





Potravinarstvo Slovak Journal of Food Sciences vol. 13, 2019, no. 1, p. 538-546 https://doi.org/10.5219/1137 Received: 12 March 2019. Accepted: 12 March 2019. Available online: 28 June 2019 at www.potravinarstvo.com © 2019 Potravinarstvo Slovak Journal of Food Sciences, License: CC BY 3.0 ISSN 1337-0960 (online)

FACTORS INFLUENCING INTEREST OF SLOVAK CONSUMERS' IN ORGANIC DAIRY PRODUCTS

Iveta Ubrežiová, Tatiana Kráľová, Jana Kozáková

ABSTRACT

OPEN CACCESS

The aim of the article is to analyse the dependency of selected factors (age category, level of income and gender) on consumers' willingness to buy organic dairy products. The primary research based on the electronic interview survey carried out on the sample of 203 Slovak respondents of all ages, in different social situations and with different views on the issue. The questionnaire consisted of seven sorting questions and six questions addressed consumers' perception of organic dairy products and the reasons for their purchase or rejection. For evaluation the Chi square test of square contingency was used. Results were sorted into three parts. The aim of the first part of research was to find out whether there is a dependency between the age category of the respondents and whether they are buying organic dairy products. Results showed that the age category of the respondents and purchase of organic dairy products are independent. The second part of the research based on the examination of the dependency between the level of income of the respondents and their willingness to pay for organic products. In this case we confirmed the dependency between the customers' average income per month and their willingness to pay for organic dairy products. Last but not least, the dependency between the reasons that would discourage consumers from buying organic dairy products and their gender was examined. The results of analysis clearly showed that these two variables are independent. Despite generally persisted opinions that food of daily consumption in bio quality (organic) is mainly bought by women of specific age categories (joung independent woman after graduation, mothers on maternity leave) we can confirm just the significance of the impact of customers' average income per month on their willingness to pay for these high quality and therefore expensive products.

Keywords: organic dairy products; Slovakia; age category; gender; level of income

INTRODUCTION

Production of food is one of the main mission of the manufacturing and processing industry of every country. According to the Food and Agriculture Organization of the United Nations (FAO): "all people, at all times, should have physical, social, and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life". This principle is fundamental for food security and it concerns both the production of foodstuffs of plant and animal origin as well (Cafiero et al., 2016). However, ensuring food security and sufficient consumption of different types of food is often not just the problem of developing countries. In Slovakia, present consumption of milk and dairy products is at the 70% of the recommended level. Consumption of cow's milk is alarmingly low, covering only about 50% of the recommended milk consumption, while consumption of cheese, curd and sour-milk products has risen in recent years and slightly exceeds the recommended (Kubicová, consumption intakes Predanocyová and Kádeková, 2019). Problem is not just on the demand side, there are some issues on the supply side as well. According to SOSR (2019), milk production

in Slovakia slightly decrease in last decade. While in 2007 we produced 96 422 000 ton per year in 2017 it was just 82 589 000 ton, which is just over 0.5% of total milk production in European Union (EU). Current situation is a consequence of previous cases and production quotas. In 1984, after several years of large overproduction of milk and dairy products (such as skimmed milk powder or butter), the Common Agricultural Policy (CAP) announced quotas for milk production in the European Union. After the CAP control in 2009, EU decided for a change and prepared the end of the milk quotas in socalled "soft landing" way. The impacts of quota removal on world markets were limited and demand context for meat and dairy products had a much more significant impact on agricultural markets than this removal alone (Salou et al., 2017). However, at the time of prodution quotas, Slovakia did not produced even its maximum allowed production volumes. The reason is comparative disadvantage compared with other EU countries, in which milk production is more supported. Therefore, dairy production in the country is not increasing at the same pace as in other EU countries, despite fact highlited by Michalek, Ciaian and Pokrivčák (2018) who states that

the Rural Development Programme (RDP) supports the establishment of POs in Slovakia with the aim to enhance the bargaining position of farmers in the supply chain, and thus to contribute to the improvement of their value added and economic viability. Consequently, out food producers also have a significant problem in establishing at foreign markets. Mura and Buleca (2014) for example states no significant correlation between acceptance of internationalization as the current trend in a globalizing world, and the development of the volume of sales to foreign markets in the Slovak food producers. They also confirmed a difference in perception of the factors that give rise to international business activities of business subjects.

