FACTORS INFLUENCING THE CHOICE OF HONEY IN SLOVAKIA AND HUNGARY: A COMPARATIVE STUDY

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Please cite this article as:
Šedík, P., Čvirik, M., Pocol, C.B. and Oravecz, T., 2025. Factors Influencing Honey Choice in Slovakia and Hungary: A Comparative Study. *Amfiteatru Economic*, 27(69), pp. 431-451.

DOI: https://doi.org/10.24818/EA/2025/69/431

Article History
Received: 30 December 2024
Revised: 22 February 2025
Accepted: 29 March 2025

Abstract
The study investigates extrinsic and intrinsic factors that influence honey purchasing decisions and their impact on honey consumption in Slovakia and Hungary. The comparative study is based on an online survey carried out during 2022. Both research samples are representative in terms of gender and age. They include honey consumers aged 18 years and older. An exploratory factor analysis (EFA) was used to investigate the relationships between 20 selected factors. The findings showed the existence of several latent factors, with slight differences between the two countries. In the Slovak honey market, four latent factors were identified: quality, price, marketing and visual factors, while in the Hungarian honey market six latent factors were identified: quality, marketing, geographic, product design and visual factors. In addition, cohort analysis showed statistically significant differences between the generations (Gen Z, Gen Y, Gen X, and Babyboomers) in both countries. The findings provide valuable insights into consumer preferences when selecting honey, which can help beekeepers develop customer-focused marketing strategies.

Keywords: honey market, purchasing behaviour, consumer choice, intrinsic factors, extrinsic factors, comparative study

JEL Classification: Q13, M31, M37, D12

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Introduction

Honey has been an important source of energy for humans since ancient times, complementing their meat and plant-based diets and playing a key role in their evolution. (Crittenden, 2011). It has been valued for both its nutritional value and its therapeutic properties. Honey is mainly valued for its antioxidant, antibacterial, and antiseptic properties, which make it a valuable source of energy (Ilia et al., 2021). There is increasing evidence of honey's potential as a natural medicine, according to Akanda et al. (2024). In recent years, the growing importance of honey among agri-food products has increasingly attracted the interest of researchers, who have studied the benefits of honey consumption, as well as the factors that influence the purchase and consumption of this product (Testa et al., 2019). Although most of the studies identified in the literature focus on the analysis of consumption behaviour in a single country, for example Italy (Blanc et al., 2021; Zanchini et al., 2022), Australia (Batt and Liu, 2012), Portugal (Mata and Dos-Santos, 2023), Poland (Kowalczuk et al., 2017), Romania (Pocol and Bolboacă, 2013), or on general aspects that may influence this behaviour, the present research makes an important contribution by comparing honey consumption behaviour in two countries with different cultures – Slovakia and Hungary – which are both emerging economies with different consumption trends. Thus, the present study fills a significant gap identified in the literature, namely the lack of comparative research between countries with different consumer markets and behaviours, with different socioeconomic and cultural backgrounds, and incorporates detailed demographic perspectives, namely generational and gender differences, which, to the best of our knowledge, have not been considered in other previous studies.

The aim of this study is to analyse the main factors influencing honey purchase choices in Slovakia and Hungary, as well as to highlight the differences between these two countries. This research not only examines the factors influencing honey consumption (intrinsic and extrinsic) but also focuses on the differences in consumption behaviour by generation (Gen Z, Gen Y, Gen X and Babyboomers) and by gender, which provides a more detailed and specific understanding of consumer behaviour in a regional context.

To accomplish the study objectives, the following research questions (Q) were formulated:

- Q1: How can the current level of importance of the investigated purchase factors be characterised in both countries?

- Q2: What latent factors can be identified in terms of the purchasing decisions of consumers in both countries?

- Q3: How can the influence of selected demographic factors on the identified purchasing decisions can be characterised in both countries?

The use of a rigorous sampling method (quota sampling by age and gender) and data analysis using advanced statistical techniques such as Exploratory Factor Analysis (EFA) are key elements that bring a level of detail and precision to the understanding of consumption behaviour in the two countries studied. The chosen methodology allowed the identification of latent factors influencing honey consumption patterns that have not been extensively studied in previous studies. The research adds value by applying a comparative approach between two European markets, integrating detailed demographic variables, and using a comprehensive set of analytical techniques that can deepen our understanding of honey consumer behaviour in these two countries. The study provides valuable information for

honey producers and retailers in Slovakia and Hungary who want to better understand their consumers' preferences. It also provides a basis for targeted marketing strategies based on the sociodemographic characteristics of consumers and the differences between the two markets. In addition, the results of this research can help agri-food policy makers to improve honey quality regulations and to promote sustainable practices in honey production and consumption. Public campaigns to promote the consumption of honey, especially local honey, can also be guided by an understanding of the behaviour and preferences of consumers of different generations. This will enable consumers to make more informed purchasing decisions based on quality, individual preferences, and values.

