





# Slovak Journal of Food Sciences

Potravinarstvo Slovak Journal of Food Sciences vol. 15, 2021, p. 226-234 https://doi.org/10.5219/1556

Received: 12 November 2021. Accepted: 16 March 2021. Available online: 28 March 2021 at www.potravinarstvo.com © 2021 Potravinarstvo Slovak Journal of Food Sciences, License: CC BY 4.0

ISSN 1337-0960 (online)

# THE IMPACT OF CONSUMER PERSONALITY ON PURCHASING BEHAVIOR IN THE DAIRY MARKET IN TERMS OF PSYCHOLOGICAL FACTORS

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# **ABSTRACT**

Since the 1990s of the 20th century, the Slovak dairy industry has undergone many significant changes which have been related to the reduction of the herds of cattle and milk cows, the decrease of quantity of milked milk, low purchase prices of milk, the decline of a great number of milk producers and processors. The consumption of cow's milk and dairy products in Slovakia is very low in comparison with the countries of the European Union (about 320 kg), Europe (293 kg), the Czech Republic (280 kg), and the rest of the world. It varies around 170 kg per capita per year, which is also considerably lower consumption than the dose of 220 - 240 kg per capita per year recommended by doctors. Since 1990 the production and consumption of dairy products and cheeses have decreased significantly. In Slovakia, the consumption is twice even three times less than in the developed countries of Europe. The reason for this situation is the behavior of a consumer and the factors having an impact on the consumption of cow's milk and dairy products. The objective of the paper is to indicate the impact of the personal consumers' characteristics on the purchasing decisions on the market of the products of cow's milk origin, based on the processed answers of the respondents participating in the questionnaire survey. The primary data were obtained via the questionnaire survey, which was conducted with 786 respondents. The questionnaire consisted of four parts – Eysenck's personality test, the questions targeted at the detection of factors influencing the consumers' purchasing behavior and decision making, the questions related to expressing opinions about cow's milk and dairy products, and the classification questions providing the information about the respondents. The data were processed by the methods of quantitative and qualitative statistics – Chi-square statistic  $\chi^2$  test of square contingency, Chi-square  $\chi^2$  goodness of fit test, two proportion test, Kolmogorov-Smirnov test, the test of hypotheses of relative proportion.

**Keywords:** consumer personality; consumer behavior; cow's milk; dairy products; determinants of purchase; psychological factors

# INTRODUCTION

A consumer is every individual who buys products or services for his/her consumption to satisfy their own needs (Biswas and Roy, 2015). Richterová et al. (2015) completed the definition by the idea that a consumer buys products which are aimed for the use in the family, the family members, or as a present for other persons. According to Consumer Rights (2019), a consumer buys products or services for his/her consumption but not for the production or further sale. The purchasing decision of a consumer is influenced by their needs and wants (Solomon et al., 2016).

Golian (2017) claims that consumer behavior reflects the competence of their decisions with the aspect of acquisition, consumption, and disposition of products and services, their activities, experience, consumer patterns in the surroundings, and their own or acquired processes from models in the micro or macro-environment. The behavior, which has an impact on purchasing decision-making, is different with each individual. The factors influencing some consumers do not have necessarily an

impact on others (Javornik, 2016). The internal factor is predominantly our conviction whether we need or do not need a product, and if we buy it or not (Ramya and Ali, 2016). Lypchuk and Larina (2018) rank among the external determinants the price, packaging, advertisement, and all other marketing tools. Consumer decisions are also by constantly changing food (Santeramo et al., 2018) and the habits of individual consumers (Wallner et al., 2016). The globalization and internationalization of markets increase the interest in the knowledge of general and specific characteristics of consumers and their needs. It is connected with the traditional monitoring of trends of the development of lifestyle, consumption, and value orientation of consumers, (whose) the knowledge of which allowed many marketing organizations to achieve the competitive advantage (Richterová et al., 2015). During the decision-making process, a consumer is influenced by many factors, which are divided by many authors into four or five essential groups - cultural, social, personal, psychological, and situational factors (Armstrong et al., 2016; Horská et al.,

2009; Kotler and Keller, 2019; Koudelka, 2018; Nákonečný, 2009; Richterová, 2015; Sarma, 2018; Solomon et al., 2016; Vysekalová, 2014; Wänke, 2015).