Despite mentioned problems, the Slovak market with milk and dairy products is still affected by globalization and development on international markets. Our producers have to face strong international competition. Even if they are not active at foreign markets, they still have to challenge with foreign competititors, who penetrate our domestic market. Ubrežiová and Horská (2011) confirmed, that one of the main global trend which affected competition internationaly is implementation of Corporate Social Responsibility (CSR). Carroll and Buchholtz (2008) state, that the main idea of CSR is that the enterprise has not only legal and economic obligations, but also other responsibilities to society that extend these obligations. CSR is taking into account actions of company on society. Corporate Social Responsibility includes economic, legal, ethical and philanthropic expectations that society has placed to the organization in a given point of a time (Ubrežiová and Gurská, 2012). In the EU, the Lisbon Summit in 2000 was a fundamental step towards the implementation of CSR, with a commitment to support across the EU and make it capable of sustainable economic growth (Madrakhimova, 2013). In addition, milk and dairy products have a great potential to reach not just the sustainable economic growth, but ecological as well. The main instrument of implementation of ecological principles into primarily agricultural production is organic farming since it (Wachter and Reganold, 2014) relies on the integration of a diversity of farm components, the cycling of nutrients and other resources, and stewardship of soil and environment. For a food product to be certified as organic, it must satisfy a comprehensive series of requisites on aspects of production that, in the case of milk, range from livestock management and feed to the labeling of the final product (Ferreiro, Gayoso and Rodríguez-Otero, 2015). Consumer's reaction on these products are positive, since their characteristics fulfill the need for more naturalness and sustainability (Janssen, 2018; Sogari et al., 2015). They also believe that organic food is healthier, has a better taste, is better for the environment, and shows more respect for animal welfare, as well as enshrining important human and cultural value (Hamzaoui Essoussi and Zahaf, 2009). In addition, Kurajdová, Táborecká-Petrovičová and Kaščáková (2015) and Benda-Prokeinová et al. (2017) generally recommends to emphasize product attribute together with positive health impacts and demonstrate practical utilization of milk in households (e.g. through recipes on the package) to reinforce segment of purchasers.

Scientific hypothesis

According to previous data analysis we identified 3 main factors influencing the interest of Slovak consumers' in organic dairy products (age category, level of income and gender).

Factor 1 – Age category

The first part of research based on the expectation that there is a dependency between the age category of the respondents and their willingness of buying organic dairy products. According to this expectation the hypotheses was set:

- Hypothesis H0: The age category of the respondents and purchase of organic dairy products are independent.
- Hypothesis H1: There is a dependency between the age category of the respondents and purchase of organic dairy products.

Factor 2- Level of income

This part of research based on the expectation that there is a dependency between the level of income of the respondents and their willingness to pay for organic products. According to this expectation, following hypotheses was set:

- Hypothesis H0: The average income per month and the willingness to pay for organic dairy products are independent.
- Hypothesis H1: There is a dependency between the average income per month and the willingness to pay for organic dairy products.

Factor 3 – Gender

The last part of the research was connected with the expectation that there is a dependency between the reasons that would discourage consumers from buying organic dairy products and their gender. According to third expectation, the hypotheses was set:

- Hypothesis H0: The gender of respondents and the reasons that would discourage consumers from buying organic dairy products are independent.
- Hypothesis H1: There is a dependency between the gender of respondents and the reasons that would discourage consumers from buying organic dairy products.

MATERIAL AND METHODOLOGY

The primary research was conducted from February 19, 2019 to March 20, 2019, attended by 203 respondents from Slovakia. The results were obtained from a survey conducted in electronic form. It was filled by respondents of all ages, in different social situations and with different views on the issue.

The questionnaire consisted of 13 questions, divided into 2 categories:

- Questions 1 7 dealt with the characteristics of the respondents (their gender, age, status, etc.).
- Questions 8 13 addressed consumers' perception of organic dairy products and the reasons for their purchase or rejection.

For the collection of data was used Google form of questionaire. The results of the survey were processed using Microsoft Excel 2016 MSO: 16.0.4266.1001.

Statistic analysis

Chi square test of square contingency is used to summarize the existence of a statistically significant relationship between qualitative characters. The test consists of a comparison of empirical and theoretical frequences, this means, what would emperical frequences be, if characters A and B were independent. The first step is formulation of hypotheses, followed by calculation of test statistics, and the last step is evaluation of results and acception of null or alternate hypothesis (**Moore, 2006**).