The paper is structured as follows: the first section contains the literature review, which focuses on the analysis of intrinsic and extrinsic factors influencing honey consumption behaviour. This is followed by the section describing the methodology, which presents the data collection method, the samples studied in Slovakia and Hungary, the research instruments, and the data analysis. The next section includes the presentation of the results, illustrated by tables and graphs, and the discussion. The last section is devoted to the conclusions, the implications of the study, its limitations, and future research directions that can be derived from the results.

1. Literature review

The factors influencing honey consumer behaviour are very diverse (Zanchini et al., 2022), ranging from intrinsic factors, which are related to the characteristics of the product itself, to extrinsic – external factors, related to the context and environment in which the product is purchased (Blanc et al., 2021). Among the most important intrinsic factors, we find the quality of honey, consistency, colour, assortment, packaging (size, its design, the material it is made of, the label). To these we add its health benefits and medical uses (Brščić et al., 2017). The study conducted by Sparacino et al. (2022) confirms that honey consumer behaviours are nowadays increasingly related to health aspects and organoleptic characteristics of honey. Extrinsic factors refer to economic, social, and environmental aspects that may influence the honey purchase decision. Thus, economic factors such as the price of honey, consumer incomes, discounts offered by traders, sales channels, etc. have a direct impact on the consumer's decision. To these are added the influences related to social perception and environmental consciousness, namely: ecological aspects, the local character of the product (Blanc et al., 2021; Trentinaglia et al., 2023), advertising and recommendations made by other consumers. Given these diverse factors that influence honey consumption, it is essential to explore the underlying patterns of consumer behaviour. Although a variety of factors influencing honey consumption, both intrinsic and extrinsic, have been identified in the literature, no studies have been identified that compare the influence of these factors on honey consumption behaviour in countries with different socioeconomic and demographic contexts. This identified gap provided an opportunity for the authors to contribute to advancing the literature on honey marketing by comparing honey consuming behaviour in two different countries, Slovakia and Hungary.

Young consumers are characterised by an increased interest in sustainability aspects in the honey purchasing process, while health benefits are prioritised by both them and adults (Sparacino et al., 2022). This growing interest in honey consumption as a health exponent is in line with the values of sustainable consumption. These aspects have not been sufficiently addressed in the literature. Although there is no standardised honey consumer profile, certain

sociodemographic characteristics (Kleisiari et al., 2023) but also high income are among the best predictors of honey consumption (Mascarello et al., 2024). As income levels increase, the likelihood of buying honey becomes higher, following the law of demand in economics – meaning that higher income leads to stronger demand for superior goods (Zeng et al., 2023).

According to a study by Roman et al. (2013a), the frequency of honey purchase is strongly influenced by income: thus, low income is the main limiting factor for honey purchase. According to the same study (Roman et al., 2013a), price is another factor that strongly influences the decision to purchase honey, the best marketing strategy for this product being the low price, followed by the possibility of tasting honey at the point of sale. Price is also identified as an important factor in the decision to buy honey by Kleisiari et al. (2023) who show, however, that there are differences between Western European consumers (who perceive honey as an expensive product) and Eastern European consumers (who consider the price of honey to be generally acceptable). The results of these studies highlight the importance of considering economic aspects when analysing honey consumption patterns. Factors such as price may influence the perceived value of honey, and income may be an important predictor of honey consumption. When analysing this behaviour, regional economic differences can also be considered. The results reported by Mascarello et al. (2024) show that, for Italian consumers, the least important factor in the honey purchase process is the price, and the most important is the local character of the product. They would be willing to pay a higher price for products that provide more information about the use of good beekeeping practices (Mascarello et al., 2024). Another study also conducted in Italy shows that people with lower incomes tend to be more attached to local products, having a stronger ethnocentric preference – i.e., they choose to support local products for reasons of identity and loyalty to their own country or community. However, this behaviour is not exclusive to those with modest incomes (Trentinaglia et al., 2023). Even more affluent consumers may prefer local products, but likely for other reasons, such as perceived quality, sustainability, or supporting the local economy (Trentinaglia et al., 2023).