A personality is perceived as a whole of the internal dispositions that along with the situation determine the content and procedures of the psychological processes which are understood as a reaction of an individual to a particular situation (Nákonečný, 2009). A personality is associated with his/her internal characteristics, specific virtues, attributes, features, and manners, which differ consumers from each other. These characteristics have an impact not only on an individual's product and trade choice but also on the way how a consumer reacts to the promotional tools of a seller (Strydom, 2011). Nákonečný (2009) describes a personality as a whole of the internal dispositions that along with the situation determine the content and procedure of the psychological processes, which are perceived as a reaction of an individual to a particular situation. According to Richterová et al. (2015), it is just a personality who decides about the way how an individual will achieve his/her objectives. Freud's theory of personality, Neo-Freudian theory of personality, the theory of personality traits, and cognitive approach to the study of a personality by so-called Self-concept rank among the most significant and well-known theories. Freud's theory of personality arises from the assumption that human behavior originates from the basic conflict between a human desire to satisfy the physical needs and the necessity to act as a responsible member of society. This struggle is carried out in mind between three systems - Id, Ego, and Superego (Solomon et al., 2016; Vysekalová, 2011). Several followers of Sigmund Freud, among them Alfred Adler (theory of individual psychology), Carl Jung (theory of collective unconscious), Karen Horney (three types of personalities), and others enlarged Freud's theory and created Neo-Freudian school (McLeod, 2018; Richterová et al., 2015). The British psychologist Hans Eysenck suggested the theory of personality based on biological factors. He states that individuals inherit the type of nervous system which has an impact on their ability to learn and adapt to the environment where they live (Cherry, 2018). Atkinson (2003) describes two main factors – neuroticism (stable/unstable) and extraversion (extrovert/introvert). Their mutual combination forms different personal characteristics. According to Hradiská and Letovancová (2007), decision-making is the phase in a consumer's behavior that results in a particular activity influenced by several factors. These factors are implicit in the individual characteristics of a consumer and they also have an impact on their motivation towards the consumer action. Emotions are closely related to motivation. From the aspect of consumer behavior, the result of the internal process is a feeling linked to a product. This emotion is not an irrational act. Vysekalová (2011) claims that emotions are effective tool persuade a consumer to buy a product. When watching an advertisement, each experiences an emotion-inducing need to buy or not to buy a given product. The sellers try to influence a customer via emotions and evoke the impression that their product is the best one. The interconnection of the positive emotions with a brand creates a positive image of the brand in the consumer's

mind. If an advertisement evokes the consumer's positive and strong emotions, then there is a great probability that when shopping he/she will choose just the goods which stimulated the positive emotions. On the contrary, negative emotions are rarely used in adverts because the consumers are not interested in buying a product that is associated with the negative emotions.

The decision-making process is created by several phases – problem identification, searching for information, evaluation of alternatives, a decision about purchasing, and evaluation after purchase (Kotler and Armstrong, 2004; Solomon et al., 2016).

When dealing with the consumption of milk and dairy products we often come across lactose intolerance or the different myths about these products (Dairy Global, 2018). The collective of authors Golian et al. (2019) explain that milk produces sputum, it is diluted by water, it contains various preserving agents and also that the consumption of milk causes different health problems for some consumers. In the world, there are more than 7.5 milliard inhabitants, out of the 80% consume cow's milk and dairy products (Kapaj and Deci, 2017). The majority of consumers do not have any problems with their consumption. However, some consumers do not consume cow's milk and dairy products for different reasons (Elwood, Pickering and Fehily, 2007). Their negative attitude can originate from health problems, own conviction, new trends in nutrition, and recommendations. The significant aspect of the purchasing behavior can consist in the conclusions of the various researches and specialists" opinions (Kassin et al., 2018). Generally, milk is considered to be one of the principal structural parts of human nutrition (Golian et al., 2019), therefore it is necessary to motivate the consumers to buy (it) and consume it more. The average annual consumption of cow's milk and dairy products per capita in Slovakia is 176 kg, while the doctors recommend consuming 220 kg per capita (Masár, 2018). According to Herian (2019), since 1990 there has been a significant decrease in the production and consumption of dairy products and cheeses in Slovakia. The Slovaks consume twice even three times less acidophilus milk products, and mainly cheeses, than in the developed countries of Europe. "A decreased consumption, and therefore also a decreased milk production, has the negative impact on agriculture, animal production, and human health. - 696 milliard kg of milk were produced, out of it 28% in the EU,8% in other European countries, 30% in Asia, 18 % in North America, 9% in South America, 6% in Africa, and 5% in Oceania. For many Europeans, milk and dairy products are the essential sources of proteins and calcium, and cheese is necessary for the normal growth and development of bones and teeth. In 5 decagrams of hard cheese, there is about one-fifth of protein quantity, which is needed for an adult person, and approximately one-third of calcium quantity needed for a teenager. Cheeses contain also the vitamins A, B2, niacin, B12 and D, as well as the mineral substances like zinc and phosphorus" (Herian, 2019).

# Scientific hypothesis

Assumption No. 1: We assume that women think more rationally than men.

Assumption No. 2.: We assume that the quality of cow's milk and dairy products have an impact on a consumer when buying these products.

Assumption No. 3: We assume that more than 70% of respondents purchase cow's milk and its products.

Assumption No. 4: We assume that there exists a dependence between the economic status and the choice of a company.

## MATERIAL AND METHODOLOGY

The primary data for the elaboration of the paper was received by the questionnaire survey which was administered in the electronic form of Google Forms in the territory of the Slovak Republic. The data collection was pursued in 2018 – 2019. 786 respondents participated in the research. The questionnaire was divided into four independent parts. The first part provided information about the respondents, their gender, age, economic status, income, and place of residence. The second part consisted of the questions related to a consumer's personality. The third part was aimed at the consumer behavior on the market of milk and dairy products. The last part focused on cow's milk and dairy products.

The principal objective was to detect the impact of a personality and determinants on the consumer behavior on the market of cow's milk and dairy products.