Calculation of theoretical frequencies is based on the theorem of independence of random characters A and B:

$$\left(a_i b_j\right)_0 = \frac{(a_i) * (b_j)}{n}$$

Calculation of test statistics:

$$x^{2} = \sum_{i=1}^{m} \sum_{j=1}^{k} \frac{\left(\left(a_{i} b_{j}\right) - \left(a_{i} b_{j}\right)_{0}\right)^{2}}{\left(a_{i} b_{j}\right)_{0}}$$

Where:

(aibj) – the empirical frequency,

(aibj) 0 - the theoretical frequency,

m - number of categories of the first character,

k – number of categories of the second character,

Evaluation of the hypotheses:

After calculation of test statistics for the respective Chi square with selected degrees of freedom and compare it with the critical value. To calculate the critical value, we chose a level of significance at 0.05 level (5% level). X2 < critical value \rightarrow H0 is accepted, there is

independence between characters examined.

 $X2 > critical value \rightarrow H0$ is rejected, there is dependence between characters examined.

RESULTS AND DISCUSSION

The composition of respondents by gender shows that three quarters of respondents were women who are probably more concerned with this issue and also buy food products more often than men. Specifically, 151 women and 52 men answered to the questions in the questionnaire.

The majority of respondents were between 26 and 40 years old (92 respondents, which is 42%). The second largest age group is 18 - 25 years (78 respondents, which is 39). This group consists mainly of students. The third largest group is people aged 41 - 60 years (25 respondents, which is 12%). The remaining two age groups are under 18 and over 60 (both only 4 respondents).

The number of respondents living in the city or in the countryside is more or less balanced (116 live in the city which is 57% and 87 in rural areas people which is 43%).

More than half of respondents had a university degree (110 respondents, which is 54%). The second largest group consists of respondents with secondary education with school-leaving exam (78 respondents, which is 38). Less than 3% belong to the group with specialized secondary education (6 respondents), 5 respondents had secondary education without school-leaving exam and 4 respondents only primary level of education.

According to the status, people from all possible categories appeared among results. Almost half of

respondents were employed people (97 respondents, which is 48%). They are followed by students with (55 respondents, which is 27%), entrepreneurs and housewifes (both 18 respondents, which is 9%). Groups, with share less than 2%, were also employed students (5 respondents), pensioners (4 respondents), unemployed (3 respondents), invalids (2 respondents) and one voluntary unemployed person.

Most respondents, come from a household with 4 members (69 respondents). The second largest is the group with 3 household members (51 respondents). They are followed by a group with two members (42 respondents, which is 21%), and more than 4 members (26 respondents, which is 13%). The remaining 7% are people living alone (15 respondents).

Over half of respondents (123 respondents, which is 61%) have an average monthly income per household member from 500 - 1,000 EUR. Following groups are people with income less than 500 EUR (33 respondents), from 1,001 - 1,500 EUR (32 respondents), from 1,501 - 2,000 EUR (7 respondents) and income higher than 2,000 EUR per month (8 respondents).

Research based on the statistical verification of the influence of three choosen factors on the interest of Slovak consumers' in organic dairy products, or their willingness to buying these products.

We included age category as a first analysed factor and statistically connect it with the answers to the question no. 8 (Do you buy organic (BIO, ECO) dairy products?). The aim of this part of the research was to find out whether there is a dependency between the age category of the respondents and whether they are buying organic dairy products. The results showed that $\chi 2 = 8.89 < \chi$ ra6. = 15.51. Therefore, we have accepted null hypothesis, and thus, the age category of the respondents are independent (Table 1). Since customers' willingness to buy organic products is not connected with their age and thus wiew of life associated with generation, we were looking for other couses.

Respondents who do not buy organic dairy products have had the opportunity to say (question no. 9) why they chose to do so (If you answered "No" to previous question, please state the reason). Almost half of respondents do not trust the quality of organic dairy products on sale. 31% of respondents consider these dairy products to be more expensive and cannot afford such expenses. 15% think that there are few such products on the market. 4 respondents do not see the difference between organic and non-organic dairy products. One respondent has even added own version of answer and he is not buying it due to a short shelf life, he does not want to throw away unconsumed food (Figure 1).

