Article

Consumer Behavior towards Regional Eco-Labels in Slovakia

Jana Jaďuďová [1], Miroslav Badida [2], Anna Badidová [2], Iveta Marková [3] , Miriam Ťahúňová [1] and Emília Hroncová [4,5,*]

[1] Department of Environmental Management, Faculty of Natural Sciences, Matej Bel University, 97401 Banská Bystrica, Slovakia; jana.jadudova@umb.sk (J.J.); minatlud@gmail.com (M.Ť.)

[2] Department of Process and Environmental Engineering, Faculty of Mechanical Engineering, Technical University of Košice, Letná 9, 04200 Košice, Slovakia; miroslav.badida@tuke.sk (M.B.); anna.badidova@tuke.sk (A.B.)

[3] Department of Fire Engineering, Faculty of Security Engineering, University of Žilina, Univerzitná 1, 01026 Žilina, Slovakia; Iveta.Markova@fbi.uniza.sk

[4] Slovak Hydrometeorological Institute, Jeséniova 17, 83315 Bratislava, Slovakia

[5] European Science and Research Institute, A. Hlinku 29, 96001 Zvolen, Slovakia

[*] Correspondence: emilia.hroncova@shmu.sk or emilia.hroncova@gmail.com; Tel.: +421-(0)2-5941-5247

check for updates

Abstract: Slovakia, as part of the European Union, participates in all forms of regional development and sustainability. A transparent form of regional development and sustainability is regional labeling, which has a 10-year tradition. Our regions represent excellent potential for the development of domestic products. Acceptance of essential requirements for regional products (domestic raw materials, manual work share, respect for the environment) opens up opportunities for the labor market, promotes tourism, and increases citizens' purchase ability, none of which are clearly demonstrable in Slovak regions. Residents of individual regions have specific approaches in relation to regional brands depending on the region studied. For the purpose of the survey, four regions of southern Slovakia (with common environmental morphology and different industrial development) were selected. Indicators of age, gender, education, monthly income, and location relative to regional product preferences were studied. The results obtained were processed by cluster analysis (as a way of segmenting consumers). An average conscious purchaser of regional products is a local productive middle-aged person with a secondary or tertiary education, either male or female, and from a more economically advanced region. The results show regional branding as a mobilizing function for connecting inhabitants and the subsequent joint presentation of regional activities.

Keywords: regional development; eco-labels; consumers; sustainability; food products

1. Introduction

There are different food labeling systems in the European Union in order to inform consumers about the qualitative characteristics of food products. The best-selling labeling scheme is a system governed by European Union law.

The need to develop and identify sustainable products led the Federal Republic of Germany in 1978 to launch the Blue Angel environmental labeling scheme. Later on, environmental labels were supported by UN reports. The first report of the United Nations, called "Our common future", described the role of electrical appliance labels to promote energy saving. Later, Agenda 21 promoted environmental labels as a tool to support sustainable production and consumption, proposing that labels should be used to promote cleaner production in different market sectors [1–3]. Rationalists consider

price, nutritional information, and cooking methods when making food choices, and adventurous consumers want quality and good taste in food products, as they are highly interested in cooking meals themselves [4].

1.1. Characterization of Eco-Labeling

Eco-labeling in the European Union was launched by the European Commission in 1992 to promote the production and consumption of products that have a reduced environmental impact compared to other products [5,6]. The Ecolabel is defined by the International Organization for Standardization as a voluntary method of certifying and labeling environmental properties, which applies worldwide. According to [7], eco-labeling is a designation that identifies the overall environmental preference of a product or service within a particular product category. Ecolabel products can be found in many areas, such as food products [8], energy [9], remanufactured products [10], electrical equipment [11], furniture and wood products [12], clothing [13], cosmetics, paints, and building materials [5]. In the Nordic countries, the market for eco-labeled products is considered to be considerably expansive. As reported by [14], the food industry has recorded an annual increase in sales of these products by 20%. Cerri, Testa, and Rizzi (2018) [15] state that organic food currently represents 4% of total food sales in the US, and the number of markets for local food sellers grew by 180% between 2006 and 2014. According to the Ecolabel Index (2017) [16], the world market contains 465 environmental labels in 199 countries among 25 industries.