## **Statistical Analysis**

The formulated scientific hypotheses were tested by the methods of qualitative statistics – Chi-square of the goodness of fit test, the test of hypotheses of relative proportion, two proportion tests, and Kolmogorov-Smirnov test.

The set level of probability alfa ( $\alpha = 0.05$ ) was compared with the significance level (p-value). If the p-value is lower than alfa ( $\alpha$ ), then we reject H<sub>0</sub>. If the p-value is higher than alfa ( $\alpha$ ), then we accept H<sub>0</sub>.

## RESULTS AND DISCUSSION

The first part of the questionnaire was formed by the classification questions related to the gender, age, completed education, economic status, monthly income, and place of residence of the respondents. The answers to the questions were recorded in the electronic form through Google form.

The research sample was represented by the consumers of cow's milk and dairy products classified into four age categories. 786 respondents participated in the questionnaire survey, out of the 521 women (66.28%) and 265 men (33.72%). From the age aspect, the biggest representation was achieved by the group of people in the age category from 26 to 35 years (42.49%). The second biggest group were young people aged 25 years (28.63%). This group was followed by the age category from 36 to 50 years (17.18%). The lowest representation in the research – 92 respondents (11.70%) – was the group aged from 51 and more years.

The analysis of the economic status of the respondents participating in the research provided the information that the smallest number were employed people (39.31%), followed by the students (38.68%). The third position was taken by the self-employed people (38.68%). 34.10% of the respondents claimed that their monthly income is less than 400  $\epsilon$ . The smallest group were the respondents (13.23%) whose income was higher than 1001 $\epsilon$ . 8.78% of respondents – students undergraduates stated that they do not have any own income. Out of the total number of respondents, 786 (58.65%) live in a town and 41.35 % live in the countryside.

The second part of the questionnaire survey was formed by Eysenck's test of personality. Based on this test the respondents were identified from the aspects of extroversion/introversion and emotional stability/lability.

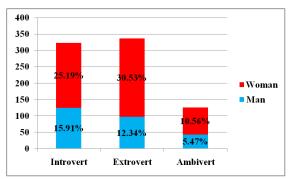
In the third part, the respondents answered the questions targeted at the determination of the factors of the purchasing behavior and decision making, which can influence them or not in the process of decision making and purchase of cow's milk and dairy products. The answers were recorded on the evaluation scale of 1-5.

In the fourth part of the questionnaire, the questions were formulated in a way so that the respondents could express their opinion about the evaluated products from the viewpoint of their purchase, consumption, and preferred brands.

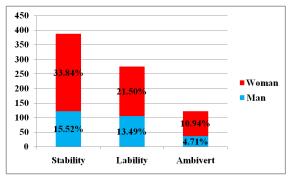
Based on the theory of personality, which is founded on two basic dimensions, the combination can create the different personality characteristics of each individual, thus Eysenck's personality test was formed. This test allows detecting the level of extroversion and neuroticism of the respondents and classifying them into one of four types of temperament - sanguine (stable extrovert), choleric (unstable extrovert), phlegmatic (stable introvert), and melancholic (unstable introvert). The test consisted of 30 closed questions with the answers yes/no. The respondents' answers to the first 12 questions allowed to evaluate the scale of extraversion (granting one point for the answer "yes" with the questions 1, 3, 4, 6, 7, 8, 11, 12 and for the answer "no" with the questions 2, 5, 9, 10). If a respondent achieved more than 6 points, he/she was evaluated as an extrovert, in the case of fewer points as an introvert.

The results of the survey indicated the dominance of extroverts. Out of the total number of 337 extroverts, there were 240 women, men were mostly introverts. The group of "intertype" was formed by 126 respondents (ambiverts), who achieved the same number of 6 points for extroversion and introversion (Figure 1).

The responses to the second group of questions (13-24) allowed to determine the scale of neuroticism (emotional stability and lability of respondents). In this case, the same division of points was used as in the determination of the extroversion of respondents. If a respondent obtained more than 6 points, he/she was evaluated as emotionally labile, if less than 6 points, he/she was emotionally stable. If he achieved 6 points, he was classified in the group as "intertype". The results of the research pointed out the dominance of the emotionally stable respondents (total 256, 164 women and 92 men). In the group of emotionally labile, there were classified 201 respondents, 114 women and 87 men (Figure 2).



**Figure 1** Structure of respondents according to the scale of extroversion and gender.



**Figure 2** Output from the statistical program.

Based on the results of the marketing survey we can claim that the majority of respondents are emotionally stable extroverts, who belong to the group of sanguines from the aspect of temperament, the second group is choleric – emotionally labile extroverts. The same number of respondents rank among phlegmatics (stable introverts) and melancholics (labile introverts). The respondents, who achieved the same amount of points in both scales and belonged to the group of "intertype", were not classified in any group according to temperament (Figure 3).

The third group of questions in the survey was targeted at consumer behavior and decision-making when purchasing milk and dairy products. The respondents should have chosen one out of 5 options of the submitted scale of responses (1 – strongly agree, 2 – agree, 3 – I do not know, 4 – disagree and 5 – strongly disagree).