Empirical frequencies						
Age Category	18 - 25	26 - 40	41 - 60	Less than 18	More than 60	Total
Yes, some dairy products	35	58	14	2	2	111
Yes, all dairy products	1	4	1	0	0	6
No	42	30	10	2	2	86
Total	78	92	25	4	4	203
Theoretical frequencies						
Age Category	18 - 25	26 - 40	41 - 60	Less than 18	More than 60	Total
Yes, some dairy products	42.65024631	50.30541872	13.66995074	2.187192118	2.187192118	111
Yes, all dairy products	2.305418719	2.719211823	0.738916256	0.118226601	0.118226601	6
No	33.04433498	38.97536946	10.591133	1.694581281	1.694581281	86
Total	78	92	25	4	4	203
Statistics						
Age Category	18 - 25	26 - 40	41 - 60	Less than 18	More than 60	Total
Yes, some dairy products	1.372237527	1.176942417	0.007968757	0.016020947	0.016020947	-
Yes, all dairy products	0.739179403	0.603269794	0.092249589	0.118226601	0.118226601	-
No	2.427161451	2.06687603	0.03299347	0.055046397	0.055046397	-
Test statistics	8.897466329					
Critical value	15.50731306					

Table 1 The dependency between age category of the respondents and their willingness of buying organic dairy products – Factor 1.

Note: Source: Own processing.



Figure 1 Reasons why customers do not buy organic dairy products (number of answers). Note: Source: Own processing.



Figure 2 Reasons why customers buy organic dairy products (number of answers). Note: Source: Own processing.



Figure 3 Customers consideration of suffiency of the range of organic dairy products in their region (number of answers).

Note: Source: Own processing.

Table 2 The dependency between the level of income of the respondents and their willingness to pay for organic products – Factor 2.

Empirical frequencies	S						
Income range	0.2	0.4	0.6	Less than 20%	More than 60%	Total	
1000 – 1500€	19	3	0	10	0	32	
1500 - 2000€	4	1	1	1	0	7	
500 - 1000€	55	12	1	54	1	123	
Less than 500€	8	5	0	20	0	33	
More than 2000€	4	4	0	0	0	8	
Total	90	25	2	85	1	203	
Theoretical frequencies							
Income range	0.2	0.4	0.6	Less than 20%	More than 60%	Total	
1000 – 1500€	14.18719212	3.9408867	0.315270936	13.39901478	0.157635468	32	
1500 - 2000€	3.103448276	0.862068966	0.068965517	2.931034483	0.034482759	7	
500 - 1000€	54.5320197	15.14778325	1.21182266	51.50246305	0.60591133	123	
Less than 500€	14.63054187	4.064039409	0.325123153	13.81773399	0.162561576	33	
More than 2000€	3.54679803	0.985221675	0.078817734	3.349753695	0.039408867	8	
Total	90	25	2	85	1		
Statistics							
Income range	0.2	0.4	0.6	Less than 20%	More than 60%	Total	
1000 – 1500€	1.632678229	0.2246367	0.315270936	0.862250072	0.157635468	-	
1500 - 2000€	0.259003831	0.022068966	12.56896552	1.272210953	0.034482759	-	
500 - 1000€	0.004016091	0.654124715	0.037025912	0.121114417	0.256317834	-	
Less than 500€	3.004952646	0.21555456	0.325123153	2.766040586	0.162561576	-	
More than 2000€	0.057909141	9.225221675	0.078817734	3.349753695	0.039408867	-	
Test statistics	37.64714603						
Critical value	26.2962276						

Note: Source: Own processing.



Potravinarstvo Slovak Journal of Food Sciences

Figure 4 Reasons which would discourage customers from buying organic dairy products (number of answers). Note: Source: Own processing.

Table 3 The dependency between the reasons that would discourage consumers from buying organic dairy products	s
and their gender – Factor 3.	