Strong competition in the market has led consumers to find products that have added value. Except for "bio products", there is growing interest in products that highlight the regional approach. The definition of a regional product differs according to the perspective of the public and consumers, and is most often associated with local food and beverages. Van Ittersum et al. (2007) [17] define regional products as products whose quality and origin are assigned to a particular region, with an important attribute being that the products are sold using the name of the region of origin. According to Fernández-Ferrín et al. (2018) [18], regional products are produced locally, may or may not be consumed outside of their environment, and offer exceptional quality derived from the specific conditions of their identifiable geographical origin. Bingen (2012) [19] notes that a regional product brand indicates, in particular, the authenticity of the product, so that it is actually made in the region marked by the name. Ilbery and Maye (2007) [20] identified as basic characteristics of regional products environmental respect, the share of manual labor, and the use of region-specific raw materials. According to Krnáčová and Kirnová (2015) [21], regional products are the result of human activities that are unique and associated with the region in which they are produced, following the customs and traditions of the region, and produced with local raw materials and manual labor. Such products should be made by local producers of regional raw materials according to traditional recipes and practices [22].

1.2. Characterization of Regional Eco-Labeling in Slovakia

The offer of regional products in the Slovak Republic began in the 1990s through various European projects and nonprofit organizations. After the end of EU-funded projects, an initiative to implement regional brands was taken over by local action groups [23,24]. At present, the labels Podpoľanie, Hont, Ponitrie, Gemer-Malohont, Karsticum (the region of Slovak Karst in Slovakia and Aggtelek's Karst in Hungary), Horný Liptov, Maldon-Galantsko, Kopanice, and Záhorie are used in the Slovak Republic.

For regional food labeling, we selected four regions of Slovakia (Figure 1): Ponitrie, Hont, Podpoľanie, and Gemer-Malohont. The choice of regions was intentional with regard to geographic proximity and the history of product labeling. The regional brand Ponitrie originated from the initiative and cooperation of six partners in 2013. For the purposes of regional labeling in the countryside, the Ponitrie region is formed by the districts of Nitra, Topoľčany, and Zlaté Moravce. The territory also includes the municipality Rastislavice in the Nové Zámky district (Figure 1). A sheaf of wheat is part of the brand logo, which most closely reflects the territory as traditional farmland. Among traditional

food products, goat's and cow's milk, honey and pollen, pumpkin seeds, and wine are marked by the regional brand.
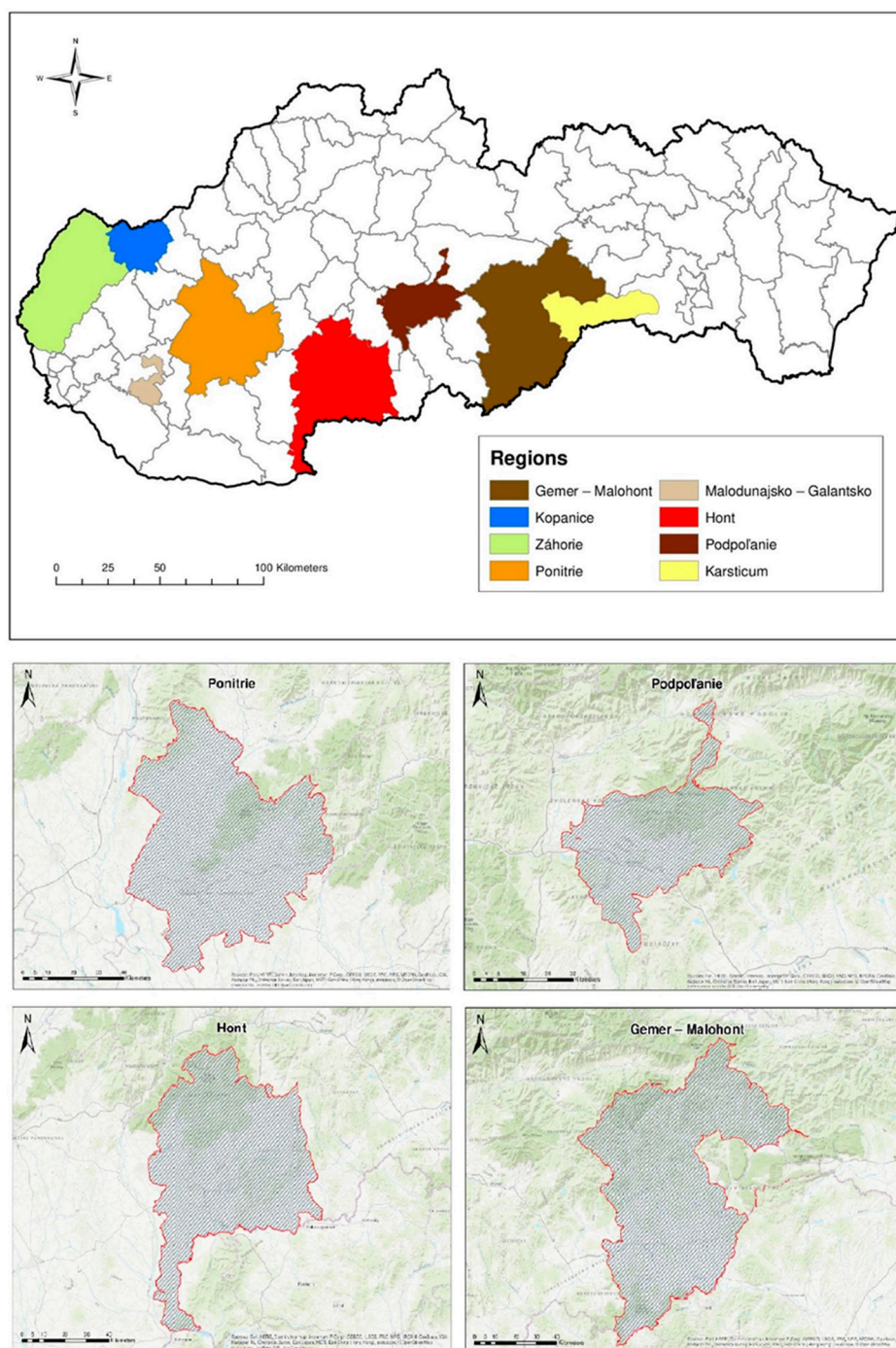
Figure 1. Territorial scope of regional brands in Slovakia. Source for topographical background: ESRI-Environmental Systems Research Institute (Get Outlook for iOS).