The first question was aimed at purchase planning. The majority of respondents (26.59%) marked the answer 3 'I do not know', which means that the respondents do not plan their shopping. Similar conclusions result from the survey of **Wand and Sahin (2018)**, who stated that the purchase planning depends on the purchased range of products. If a consumer goes shopping for products of daily consumption, then he/she hardly ever plans the purchase. The different situation occurs in the case of the purchase of clothes, electronics, or other durables. In this case, he/she plans the purchase and thinks over thoroughly the final decision. Then the options "disagree" followed (24.68%) and "agree" (24.30%). The reply 'strongly agree' was indicated by 12.98% and 'strongly disagree' by 11.45% of respondents.

The second question referred to the impulsive purchase. It is an unplanned purchase without any serious speculation about the effect/importance of this action. Also

in this case it was affirmed that the majority of respondents could not express their opinion (32.57%). It means that the range of products and the way of purchasing can have an impact on their impulsive behavior. The research of **Ling and Yazdanifard (2015)** emphasized impulsive behavior with a particular range of products. The authors also declare that impulsive behavior is dependent on both internal and external factors.

The next option was 'agree' (23.41%) and 'disagree' (18.32%). 15.14% respondents marked 'strongly agree' and 10.56% of respondents 'strongly disagree'.

Hypothesis No. 1 was defined in the relation to purchasing planning:

 $H_0$ : Women do not think more rationally than men.

 $H_1$ : Women think more rationally than men.

The two proportion test was used to verify the hypothesis. In this case, the table value was 1.6449 and the test characteristics 2.4631, which means that we reject the null hypothesis. We accept the alternative hypothesis and affirm that women think more rationally than men. Based on the test results, we consider our assumption to be correct.

The responses to the question referred to advertising should provide the information to what extent the respondents agree with the statement that they buy foodstuff influenced by advertisements. The majority 37.02% of respondents strongly agreed. This statement only confirms that the advertisement still belongs to the significant marketing communication tools, having an impact on consumer behavior. This statement was approved also by the answers of respondents in the survey conducted by Pechmann and Catlin (2016). The authors concluded that the consumers perceive subconsciously the advertisements of new products, and when shopping they recall repeatedly the information. According to Boyland and Whalen (2015), the most influenceable groups of consumers by an advertisement are children and pensioners. The following option was 'agree' (20.87%) and in the third place the answer 'disagree' (19.47%) was placed. 10.69% of respondents strongly disagree, and 11.96% of respondents do not know how to evaluate this statement.

The last but one question referred to the influence of the decision-making of a consumer through quality. The reaction should have pointed out whether consumers decide to buy milk and dairy products also according to quality, and if they are willing to pay more. 25.70% of respondents strongly disagree. Recently still more attention is focused on the issue of food quality. Even in some cases, quality is considered to be the most important factor influencing the choice and purchase of food. The survey of Jeong, Crompton and Hyun (2018) was targeted at the quality versus the price of selected products. The results of this survey proved that the consumers are willing to pay more for the product of higher quality. Of course, the quality of the particular products must be declared. The next opinion was "disagree" (25.45%) and the answer "I do not know" (17.68%). 13.99% of respondents strongly agreed and 17.18% respondents agreed.

Concerning the impact of the quality of milk and dairy products on a consumer during shopping, hypothesis No. 2 was formulated:

 $H_0$ : Quality does not have an impact on a consumer when purchasing milk and dairy products.

*H*<sub>1</sub>: Quality has an impact on a consumer when purchasing milk and dairy products.

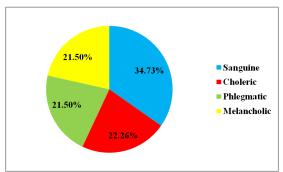


Figure 3 Structure of respondents according to temperament.

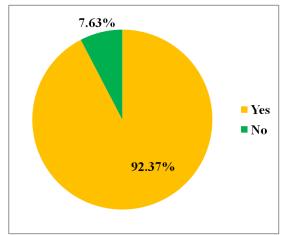
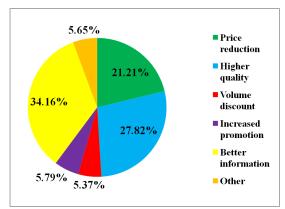


Figure 4 Purchase of cow's milk and dairy products.



**Figure 5** Motivation to higher consumption of milk and dairy products.

We have used the Kolmogorov-Smirnov test to verify the hypotheses. In this case, the table value achieved the level 0.0736 and the testing characteristics were calculated at the level of 0.3776, which means that we reject the null hypothesis. We accept the alternative hypothesis and claim that the quality of milk and dairy products has an impact on a consumer's purchase. Based on the test results we consider the assumption to be correct.

The last statement was aimed at the price – whether this factor is decisive in purchasing food. The majority of respondents marked the option "disagree" (25.32%). The survey of **Rödiger**, **Plaßmann**, and **Hamm** (2016) also detected that the price does not always rank among the decisive factors of purchase of a particular product. This survey determined that more than 60% of respondents bought a particular product at a higher price although the willingness to pay was lower than the price. The following was the option "I do not know" (23.54%) and the third place was taken by the answer "strongly disagree" (21.25%). 9.80% of respondents strongly agreed and 20.10% of respondents' agreed.

The last studied area was cow's milk and dairy products. The respondents reactions should have provided the information if they buy cow's milk and its products (Figure 4).