Empirical frequencies			
Reasons	Male	Female	Total
"BIO" label does not guarantee that this is a Bio product.	0	1	1
Different taste	2	17	19
Shorter shelf life of products	9	14	23
I buy them, I have no reason to stop buying them	0	1	1
Unavailable in the stores	0	1	1
Does not belong to the assortment of my favourite brand	6	8	14
I do not see any difference	9	20	29
High price	25	90	115
Total	51	152	203
Theoretical frequencies			
Reasons	Male	Female	Total
"BIO" label does not guarantee that this is a Bio product.	0.251231527	0.748768473	1
Different taste	4.773399015	14.22660099	19
Shorter shelf life of products	5.778325123	17.22167488	23
I buy them, I have no reason to stop buying them	0.251231527	0.748768473	1
Unavailable in the stores	0.251231527	0.748768473	1
Does not belong to the assortment of my favourite brand	3.517241379	10.48275862	14
I do not see any difference	7.285714286	21.71428571	29
High price	28.89162562	86.10837438	115
Total	51	152	203
Statistics			
Reasons	Male	Female	Total
"BIO" label does not guarantee that this is a Bio product.	0.251231527	0.084294789	
Different taste	1.611376311	0.540659157	
Shorter shelf life of products	1.796227936	0.602681742	
I buy them, I have no reason to stop buying them	0.251231527	0.084294789	
Unavailable in the stores	0.251231527	0.084294789	
Does not belong to the assortment of my favourite brand	1.752535497	0.588021779	
I do not see any difference	0.403361345	0.135338346	
High price	0.524191686	0.175880105	
Test statistics	9.13685285		
Critical value	14.06714045		
Note: Source: Own processing.			

Volume 13

It is very interesting that despite the "trust" was the biggest issue for people who do not buy organic dairy products, it was also one of the main reasons for people who buy them. We have identified the most common reasons for purchasing organic dairy products (question no. 10: For what reasons would you buy organic (BIO, ECO) dairy products?). In case of this question, 133 respondents chose Support of domestic milk producers (which is 65.5%), 132 respondents chose a Higher quality of these product and the third most important factor was the Food Safety Guarantee (almost 40%). About 30% of respondents chose better conditions for farm animals and support of organic milk farmers and 23.5% chose positive environmental impact.

Two respondents did not choose any of the options and two would not buy them under any circumstances (Figure 2).

Reasons of reduced interest in buying organic dairy products could be on the side of demand and on the side of supply as well. In connection with this we included question no. 11 (Do you consider the range of organic (BIO, ECO) dairy products in your region to be sufficient?) into analysis.

Surprisingly, 75% of respondents consider the range of organic dairy products insufficient in their region. Just the remaining quarter thinks that there is a sufficient range of organic dairy products in their region, and there is no need to improve it (Figure 3). But we find differences between people living in cities and in the countryside. While 35% of people living outside the city consider the product range to be sufficient and 7% rather sufficient, in cities these figures were lower -25% sufficient and 5% rather sufficient. This means a total difference by 12%. The product range is considered to be insufficient in the countryside by 52% of respondents, which is a difference by 17% compared to a sufficient one. For people living in cities, it is 62% and the difference is 37%.

Considering fact, that price is a factor with strong impact on demand generally, we included it into analysis as well. Higher price of organic products can potentionally discourage price elasticity for consumers to the extent that they completely stop buying products or reduce their consumption considerably. In view of this, we included question no. 12 (How much are you willing to pay for organic (Bio, Eco) dairy products in addition to the price of the goods?). The results was expected, if respondents had a choice how much they would pay in addition to the price of dairy products for being organic, they would choose the lowest possible values. Up to 42% of them would only pay less than 20% and 45% of respondents identified 20% as their border. Just 12.5% of respondents would invest at least 40% extra for organic products, only one percent would invest 60% in addition to the price of the products and only one would invest more. Despite the fact that men and women tend to different price elasticity, we can not confirm this in our samle, but 60% or more than 60% in addition to the price of the products are willing to pay mainly men. Another fact is that most of these respondents are already buying organic products, although not all. For these products, the price is already 50% higher. Therefore, their willingness to pay for these products should be higher than they showed in the

questionnaire. Besides, the level of income is likely important factor.