A characteristic feature of the Hont region is the village settlement with traditional folk customs and preserved traditional crafts. As for administrative breakdown, the region's territory consists of seven districts (Banská Štiavnica, Levice, Veľký Krtíš, Žiar nad Hronom, Krupina, Nové Zámky, Žarnovica). The brand logo is a violin key. Food products using the regional brand are greaves oilcakes

stuffed with plum jam, waffles, honey and pollen, wine, Concord grape jam, products made from goat's milk, and pressed virgin oils.

The regional product of Podpoľanie is defined by the cadastres of 19 member municipalities of the districts of Zvolen and Detva. The brand has a uniform graphic design. The logo is a solar rosette, a traditional feature characteristic of the Podpoľanie area. Regional foods include bryndza, sheep's milk products, bread, greaves, poppy seed and bee products, and products thereof.

The Gemer-Malohont region has geographic, natural, and cultural diversity among the regions with the largest protected areas, which is a prerequisite for tourism and agro-tourism. The central motif of the regional brand is a jug as a symbol of pottery, which in the past was one of the most notable crafts in the area. Products that have received the regional brand are fruit juices, goat's milk, meat and meat products, homemade oilcakes, and honey.

The aim of the paper is to present the regional labeling of Slovak food with eco-labeling in selected regions. The primary goal of the survey is to monitor consumer opinions on the environmental labeling of regional products. The secondary goal, based on consumer survey results, is to identify consumer attitudes, opinions, and awareness of regional products in selected territories of Slovakia and identify the strengths and weaknesses of regional product labeling. Part of the research is a mutual comparison of the economic development of individual regions.

2. Materials and Methods

The study aims to analyze and assess the opinions of consumers on regional branding in selected regions in Slovakia. The subject of the survey was regional food products made by small farmers. The analysis was carried out based on original empirical research, which was based on a questionnaire survey. The survey was conducted in April–July 2017 in each district in the region. Respondents were divided by gender, age, education, employment, monthly income, family status, number of children, and locality where they live. The regions were selected based on the existence of regional brands, i.e., those regions in which the regional label has the longest active tradition were selected (not necessarily the oldest brands; e.g., the Kysuce regional brand is older but not currently active). The questionnaire was distributed in electronic and printed form through the Local Action Group. The survey was conducted with Slovak men and women, 18 years old or older, who were likely to buy food products, with a total of 669 respondents. We excluded respondents who answered "I don't know" (Table 1).

Table 1. Sociodemographic characteristic of respondents.

	Basic Sample		Selected Sample	
	Abs. Frequency	**Rel. Frequency (%)**	**Abs. Frequency**	**Rel. Frequency (%)**
Gender				
Male	314,428	49	320	48
Female	327,260	51	349	52
Total	*641,688*	*100*	*669*	*100*
Region				
Ponitrie	346,211	54	359	54
Hont	125,818	20	128	19
Podpoľanie	84,918	13	81	12
Gemer-Malohont	84,741	13	101	15
Total	*64,688*	*100*	*669*	*100*

Absolute frequency is the number of all people over the age of 18 living in the regions in question, divided by region and sex (so-called basic set), with data from the Statistical Office of the Slovak Republic. The representativeness of the selected sample was guaranteed by respecting geographic location and gender. In order to verify the representativeness of the sample, we used the nonparametric

chi-squared test. According to the results of the test, we can assume that the sample is representative by region (*p*-value = 0.401) and gender (*p*-value = 0.546).