The graph indicates the positive relation towards the purchase of cow's milk and dairy products (92.37%). The similar result, referred to the consumption of cow's milk, has also been achieved in the survey of the collective of authors Rybanská et al. (2019) as well as in the survey of Krivošíková et al. (2019). The negative answers can originate from several reasons (lactose intolerance, lifestyle, own conviction). The problem of lactose intolerance was studied by the team of researchers Deng et al. (2015) who concluded that the number of consumers suffering from this kind of intolerance is growing continuously. 7.63% of respondents, who stated in our survey not buying milk and dairy products, did not carry on the completion of the other questions in the questionnaire.

To test the number of respondents purchasing milk and dairy products we set hypothesis No. 3:

 $H_0$ : More than 70% of respondents do not buy cow's milk and its products.

 $H_1$ : More than 70% of respondents buy cow's milk and its products.

We used the test of hypotheses about the relative proportion to verify the hypotheses. In this case p-value = 0.9237 and the upper limit was calculated at the level 0.7001, which means that we reject the null hypothesis. We accept the alternative hypothesis and claim that more than 70% of respondents purchase cow's milk and its products. Based on the test results, we consider our assumption to be correct.

The processed answers to the second question were related to the reason for purchasing milk and dairy products. The most frequent reason for the purchase of these products was their taste (50.41%), followed by healthy nutrition (28.24%) and as a raw material used for food preparation and baking (15.56%). 4.13% of respondents stated that they buy milk and dairy products predominantly for their children. The healthy nutrition as a reason for the purchase of milk and dairy products was also presented in the survey of Kurajdová, Táborecká-Petrovičová and Kaščáková (2015). The following questions in the questionnaire survey were aimed at the motivation of respondents to higher consumption of milk and dairy products (Figure 5). The majority of the respondents stated that they would be motivated to the increased consumption by better informedness about the positive effects on their health (34.16%). This means that the respondents would be willing to buy milk if they had the adequate and sufficient amount of needed information and arguments. 27.82% of respondents consider a higher quality of these products as a reason for their purchase. The purpose of this request is the unexplained information related to the different myths which are spread about milk - the dilution of milk by water, insufficient content of vitamins and nutrients, the scarcity of information about the health benefits of milk, the excessive fat content, etc. The third reason for the insufficient interest in milk was price, in a lower price of milk (21.21%). The survey of Paraffin, Zindove and Chimonyo (2017) confirms that the consumers preferred the price to milk safety. The next factor was the increased promotion, bulk discounts, and others. 5.65% of respondents claimed that they are not motivated by anything to increase the consumption of cow's milk and dairy products because they consider their consumption to be sufficient and do not need to increase it.

The following question referred to the factors which influence respondents mostly when buying cow's milk and its products. The respondents had the opportunity to choose out of five factors. 25.48% of respondents think that the country of origin is the most significant factor, 24.66% price, 23.14% quality, 17.08% packaging, and 9.64% brand. The survey of **Elofsson et al. (2016)** emphasized the importance of brand and brand awareness to be significant also with milk and dairy products. The results of the survey referring to brand awareness declared the rise of milk purchase by 6-8%.

The answers to the question related to the most purchased dairy products allowed us to classify the order of the preferred purchased evaluated products made by the consumers participating in our survey. More than one-fifth of respondents prefer to buy milk, one-fifth prefers cheeses, followed by yogurts, butter, curds, and acidophilus milk products. Almost 2% of respondents stated milk puddings and creams in the category of the other products (Figure 6).

The survey pursued by the team of **Kubicová**, **Predanocyová and Kádeková (2019)** indicated almost the same results when the consumers preferred mainly milk, cheeses, and yogurts. The survey determined that the consumption of milk and dairy products is below the limit of the daily recommended consumption, which is caused predominantly by high prices of the dairy products

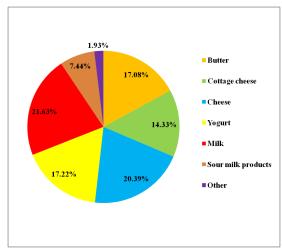


Figure 6 Most frequently purchased dairy products.

(cheeses, butter, yogurts) in comparison with the incomes of households.

The last question of the survey was focused on the consumption of the Slovak traditional cheeses (steamed cheese "parenica", braided string cheese, cheese preserved by smoke curing "oštiepok" and so on). 685 (94.35%) respondents provided a positive answer to this question. 5.65% of participants expressed their negative relation to the Slovak types of cheeses. The respondents, who answered positively, were also asked which particular brand of the Slovak traditional cheeses is their favorite and preferred. The majority of respondents (58.69%) stated the brand Liptov. The next one was Agrofarma (21.75%), Milsy (15.47%), and others – Levmilk, Tami, Syrex, and the different local farms in their place of residence represented by 4.09% of respondents.

We detected the dependence of the economic status and the choice of a particular brand of the Slovak cheeses via the method of quantitative statistics.

 $H_0$ : There does not exist any dependence between the economic status and the choice of a particular brand of Slovak cheeses.

H<sub>1</sub>: There exists a dependence between the economic status and the choice of a particular brand of Slovak cheeses.