In connection with previous outcomes, the level of income was included as a second factor. The goal was to examined the dependency between the level of income of the respondents and their willingness to pay for organic products. The results showed in Table 2 clearly states that $\chi 2 = 37.64 > \chi$ Tab. = 26.29. Therefore, we have accepted alternative hypothesis, and thus, we can confirm the dependency between the customers' average income per month and their willingness to pay for organic dairy products. Despite the undenaiably high impact of price elasticity, this is not the only important aspect. Out task was aslo to find another features and therefore we asked respondents (question no.13) What would discourage them from buying organic (BIO, ECO) dairy products. As shows Figure 4, more than a half of respondents (115 respondents), could be discouraged by high price of organic products. 11% of respondents would discourage shorter shelf life of such products, 9% different taste and 7% would not buy organic products that does no belong to the range of their favourite brand. There were also some minor opinions among answeres: organic dairy products are unavailable in the storesa and BIO label does not guarantee that it realy is organic product. Of course there are some loval customers as well which buying these products ans have to reason to stop. But, there are still 29 respondents which does not see any difference between organic and non-organic products. Similar connection between consumers income and food consumption highlited also Benda-Prokeinová and Hanová (2016) as well as Kozelová et al. (2018), who state that the main impact factors affecting food consumption in Slovakia are the consumers' income and food prices despite fact that The main criterion of food selection should not be connect with money, but health concerns. On the other side, according to Nagyová et al. (2019) Slovak consumers are gradually becoming more rational, especially in terms of information literacy. As there is a wide range of food products in store, many respondents try to choose the food according to their own mind. For these reasons, they seek to obtain the necessary information by studying, reading information on product labels, and in many cases also via Internet.

Except for any other differences, diverse gender approach is also visible in consumers' decision making. Therefore, we wanted to find out whether there is a dependency between the reasons that would discourage consumers from buying organic dairy products and their gender (Factor 3).

The results of analysis showed that $\chi 2 = 9,12 < \chi \text{ ra6.} = 14,07$ (Table 3). Therefore, we have accepted null hypothesis, and thus, the gender of respondents and the reasons that would discourage consumers from buying organic dairy products are independent. This outcome does dot explain the differences in consumers' willingness to buy organic products, but it brings beneficial result that gender oriented approach in marketing of these products would not be effective.

Our outcomes aslo suggests that Slovak consumers become more focused on products quality and their range. This puts pressure on the domestic food industry. There is only one major producer of organic dairy products on the

market - Rajo. Similar products are already offered by market follower Tami. It added the Bio product line to its portfolio. Both offer Bio Milk, Bio Yoghurt and Bio Butter as well. Since companies are using organic milk produced in Slovakia and approaching high quality, these products also have a higher price to compensate higher costs of production. Enforcement in this market segment is still very difficult also because of necessity of extra investments, the creation of new contracts with producers of organic milk, the creation of new contracts with intermediaries who will buy organic products, staff training, and the need to obtain a certificate for the production of organic dairy products. Transporting milk from new suppliers and all additional ingredientsin BIO quality are also more expensive. Investments required for such project can be found in foreign capital, but it shifts the possibility of gaining (extra) profit to the distant future. Despite ther poor domestic competitive environment, our producers must face very strong foreign competition. There are not just producers from Austria (Biotrend), which is country with very strong organic rear, but also strong piece competitors from Czech Republic (Hollandia) and Germany (Milbona). But then again, those who can enforce in this environment will increase its market share focusing on the new target group and can gain and extra competitive advantage by demonstrating their social responsibility in the eyes of customers.

CONCLUSION

The idea of organic production based on the implementation of strict rules in the agricultural primarily production (crop and dairy) with the goal of production high quality products and subsequently high quality food, labeled as BIO or Organic by state control organization. Production under this strict control is more demanding and expensive in comparison with traditional conventional agricultural production. Products in this system have higher quality, but higher price as well. There are several organic producers in Slovakia, but just a few of them are involved in the dairy production, which is connected with the general situation of milk sector in Slovakia. Additonally, there is a lack of processing subjects in the Slovak food industry and recently just the two of them are involved in labeled production of organic milk products of BIO quality. This poor willingness of domestic processors is connected with the several factors and the fear of whether demand will be sufficient is one of them. Our analysis focused on the demand side of mentioned problem and examined dependency of age category, level of income and gender of consumers on their willingness to buy organic dairy products. Surprisingly, we found no dependency between the age category of the respondents and purchase of organic dairy products as well as between the reasons that would discourage consumers from buying organic dairy products and their gender. On the other side, analysis clearly shows the dependency between the customers' average income per month and their willingness to pay for organic dairy products. In addition, Slovak consumers are becoming increasingly demanding according to products quality. Naturally, the market supply of high quality products would be increased. But, this increase would be possible only in case of increase of investments in processing technologies. Overall objective

of this investment is not to increase short-term profits, but other benefits, which will also generate higher profits in the long term.