The results obtained from the questionnaire survey were statistically processed. We used IBM SPSS Statistics 23 software and a two-step clustering method. Using two-step clustering, we determined the consumers who did or did not purchase regional food products. First, descriptive analysis was performed, followed by cluster analysis. Two-step cluster analysis is a method that requires only one pass through the data, followed by a process of treating these sub-clusters as separate observations. The graphic output of the first step indicated the quality of the cluster solution. A value of more than 0.50 indicates satisfactory cluster quality. The second step is grouping, where the sub-clusters based on the analysis are grouped into the required number of clusters [25]. In the cluster analysis we used the following categorical variables: purchase of home product, purchase of regional product, knowledge of regional branding, and product composition. We observed the importance of variables, which was fairly balanced. The most important variable was knowledge of regional products (predictor importance = 1) and the least important was the purchase of domestic products (predictor importance = 0.68).

3. Results and Discussion

Using two-step clustering, based on segmentation criteria (purchase of domestic products, purchase of regional products, awareness of regional labeling, composition of product), we identified five consumer groups with a satisfactory quality of aggregation in the sample (Table 2). The largest share was represented by class 1 (60.7%). The remaining clusters were represented by the same proportion (from 3.9% to 19.3%).

Table 2. Label results for clusters.

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Relative share of cluster	60.7%	7.7%	8.4%	19.3%	3.9%
Purchase of domestic products	100.0% a	100.0% a	94.3% a	100.0% a	100.0% b
Purchase of regional products	100.0% a	100.0% a	100.0% b	100.0% a	100.0% b
Knowledge of eco-labeling	100.0% a	100.0% b	77.1% a	100.0% a	100.0% b
Composition of product	100.0% a	59.4% b	65.7% a	100.0% b	50.0% a

Letters indicate answers: a = yes, b = no. Data on prevailing answers are reported.

The analysis of the cluster profile of the variables presented statistical differences, as shown in Table 3.

In the first cluster, the representation of consumers in terms of gender is not very significant (55.6% women, 44.0% men). Significant representation is shown by consumers aged 26–61 (73.8%) with university education (58.7%) who are employed (75.8%). The income of this group of consumers is not a key indicator, as we observe a balanced representation at the monitored levels. They include childless consumers (56%) from urban environments (54.8%) in the Ponitrie region (57.5%).

In the second cluster, we observe a balanced representation of female (56.3%) and male (43.8%) consumers. There is a slight predominance of consumers over the age of 62 (59.4%) with secondary education (65.6%) who are not economically active (46.9% pensioners), which reflects their monthly income (46.9% monthly income in the range of EUR 351–550). Families with three children (50%) from rural areas (53.1%) of the Ponitrie region (46.9%) are predominantly represented. In the second cluster there are no families with four or more children (0%). Families with three children (50%) from rural areas (53.1%) of the Ponitrie region (46.9%) are predominantly represented. In the second cluster there are no families with four or more children (0%).

Consumers of the third cluster are predominantly men (65.7%) at an economically active age of 26–61 years (62.9%) with secondary education (71.4%). The monthly income is evenly distributed between EUR 350 and 750. The cluster is represented mostly by rural consumers (65.7%) from the Gemer-Malohont region (45.7%).

Table 3. Cluster profile demographics and socioeconomic characteristics.