We used the Chi-square test for more than two independent aggregates for the verification of hypothesis No. 4. In this case, the table value at the level 43.7730 and the test characteristics were calculated at the level 55.9116, which means that we reject the null hypothesis. We accept the alternative hypothesis and affirm that there is a dependence between the economic status and the choice of a particular brand of Slovak cheeses. Based on the test results we consider our assumption to be correct.

## CONCLUSION

Many producers are convinced that the decisions they make result from the rational analysis of the available sources. However, there exists another significant factor – emotions which can influence considerably their decisions, even change them. Nowadays, the promotion itself of these products via rational appeal is not sufficient, but emotional appeals are becoming still more important. Many companies utilize emotions in their advertising spots to induce some feelings and imagination of the target

group, which can have an impact on purchasing behavior and decision-making. A personality is a determinant that influences the model of consumption. Even if a consumer is not aware of it, he/she tends to buy and use the products which correspond with his/her personality. A personality reacts to the promotional interests of firms that have an impact on the consumer personality and his/her choice of a product and brand.

The results of the pursued questionnaire survey suggested that the consumer personality is influenced by the purchasing behavior, however, the personality itself is influenced by many factors – price, advertisement, opinion of other consumers. That very much depends on the consumer to what extent he/she is influenced by the external environment and which role is played by his/her judgment.

Based on the pursued marketing survey by Eyesenck's personality questionnaire, the majority of respondents were ranked among the emotionally stable extroverts. According to temperament, these consumers belong to the group of sanguines (34.73%). The second biggest group were emotionally labile extroverts – cholerics (21.50%). From the viewpoint of consumer behavior, we can claim that the purchase planning depends on a particular kind of a purchased product. The impulsive behavior of respondents was not affirmed, therefore we assume that this type of purchasing behavior is influenced by a particular kind of dairy product and also the form of shopping. The survey has proved the increased interest in the purchase of the dairy products recommended by advertisements, where 37% of respondents expressed their positive attitude. In the quality versus decision-making factor about the purchase of the dairy products, we conclude that the consumers are not willing to buy more expensive products, although these commodities should be of a higher quality. 25% of respondents had a negative approach towards the price of milk and dairy products and their impact on the purchase of these products.

We can evaluate positively the significant interest in the consumption of milk and dairy products. More than 92% of respondents do not have any problems with the consumption of milk and dairy products. The principal reasons for the purchase of milk and dairy products were taste and health benefits for the human organism. The important fact is that the respondents would be motivated to the increased consumption of milk and dairy products by better informedness about the beneficial effects on human health (34.16%). The most remarkable factor, which has a positive impact on the purchase of cow's milk, is its origin (more than 25% of respondents). The producers of the Slovak traditional cheeses can consider the consumption of the Slovak traditional cheeses to be a highly positive response (more than 94% of respondents).

# REFERENCES

Armstrong, G., Kotler, P. T., Harker, M., Brennan, R. 2016. *Marketing: An Introduction*. 3<sup>rd</sup> edition, London, UK: Pearson Education Limited, 615 p. ISBN 978-0-273-71395-1. Atkinson, R. L. 2003. *Psychologie (Psychology)*. 2<sup>nd</sup> edition, Praha, Czech republic: Portál, 752 p. ISBN 80-7178-

Biswas, A., Roy, M. 2015. Green Products: An Exploratory Study on the Consumer Behaviour in Emerging Economies of

the East. *Journal of Cleaner Production*, vol. 85, p. 463-468. https://doi.org/10.1016/j.jclepro.2014.09.075

Boyland, E. J., Whalen, R. 2015. Food advertising to children and its effects on diet: review of recent prevalence and impact data. *Pediatric Diabetes*, vol. 16, no. 5, p. 331-337. https://doi.org/10.1111/pedi.12278

Cherry, K. 2018. *The Trait Theory of Personality*. Available at: https://www.verywellmind.com/trait-theory-of-personality-2795955

Consumer Rights. 2019. *Who is a consumer*. Available at: http://www.consumerrights.org.in/meaning-of-consumer.htm

Dairy Global. 2018. *Dairy-free: Is it really what consumers want?* Available at: https://www.dairyglobal.net/Market-trendsArticles/2018/5/Dairy-free-Is-it-really-what-consumers-want-285629E/

Deng, Y., Misselwitz, B., Dai, N., Fox, M. 2015. Lactose Intolerance in Adults: Biological Mechanism and Dietary Management. *Nutrients*, vol. 7, no. 9, p. 8020-8035. <a href="https://doi.org/10.3390/nu7095380">https://doi.org/10.3390/nu7095380</a>

Elofsson, K., Bengtsson, N., Matsdotter, E., Arntyr, J. 2016. The impact of climate information on milk demand: Evidence from a field experiment. *Food Policy*, vol. 58, p. 14-23. https://doi.org/10.1016/j.foodpol.2015.11.002

Elwood, P. C., Pickering, J. E., Fehily, A. M. 2007. Milk and dairy consumption, diabetes and the metabolic syndrome: the Caerphilly prospective study. *Journal of Epidemiology & Community Health*, vol. 61, no. 8. p. 695-698. https://doi.org/10.1136/jech.2006.053157

Golian, J. 2017. Potraviny a spotrebitel' (Food and the consumer). Nitra, Slovak republic: SPU, 104 p. (In Slovak) ISBN 978-80-552-1767-3.