Based on the survey, producers should focus mainly on three products: milk, butter and yogurt, which were most frequently bought and have the highest probability to be successful as BIO products. Most Slovak consumers prefer domestic dairy products, it can be also an advantage for company. 75% of respondents believe that there are not enough dairy products on the market, so producers can meet the needs of consumers looking for these products.

Respondents also consider prices to be reasonable, which means opportunity to sell new Bio products at a slightly higher price. Most consumers are willing to pay more if the product is of high quality, tasty, has the appropriate composition and origin of production. All of these factors suggest that organic dairy products can be accepted by consumers in the market. Marketing campaign should be focus on more educated people who are especially interested in the quality of products and their composition. These consumers would also belong in the main target group, which include individuals with higher income.

The survey also showed that production of organic products improves the perception of corporate social responsibility among consumers. The reasons why respondents would buy these products were for example: Support for farmers producing organic milk, Support for domestic producers of milk, Higher quality of products and others. New Bio production line therefore can help companies get better reputation, increase market share, attract new customers, but mainly, demonstrate the social responsibility of its business in the eyes of its customers.

REFERENCES

Benda-Prokeinová, R., Dobeš, K., Mura, L., Buleca, J. 2017. Engel's Approach as a tool for estimating consumer behaviour. *Economics*, vol. 20, no. 2, p. 15-29. https://doi.org/10.15240/tul/001/2017-2-002

Benda-Prokeinová, R., Hanová, M., 2016. Consumer's behavior of the foodstuff consumption in Slovakia. *Procedia - Social and Behavioral Sciences*, vol. 220, p. 21-29. https://doi.org/10.1016/j.sbspro.2016.05.465

Cafiero, C., Nord, M., Viviani, S., Del Grossi, M. E., Ballard, T., Kepple, A., Miller, M., Nwosu, Ch. 2016. Methods for estimating comparable rates of food insecurity experienced by adults throughout the world. Technical Report, of Food and Agriculture Organization of the United Nations (FAO), Rome : 2016. Available at: http://www.fao.org/3/a-i4830e.pdf

Carroll, A. B., Buchholtz, A. K. 2008. *Business & Society – Ethics and Stakeholder Management*. 7th ed. USA : Western Cengage Learning. 970 p. ISBN 978-0-324-56939-1.

Ferreiro, T., Gayoso, L., Rodríguez-Otero, J. L. 2015. Milk phospholipids: Organic milk and milk rich in conjugated linoleic acid compared with conventional milk. *Journal of Dairy Science*, vol. 98, no. 1, p. 9-14. https://doi.org/10.3168/jds.2014-8244

Hamzaoui Essoussi, L., Zahaf, M. 2009. Exploring the decision-making process of Canadian organic food consumers: Motivations and trust issues. *Qualitative Market Research*, vol. 12, p. 443-459. https://doi.org/10.1108/13522750910993347

Janssen, M. 2018. Determinants of organic food purchases: Evidence from household panel data. *Food Quality and*
 Preference,
 vol.
 68,
 p.
 19-28.

 https://doi.org/10.1016/j.foodqual.2018.02.002
 19-28.
 19-28.

Kozelová, D., Országhová, D., Matejková, E., Fikselová, M., Horská, Ďurdíková, D., Matysik-Pejas, R. 2018. Eggs and their consumption affected by the different factors of purchase. *Potravinarstvo Slovak Journal of Food Sciences*, vol. 12, no. 1, p. 570-577. <u>https://doi.org/10.5219/944</u>

Kubicová, E., Predanocyová, K., Kádeková, Z. 2019. The importance of milk and dairy products consumption as a part of rational nutrition. *Potravinarstvo Slovak Journal of Food Sciences*, vol. 13, no. 1, p. 234-243. https://doi.org/10.5219/1050

Kurajdová, K., Táborecká-Petrovičová, J., Kaščáková, A. 2015. Factors Influencing Milk Consumption and Purchase Behavior Evidence from Slovakia. *Procedia Economics and Finance*, vol. 34, p. 573-580. <u>https://doi.org/10.1016/S2212-5671(15)01670-6</u>

Madrakhimova, F. 2013. History of Development of Corporate Social Responsibility. *Journal of Business and Economic*. USA: Academic Star Publishing Company. vol. 4, no. 6, p. 509-520. Available at: http://www.academicstar.us/UploadFile/Picture/2014-6/201461410571606.pdf

Michalek, J., Ciaian, P., Pokrivčák, J. 2018. The impact of producer organizations on farm performance: The case study of large farms from Slovakia. *Food Policy*, vol. 75, p. 80-92. https://doi.org/10.1016/j.foodpol.2017.12.009

Moore, D. S. 2006. *The Basic Practice of Statistics*. 4th Ed. USA : W. H. Freeman, 728 p. ISBN: 978-0716774785.

