: Attitudes towards dried sausages and consumption habits

Table 6.23.: Attitude towards acid cabbage and consumption habits

Table 6.24.: Awareness and consumption of Futog cabbage

Table 6.25.: Awareness and consumption of Petrovac sausage

Table 6.26.: Interest for buying and willingness to pay more for PDO Petrovac sausage

Table 6.27.: interest for buying and willingness to pay more for Futog cabbage

Table 6.28.: Variables that contributed the most on clustering

Table 6.29.: Attitudes towards typical products and PDO/PGI scheme

Table 6.30.: Eating habits, interest for buying PDO Futog cabbage, WTP

Table 6.31.: Eating habits, interest for buying PDO Petrovac sausage, WTP

Table 6.32.: I have eaten food products from Eastern Europe

Table 6.33.: I have been in Eastern European countries

Table 6.34.: Demographic characteristics