Golian, J., Čapla, J., Zajác, P., Benešová, L. 2019. *Mlieko a mliečne výrobky – praktické rady pre spotrebiteľov (Milk and dairy products - practical advice for consumers)*. Nitra, Slovak republic: SPU, 80 p. (In Slovak) ISBN 978-80-552-2020-8.

Herian, K. 2019. Spotreba mlieka na Slovensku stagnuje: Za európskym priemerom výrazne zaostávame (Milk consumption in Slovakia stagnates: We are lagging far behind the European average). (In Slovak) Available at: https://www.cas.sk/clanok/883104/spotreba-mlieka-na-slovensku-stagnuje-za-europskym-priemerom-vyrazne-zaostavame/

Horská, E., Nagyová, Ľ., Stávková, J., Turčínková, J., Stejskal, L., Bolaňos, R. M., Araque Padilla, R., Mentoro Simó, M. J., Ramírez Sobrino, J. N., Matysik-Pejas, R., Szafrańska, M. 2009. *Európsky spotrebiteľ a spotrebiteľské správanie (European consumer and consumer behavior)*. Nitra, Slovak republic: SPU, 219 p. (In Slovak) ISBN 978-80-552-0318-8.

Hradiská, E., Letovancová, E. 2007. *Psychológia v marketingovej komunikácii (Psychology in marketing communication)*. Bratislava, Slovak republic: Vydavateľstvo UK, 172 p. (In Slovak) ISBN 978-80-223-2306-2.

Javornik, A. 2016. Augmented reality: Research agenda for studying the impact of its media characteristics on consumer behaviour. *Journal of Retailing and Consumer Services*, vol. 30, p. 252-261. https://doi.org/10.1016/j.jretconser.2016.02.004

Jeong, J. Y., Crompton, J. L., Hyun, S. S. 2018. What makes you select a higher price option? Price-quality heuristics, cultures, and travel group compositions. *International Journal of Tourism Research*, vol. 21, no. 1, p. 1-10. https://doi.org/10.1002/jtr.2236

Kapaj, A., Deci, E. 2017. Chapter 7 - World Milk Production and Socio-Economic Factors Effecting Its Consumption. In Watson, R. R., Collier, R. J., Preedy V. R. *Dairy in Human Health and Disease Across the Lifespan*, Cambridge, US: Academic Press, p. 107-115. ISBN 978-0-12-809868-4. <a href="https://doi.org/10.1016/B978-0-12-809868-4">https://doi.org/10.1016/B978-0-12-809868-4</a>. <a href="https://doi.org/10.1016/B978-0-12-809868-4">https://doi.org/10.1016/B978-0-12-809868-4</a>. <a href="https://doi.org/10.1016/B978-0-12-809868-4">https://doi.org/10.1016/B978-0-12-809868-4</a>.

Kassin, S. M., Redlich, A. D., Alceste, F., Luke, T. J. 2018. On the General Acceptance of Confessions Research: Opinions of the Scientific Community. *American Psychologist*, vol. 73, no. 1, p. 63-80. <a href="https://doi.org/10.1037/amp0000141">https://doi.org/10.1037/amp0000141</a>

Kotler, P., Armstrong, G. 2004. *Marketing (Marketing)*. Praha, Czech republic: Grada Publishing, 855 p. (In Czech) ISBN 80-247-0513-3.

Kotler, P., Keller, K. L. 2019. *Marketing management*.14<sup>th</sup> Edition. London, UK: Pearson Education, 657 p. ISBN 978-0-13-210292-6.

Koudelka, J. 2018. *Spotřebitelé a marketing (Consumers and marketing)*. 1<sup>st</sup> edition Praha, Czech republic: C. H. Beck, 384 p. (In Czech) ISBN 978-80-7400-693-7.

Krivošíková, A., Nagyová, Ľ., Kubelaková, A., Mokrý, S. 2019. Consumer preferences on milk market: evidence from Slovak Republic. *Potravinarstvo Slovak Journal of Food Sciences*, vol. 13, no. 1, p. 961-970. <a href="https://doi.org/10.5219/1221">https://doi.org/10.5219/1221</a>

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. <a href="https://doi.org/10.1016/82212-5671(15)01670-6">https://doi.org/10.1016/82212-5671(15)01670-6</a>

Ling, L. P., Yazdanifard, R. 2015. What Internal and External Factors Influence Impulsive Buying Behavior in online Shopping? *Global Journal of Management and Business Research*, vol. 15, no. 5, 9 p. Available at: https://globaljournals.org/GJMBR\_Volume15/3-What-Internal-and-External.pdf

Lypchuk, V., Larina, Y. 2018. The Main External Factors Forming Consumer Behavior Patterns in Ukraine. *Business and Non-profit Organizations Facing Increased Competition and Growing Customers' Demands*, vol. 17, p. 549-566. ISBN 978-83-951082-2-8.