	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Chi-Square	*p*-Value
Gender						27.478	0.000
Male	27.0	3.4	5.5	7.0	3.9		
Female	33.7	4.3	2.9	12.3	0.0		
Age						105.504	0.000
18–25	13.3	1.0	1.9	7.0	1.4		
26–61	44.8	2.2	5.3	9.2	0.7		
62 and over	2.7	4.6	1.2	3.1	1.7		
Education						70.735	0.000
Primary	1.9	0.0	0.2	1.7	1.0		
Secondary	20.5	5.1	6.0	11.3	2.7		
University (1st, 2nd)	35.7	1.9	1.7	5.8	0.2		
University (3rd)	2.7	0.7	0.5	0.5	0.0		
Employment						149.226	0.000
Employed	46.0	2.4	3.6	8.7	0.0		
Unemployed	1.4	1.0	1.9	3.1	0.5		
Retired	2.2	3.6	1.0	2.9	1.7		
On maternity leave	4.3	0.2	0.0	0.0	0.0		
Student	6.7	0.5	1.9	4.6	1.7		
Monthly income						69.489	0.000
<EUR 350	14.5	1.0	2.9	10.1	1.7		
EUR 351–550	15.2	3.6	2.4	6.7	1.4		
EUR 551–750	18.1	0.5	2.7	1.0	0.2		
EUR 751–950	6.7	1.9	0.2	1.0	0.5		
>EUR 950	6.3	0.7	0.2	0.5	0.0		
Number of children						162.071	0.000
0	34.0	1.0	2.4	15.2	1.9		
1	12.8	1.2	1.7	1.7	0.0		
2	11.8	1.7	2.4	1.7	0.5		
3	1.9	3.9	0.7	0.5	1.0		
4	0.2	0.0	1.2	0.2	0.5		
Locality						25.203	0.000
Urban	33.3	3.6	2.9	5.8	0.5		
Rural	27.5	4.1	5.5	13.5	3.4		
Region						79.510	0.000
Ponitrie	34.9	3.6	1.4	12.0	1.4		
Hont	10.1	2.4	2.4	1.2	0.5		
Podpoľanie	10.6	0.2	0.7	4.1	0.0		
Gemer-Malohont	5.1	1.4	3.9	1.9	1.9		

In the fourth cluster there is slightly strong representation of female consumers (63.8%) with secondary education (58.8%) aged 26–61 (47.5%). This cluster is notable as it has the highest concentration of unemployed people in all clusters (39.4% of all unemployed in the studied batch, also reflected in the monthly income of up to EUR 350). The vast majority are represented by childless consumers (78.8%) from rural areas (70%) of the Ponitrie region (62.5%). In the fifth cluster, in terms of gender, only men are represented (100%). Consumers who are retired (43.8%) or students (43.8%) with secondary education (68.8%) slightly predominate in the cluster. In this cluster, consumers with university education are not represented at all. Their monthly income is up to EUR 350 (43.8%). Half of the consumers are childless (50%). The vast majority are rural consumers (87.5%). In terms of regional representation, half of the consumers are from Malohont; the Podpoľanie region is not represented here. In terms of the demographic and socioeconomic characteristics, all variables were important and affected the profile of the cluster (Table 3).

Consumers in the first cluster are represented by conscious consumers of domestic and regional food products who have knowledge of product labeling (Table 4). They are looking for regional products in stores (52.0%) and at public events (72.7%). More than half of these consumers (57.1%) buy specific products and prefer making recurring purchases (96.4%), but they are not willing to travel long distances for them (64.3%). In terms of frequency of purchases per week, we observe consumers with larger numbers of purchases (two times a week, 33.7%; three times a week, 32.1%; four times a week or more, 27.8%). These consumers, when buying products, prefer the composition. The most important source of information that affects purchasing is personal experience (48.4%), and the least is radio advertising (0.8%).

Table 4. Cluster profile preference for buying food.

	Cluster 1 (%)	Cluster 2 (%)	Cluster 3 (%)	Cluster 4 (%)	Cluster 5 (%)	Chi-Square	*p*-Value
Regional labeling in shops						27.840	0.000
No	30.4	4.2	3.6	8.6	3.6		
Yes	32.9	0.3	4.5	12.0	0.0		
Regional labeling at public events						39.479	0.000
No	16.8	3.4	2.0	4.7	4.2		
Yes	44.7	3.9	6.7	13.7	0.0		
Knowledge of regional labeling						207.963	0.000
No	1.1	1.9	1.1	0.3	3.7		
Yes	62.7	5.6	5.6	18.1	0.0		
Product price						27.040	0.000
No	28.2	1.2	2.2	4.3	2.2		
Yes	32.5	6.5	6.3	14.9	1.7		
Buying a specific product						69.148	0.000
No	26.0	5.5	5.3	17.8	3.1		
Yes	34.7	2.2	3.1	1.4	0.7		
Repeat purchase of regional labels						26.776	0.000
No	2.2	1.0	1.7	1.9	1.2		
Yes	58.6	6.7	6.7	17.3	2.7		
Travel for the product						37.783	0.000
No	39.0	5.3	6.5	19.0	3.1		
Yes	21.7	2.4	1.9	0.2	0.7		
Frequency of purchase						41.648	0.000
Once per week	3.9	1.2	1.9	5.1	1.4		
Twice per week	20.5	3.6	1.9	4.1	1.4		
Three times per week	19.5	1.9	2.4	5.5	0.2		
Four or more times per week	16.9	1.0	2.2	4.6	0.7		
Promotion of products						151.161	0.000
Newspaper	2.4	0.5	0.5	1.9	0.5		
TV	9.2	0.7	1.2	2.2	0.2		
Radio	0.5	1.7	0.5	0.0	1.0		
Leaflets	6.3	3.1	2.2	8.4	1.0		
Personal experience	29.4	1.0	2.4	5.5	0.0		
Presentation	8.0	0.0	0.7	0.5	0.0		
Internet	5.1	0.7	1.0	0.7	1.2		