Mura, L., Buleca, J. 2014. Trends in international business of the Slovak small and medium food enterprises. *Procedia-Social and Behavioral Sciences*, vol. 110, p. 905-912. https://doi.org/10.1016/j.sbspro.2013.12.936

Nagyová, Ľ., Andocsová, A., Géci, A., Zajác, P., Palkovič, J., Košičiarová, I., Golian, J. 2019. Consumers' awareness of food safety. *Potravinarstvo Slovak Journal of Food Sciences*, vol. 13, vol. 1, no. 1, p. 8-7. <u>https://doi.org/10.5219/1003</u>

Salou, T., van der Werf, H., Levert, F., Forslund, A., Hercule, J., Le Mouel, Ch. 2017. Could EU dairy quota removal favour some dairy production systems over others? The case of French dairy production systems. *Agricultural Systems*, vol. 153, p. 1-10. https://doi.org/10.1016/j.agsy.2017.01.004

SO SR, 2019. *DATAcube*. Available at: http://datacube.statistics.sk/#!/view/sk/VBD_SLOVSTAT/pl2

019rs/Hrub%C3%A1%20%C5%BEivo%C4%8D%C3%AD %C5%A1na%20produkcia%20pod%C4%BEa%20komod%C 3%ADt%20%5Bpl2019rs%5D

Sogari, G., Corbo, C., Macconi, M., Menozzi, D., Mora, C. 2015. Consumer attitude towards sustainable-labelled wine: An exploratory approach. *International Journal of Wine Business Research*, vol. 27, p. 312-328. https://doi.org/10.1108/IJWBR-12-2014-0053

Ubrežiová, A., Horská, E. 2011. Perception and Approach towards Corporate Social Responsibility in SMEs: Case Study of Slovak and Czech Republic. In: *PEFnet 2011 "European Scientific Conference of Ph.D. Students*, Brno, p. 1-7.

Ubrežiová, I., Gurská, S. 2012. International Management and Entrepreneurship. Nitra : SUA, 2012. 67 p. ISBN 978-80-552-0941-8.

Wachter, J. M., Reganold, J. P. 2014. Organic Agricultural Production: Plants. In Van ALfen, N. K. *Encyclopedia of Agriculture and Food Systems*. Reference Module in Food Science, p. 265-286. <u>https://doi.org/10.1016/B978-0-444-52512-3.00159-5</u>

Acknowledgment:

This work was supported by the Slovak Research and Development Agency on the basis of Contract no. APVV-16-0244 "Qualitative factors affecting the production and consumption of milk and cheese".

The publication of this article is supported by the Slovak Agency KEGA - Project KEGA 005SPU-4/2019 "Theory and Practice of the International Management and Entrepreneurship in Multicultural Environment".

Contact address:

Iveta Ubrežiová, Slovak University of Agriculture, Faculty of Economics and Management, Department of Management, Trieda A. Hlinku 2, 949 76 Nitra, Slovakia, Tel.: +421 37 641 4134,

E-mail: iveta.ubreziova@uniag.sk

ORCID: https://orcid.org/0000-0003-3681-1297

Tatiana Kráľová, Slovak University of Agriculture, Faculty of Economics and Management, Department of Management, Trieda A. Hlinku 2, 949 76 Nitra, Slovakia, Tel.: +421 37 641 4134,

E-mail: xkralovat@is.uniag.sk

ORCID: https://orcid.org/0000-0002-1464-120X

*Jana Kozáková, Slovak University of Agriculture, Faculty of Economics and Management, Department of Management, Trieda A. Hlinku 2, 949 76 Nitra, Slovakia, Tel.: +421 37 641 4130,

E-mail: jana.kozakova@uniag.sk

ORCID: https://orcid.org/0000-0001-7913-9053

Corresponding author: *