Masár, I. 2018. Mlieko – Situačná a výhľadová správa k 31.12.2017 (Milk. Situation and Prospective Report as of 31.12.2017). Ročník XXV, č. 1, jún 2018, Bratislava, Slovak republic : Národné poľnohospodárske a potravinárske centrum pod gesciou Ministerstva pôdohospodárstva a rozvoja vidieka Slovenskej republiky, 35 p. (In Slovak) Available

www.vuepp.sk/dokumenty/komodity/2018/Mlieko06\_18.pdf McLeod, S. 2018. *Carl Jung*. Available at: https://www.simplypsychology.org/carl-jung.html

Nákonečný, M. 2009. *Psychologie osobnosti (Psychology of personality)*. 2<sup>nd</sup> edition, Praha, Czech republic: Academia, 620 p. (In Czech) ISBN 978-80-2001-680-5.

Paraffin, A. S., Zindove, T. J., Chimonyo, M. 2017. Household consumption preferences of dairy products and their perceptions of milk safety. *Journal of Food Safety*, vol. 38, no. 2, 8 p. https://doi.org/10.1111/jfs.12428

Pechmann, C., Catlin, J. R. 2016. The effects of advertising and other marketing communications on health-related consumer behaviors. *Current Opinion in Psychology*, vol. 10, p. 44-49. https://doi.org/10.1016/j.copsyc.2015.12.008

Ramya, N., Ali, S. 2016. Factors affecting consumer buying behavior. *International Journal of Applied Research*, vol. 2, no. 10, p. 76-80. Available at: https://pdfs.semanticscholar.org/30b0/d20f1189698634792a6f c49b51b54f2b297f.pdf

Richterová, K., Klepochová, D., Kopaničová, J., Žák, Š. 2015. *Spotrebiteľské správanie (Consumer behavior)*. Bratislava, Slovak republic: Sprint 2 s.r.o., 404 p. (In Slovak) ISBN 978-80-89710-18-8.

Rödiger, M., Plaßmann, S., Hamm, U. 2016. Organic consumers price knowledge, willingness-to-pay and purchase decision. *British Food Journal*, vol. 118, no. 11, p. 2732-2743. https://doi.org/10.1108/BFJ-04-2016-0164

Rybanská, J., Polat, D., Nagyová, Ľ., Andocsová, A., Géci, A. 2019. Consumer behaviour and promotional strategies differences on the market of milk in Turkey and Slovakia. In *3rd International Conference on Food and Agricultural Economics*, p. 108-116. ISBN 978-605-81058-1-2.

Santeramo, F. G., Carlucci, D., De Devitiis, B., Seccia, A., Stasi, A., Viscecchia, R., Nardone, G. 2018. Emerging trends in European food, diets and food industry. *Food Research International*, vol. 104, p. 39-47. <a href="https://doi.org/10.1016/j.foodres.2017.10.039">https://doi.org/10.1016/j.foodres.2017.10.039</a>

Sarma, S. 2018. Global Observations of the Influence of Culture on Consumer Buying Behavior (Advances in Business Strategy and Competitive Advantage). Hetshey, US: IGI Global, 374 p. ISBN 978-15-2252-728-2.

Solomon, M. R., Bamossy, G., Askegaard, S., Hogg, M. K. 2016. *Consumer Behaviour: A European Perspective*. 6<sup>th</sup> edition, London, UK: Pearson Education, 736 p. ISBN 978-12-9211-672-3.

Strydom, J. 2011. *Introduction to Marketing*. 4<sup>th</sup> Edition. Cape Town, South Africa: Juta Academic, 328 p. ISBN 978-07-0217-810-8.

Vysekalová, J. 2011. Chování zákazníka: jak odkrýt tajemství "černé skříňky" (Customer Behavior: How to Uncover the Secrets of a "Black Box"). Praha, Czech republic: Grada Publishing, 360 p. (In Czech) ISBN 978-80-247-3528-3.

Vysekalová, J. 2014. Emoce v marketingu: Jak oslovit srdce zákazníka (Emotions in marketing: How to reach the heart of the customer). Praha, Czech republic: Grada Publishing, 296 p. (In Czech) ISBN 978-80-247-4843-6.

Wallner, P., Kundi, M., Hohenblum, P., Scharf, S., Hutter, H. P. 2016. Phthalate Metabolites, Consumer Habits and Health Effects. *International Journal of Environmental Research and Public Health*, vol. 13, no. 7, 10 p. <a href="https://doi.org/10.3390/ijerph13070717">https://doi.org/10.3390/ijerph13070717</a>

Wand, R., Sahin, O. 2018. The Impact of Consumer Search Cost on Assortment Planning and Pricing. *Management Science*, vol. 64, no, 8. p. 3469-3970. https://doi.org/10.1287/mnsc.2017.2790

Wänke, M. 2015. Social Psychology of Consumer Behavior. NewYork, US: Psychology Press, 385 p. ISBN 978-11-388-8294-2.

#### **Funds:**

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".

#### **Acknowledgments:**

Thank you for the financial support to the Slovak Research and Development Agency and all respondents

who actively collaborated on the marketing survey and provided us with quality information for article processing.

#### **Conflict of Interest:**

The authors declare no conflict of interest.

#### **Ethical Statement:**

All subjects that participated in our marketing research by providing information and filling out uniform questionnaires expressed their consent to the anonymous processing of the information provided.

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