The second cluster is represented by consumers buying domestic and regional products, especially at public events (53.8%). They do not seek these products in chain stores (93.8%). Due to monthly income, they prefer price (84.4%) and do not focus on specific brands (71.9%). They repeatedly

buy verified products (87.5%) but are not willing to travel for them (68.8%). They consider leaflets to be an important source of information (40.6%) and do not pay attention to personal experience at all (0%).

The third cluster (Table 4) characterizes consumers who prefer products whose country of origin is Slovakia over regional products, as they have no knowledge of regional product labeling. Domestic products are more often purchased at public events (77.4%) than in stores (55.2%). When buying products, price is the most important for them, which is why they search for information in leaflets (25.7%) or base their choice on personal experience (28.6%). These are consumers who do not look for specific product labels (62.9%) and therefore do not travel longer distances (77.1%). The frequency of their purchases is different. This cluster not only includes consumers who prefer larger purchases once a week (22.9%), but also those who shop more than four times a week (25.7%).

The fourth cluster (Table 4) is formed by conscious buyers of domestic and regional products. It is of note that the price of the product is more important for them (77.5%) than the composition, based on the amount of their monthly income. They are used to buying regional products in stores (58.1%) and at public events (74.2%). They do not buy specific brands (92.5%), nor do they travel longer distances (98.8%). Due to their preference for price, they prefer advertisements in leaflets (43.8%).

The fifth cluster (Table 4) is characterized by 100% representation of uninformed consumers who do not pay attention to product brands in shops or at public events. Product price and composition are not decisive criteria for them. They prefer repeat purchases of verified products (68.8%), but are not willing to travel longer distances (81.3%). They consider the Internet to be an important source of information (31.3%).

All variables are important for this cluster profile (Table 4): regional labeling in shops (chi-square = 27.840, *p*-value = 0.000), regional labeling at public events (chi-square = 39.479, *p*-value = 0.000), knowledge of regional labeling (chi-square = 207.963, *p*-value = 0.000), product price (chi-square = 27.040, *p*-value = 0.000), buying a specific product (chi-square = 69.148, *p*-value = 0.000), repeat purchase of regional labeling (chi-square = 26.776, *p*-value = 0.000), travel for the product (chi-square = 37.783, *p*-value = 0.000), frequency of purchase (chi-square = 41.648, *p*-value = 0.000) and promotion of products (chi-square = 151.161, *p*-value = 0.000).

A cluster analysis was performed as a way to segment consumers. The results of the analysis show that consumers, based on a preference for regional foods, are grouped into five homogeneous aggregates. The first cluster represents conscious purchasers of domestic and regional foods who have knowledge of product labeling. In terms of demographic indicators, these consumers are of working age (26–61 years old) with a university education. We are inclined to agree with the opinion of [26]: with increasing age, the probability that consumers will purchase these products declines. As part of the cluster analysis, we see regional differences in the purchase of domestic and regional food. Economically advanced regions (e.g., Ponitrie) are represented in clusters with a positive relationship to the purchase of such foods. By contrast, less economically developed regions (e.g., Gemer-Malohont) predominate in clusters of consumers that do not buy these foods. Regional differences in eco-label products were also observed in [27].

The second cluster is represented by consumers who buy domestic and regional products without any knowledge of the product labeling system. The price of food affects them more than the brand and composition of the product. In agreement with [28], we consider them to be cost-oriented consumers who do not care about the quality or origin of food. The amount of monthly income affects their purchase strategy. Several studies have confirmed the positive effect of monthly income on domestic and regional foods [28–30].

Consumers in the third cluster are predominantly represented by men (65.7%) who prefer products whose country of origin is Slovakia over regional food because they do not have knowledge of regional product labeling. We take the view of [28,31] that men buy fewer regional products, because many of these products are food and men more often buy electronics.

On the contrary, in the fourth cluster there is a slightly strong representation of female consumers (63.8%) who are looking to purchase domestic and regional food.

The fifth cluster includes unconscious consumers who do not pay attention to product brands. In terms of gender, only men are represented in this cluster (100%). We confirmed the argument of [31], that women pay more attention to food labels and prefer domestic and regional foods. Laroche et al. (2001) [32] came to a similar conclusion in their research about consumer eco-product behavior in Canada. Married men with at least one child were reported to study the composition of products when purchasing food. Product composition is equally important to female consumers in Ireland, Finland, France, Scotland, and Wales, who combine product composition with quality and specific product brands [33].

The application of regional food labeling systems varies in the European market. Verbeke (2013) [34] states that the member states of the European Union show significant differences in food labeling policy, which reflects the differences in the historical development, organization, and development of the food industry.

4. Conclusions

Consumer behavior that reflects attitudes toward regional food is also an important factor. The results of the survey show the behavior of a selected sample of consumers from the territory of Slovakia and their interest in regional foods.

Eco-labeling motivates small regional and local producers to make an effort to present the quality of their products and increase demand. Target groups of regional producers should be local residents who care about the quality of their life and food, regardless of gender and monthly income. We show that they represent locals of working age (26–61 years old) with secondary and tertiary education. Research also shows there is a group of consumers who have little or no interest in the stated products, consisting of men with secondary education and lower monthly income (up to EUR 350), i.e., socially weaker groups of the population who pay the most attention to financial spending. Ultimately, it can be said that the share of regional eco-labeling products is growing and we are still experiencing its increasing tendency.

The authors of the study are aware of some limitations. First, the analysis was carried out in only one European country and should therefore be replicated with other brands to provide more proof. It is reasonable to monitor and compare countries that differ in their cultural environment. Second, we only looked at basic consumer characteristics. Further research could examine the psychological aspects of consumers and their impact on the purchase of regional foods. Despite these limitations, we can provide useful results for future research. We can confirm that regional product labeling in Slovakia has potential in developing the agricultural and food industry.

References

1.　Prieto-Sandoval, V.; Alfaro, J.A.; Mejía-Villa, A.; Ormazabal, M. ECO-labels as a multidimensional research topic: Trends and opportunities. *J. Clean. Prod.* **2016**, *135*, 806–818. [CrossRef]

2.　Bratt, C.; Hallstedt, S.; Robèrt, K.H.; Broman, G.; Oldmark, J. Assessment of eco-labelling criteria development from a strategic sustainability perspective. *J. Clean. Prod.* **2011**, *19*, 1631–1638. [CrossRef]

3.	Clancy, G.; Fröling, M.; Peters, G. Ecolabels as drivers of clothing design. *J. Clean. Prod.* **2015**, *99*, 345–353. [CrossRef]

4.	Voinea, L.; Vrânceanu, D.M.; Filip, A.; Popescu, D.V.; Negrea, T.M.; Dina, R. Research on food behavior in romania from the perspective of supporting healthy eating habits. *Sustainability* **2019**, *11*, 5255. [CrossRef]

5.	Miranda-Ackerman, M.A.; Azzaro-Pantel, C. Extending the scope of eco-labelling in the food industry to drive change beyond sustainable agriculture practices. *J. Environ. Manag.* **2017**, *204*, 814–824. [CrossRef]

6.	Leroux, E.; Pupion, P.C. Factors of adoption of eco-labelling in hotel industry. *Technol. Forecast. Soc. Chang.* **2018**, *129*, 194–209. [CrossRef]

7.	Chakravarthy, Y.; Potdar, A.; Singh, A.; Unnikrishnan, S.; Naik, N. Role of ecolabeling in reducing ecotoxicology. *Ecotoxicol. Environ. Saf.* **2016**, *134*, 383–389. [CrossRef]

8.	Feldmann, C.; Hamm, U. Consumers' perceptions and preferences for local food: A review. *Food Qual. Prefer.* **2015**, *40*, 152–164. [CrossRef]

9.	Ozaki, R. Adopting sustainable innovation: What makes consumers sign up to green electricity? *Bus. Strategy Environ.* **2011**, *20*, 1–17. [CrossRef]

10.	Céline, M.; Llerena, D. Green Consumer Behaviour: An Experimental. *Bus. Strategy Environ.* **2011**, *420*, 408–420.

11.	Sammer, K.; Wüstenhagen, R. The influence of eco-labelling on consumer behaviour—Results of a discrete choice analysis for washing machines. *Bus. Strategy Environ.* **2006**, *15*, 185–199. [CrossRef]

12.	Thompson, D.W.; Anderson, R.C.; Hansen, E.N.; Kahle, L.R. Green segmentation and environmental certification: Insights from forest products. *Bus. Strategy Environ.* **2010**, *19*, 319–334. [CrossRef]

13.	Meyer, A. What's in it for the customers? Successfully marketing green clothes. *Bus. Strategy Environ.* **2001**, *10*, 317–330. [CrossRef]

14.	Rex, E.; Baumann, H. Beyond ecolabels: What green marketing can learn from conventional marketing. *J. Clean. Prod.* **2007**, *15*, 567–576. [CrossRef]

15.	Cerri, J.; Testa, F.; Rizzi, F. The more I care, the less I will listen to you: How information, environmental concern and ethical production influence consumers' attitudes and the purchasing of sustainable products. *J. Clean. Prod.* **2018**, *175*, 343–353. [CrossRef]

16.	Eco-Label Index. Available online: http://www.ecolabelindex.com/ecolabels/ (accessed on 24 October 2019).

17.	Van Ittersum, K.; Meulenberg, M.T.G.; van Trijp, H.C.M.; Candel, M.J.J.M. Consumers' appreciation of regional certification labels: A pan-European study. *J. Agric. Econ.* **2007**, *58*, 1–23. [CrossRef]

18.	Fernández-Ferrín, P.; Calvo-Turrientes, A.; Bande, B.; Artaraz-Miñón, M.; Galán-Ladero, M.M. The valuation and purchase of food products that combine local, regional and traditional features: The influence of consumer ethnocentrism. *Food Qual. Prefer.* **2018**, *64*, 138–147. [CrossRef]

19.	Bingen, J. Labels of origin for food, the new economy and opportunities for rural development in the US. *Agric. Hum. Values* **2012**, *29*, 543–552. [CrossRef]

20.	Ilbery, B.; Maye, D. Marketing sustainable food production in Europe: Case study evidence from two Dutch labelling schemes. *Tijdschr. Voor Econ. Soc. Geogr.* **2007**, *98*, 507–518. [CrossRef]

21.	Krnáčová, P.; Kirnová, L. Regionálne produkty z pohľadu spotrebiteľov (Regional products from a consumer perspective). *Studia Commer. Bratisl.* **2015**, *8*, 4.

22.	Hrubalová, L. Regionálne produkty v rozvoji regiónu Záhorie (Regional products in the development of the Záhorie region) (in Slovak). *Reg. Rozv. Mezi Teorií Praxí* **2017**, *3*, 72–82.

23.	Jaďuďová, J.; Marková, I.; Hroncová, E.; Vicianová, J.H. An assessment of regional sustainability through quality labels for small farmers' products: A Slovak case study. *Sustainability* **2018**, *10*, 1273. [CrossRef]

24.	Jaďuďová, J.; Marková, I.; Vicianová, J.H.; Bohers, A.; Murin, I. Study of consumer preferences of regional labeling. Slovak case study. *Eur. Countrys.* **2018**, *10*, 429–441. [CrossRef]

25.	Sarstedt, M.; Mooi, E. *Concise Guide to Market Research: The Process, Data, and Methods Using IBM SPSS Statistics*, 1st ed.; Springer: Berlin, Germany, 2014.

26.	Srinivasan, A.K.; Blomquist, G.C. Ecolabeled paper towels: Consumer valuation and expenditure analysis. *J. Environ. Manag.* **2009**, *90*, 314–320. [CrossRef] [PubMed]

27.	Cai, Z.; Xie, Y.; Aguilar, F.X. Eco-label credibility and retailer effects on green product purchasing intentions. *Forest Policy Econ.* **2017**, *80*, 200–208. [CrossRef]

28.	Schumacher, I. Ecolabeling, consumers' preferences and taxation. *Ecol. Econ.* **2010**, *69*, 2202–2212. [CrossRef]

29. Telligman, A.L.; Worosz, M.R.; Bratcher, C.L. "Local" as an indicator of beef quality: An exploratory study of rural consumers in the southern U.S. *Food Qual. Prefer.* **2017**, *57*, 41–53. [CrossRef]

30. Nicolosi, A.; Laganà, V.R.; Laven, D.; Marcianò, C.; Skoglund, W. Consumer habits of local food: Perspectives from northern Sweden. *Sustainability* **2019**, *11*, 6715. [CrossRef]

31. Chalupová, M.; Prokop, M.; Rojík, S. Regional Food Preference and Awareness of Regional Labels in Vysočina Region (Czech Republic). *Eur. Countrys.* **2016**, *8*, 109–122. [CrossRef]

32. Laroche, M.; Bergeron, J.; Barbaro-Forleo, G. Targeting consumers who are willing to pay more for environmentally friendly products. *J. Consum. Mark.* **2001**, *18*, 503–520. [CrossRef]

33. Maeve, H.; Mcintyre, B. The use of regional imagery in the marketing of quality products and services. *Irish Mark. Rev.* **2000**, *13*, 19–26.

34. Verbeke, W. Food quality policies and consumer interests in the EU. *EAAP Sci. Ser.* **2012**, *133*, 13–22.