These results suggest that the preference for honey as a local product depends not only on consumers' income but also on other values, such as cultural and social values. These values may differ from region to region and between sociodemographic groups. The literature highlights the significant influence of sociodemographic factors on honey consumption. Income, residence, age, gender, ethnicity, and household size are identified as key determinants (Batt and Liu, 2012). Education and occupation are also considered relevant factors (Sparacino et al., 2022). Ćirić and Ignjatijević (2017) delve into the importance of sociodemographic characteristics, explaining that marketing strategies should take gender differences into account, while age influences taste preferences, interest levels, and purchasing power. Education, they argue, affects consumer behaviour both directly and indirectly, depending on the specific marketing context. In addition, the family structure plays a critical role in shaping the priorities related to the purchase and consumption of honey. These previous studies highlight the need to segment the consumers of honey according to their sociodemographic profile, as this segmentation will help to develop marketing strategies that are tailored to each segment. Therefore, to address these issues, research question 3 was developed, focusing specifically on gender and age as the primary sociodemographic factors, as these were considered most relevant to honey consumption patterns in the present study. The hypotheses (H) will be formulated based on the number of latent factors and will have the following structure:

- Ha: There are significant differences in latent factors based on gender;
- Hb: There are significant differences in latent factors between generations.

2. Research methodology

The comparative study is based on primary consumer research involving online questionnaire survey conducted in 2022 both in Slovakia and Hungary. The survey was distributed via e-mail, social media, and with the support of beekeeper associations. The population was defined for the purposes of the research as 'honey consumers from the studied countries between the ages of 18 and 70', while Slovakia and Hungary were chosen as the selected countries. Since it is not possible to examine the entire population, the research samples were created that we examined for the needs of the research problem and then generalised to the population. Quota sampling was applied based on the generational affiliation (age) and gender of the studied population. The quotas as well as the frequencies of both research samples are shown in Table no. 1.

Table no. 1. Characteristics of the sample and population quota

Sample	Variable	Value	Quota in population [%]	Applied quota [%]	Applied quota [pcs]
Slovakia	Generation	Gen Z	11.21	11.11	70
		Gen Y	32.32	32.38	204
		Gen X	33.31	33.33	210
		Babyboomers	23.15	23.17	146
	Gender	male	50.04	50	315
		female	49.96	50	315
	Total		100	100	630
Hungary	Generation	Gen Z	11.90	12.13	149
		Gen Y	29.59	29.48	362
		Gen X	34.61	34.53	424
		Babyboomers	23.90	23.86	293
	Gender	male	49.56	49.10	603
		female	50.44	50.90	625
	Total		100	100	1228

Note: For the Slovak sample, the population quotas were identified based on the data of the Statistical Office of the Slovak Republic (2023), and for the Hungarian sample, the quotas were identified based on Hungarian Central Statistical Office (2021).

Generational affiliation was established based on the following generational categories: Gen Z (18-25 years), Gen Y (26-41 years), Gen X (42-57 years) and Babyboomers (58-70 years) (Šedík et al., 2018; Schroth, 2019; Šedík et al., 2023; Janšto et al., 2024). According to Table no. 1, the numbers of respondents in each sample are different, which also affects their error rate. For the Slovak sample (630 respondents), the maximum statistical error (with a 95% confidence probability) is approximately 3.8%, and for the Hungarian sample, we expect a maximum statistical error (with a 95% confidence probability) approximately 2.7%. The presented article is supported by two surveys, which were carried out in the form of surveys in two countries. Several analytical and statistical procedures were performed in the processing of the obtained data, including general descriptive statistics. The correlations were applied for clarity and were visualised utilising network plot, where the colour of the lines

determines the direction of the correlation and the thickness of the lines indicates their strength (Epskamp et al., 2012). Exploratory factor analysis (EFA) was applied to identify latent factors. It was necessary to examine its assumptions using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test, where the KMO values are recommended to be above 0.5 and Bartlett's test should be significant (Williams et al., 2010; Luo et al., 2019; Shrestha, 2021). Principal-axis factoring is generally recommended (Williams et al., 2010; Čvirik, 2024). For the purposes of determining latent factors, it is currently recommended to apply parallel analysis, which shows the best results in simulations (Yang and Xia, 2015). The general rule also says that unless the results yield a satisfactory assessment, it is appropriate to use rotation, while due to the expected connection of latent factors, it is appropriate to use promax (Howard, 2016). Additional fit measures such as the comparative fit index (CFI greater than 0.95 is recommended, but above 0.9 is acceptable) can be designated as recommendations for evaluating the quality of the model, the root mean square error of approximation (RMSEA 90% confidence up to 0.1); and the standardised root mean square residual (SRMR is recommended up to 0.08) (Lai and Green, 2016; Taasoobshirazi and Wang, 2016; Xia and Yang, 2019). When examining differences between groups, several factors and assumptions need to be considered. If it is necessary to use non-parametric testing, it is appropriate to use the Mann-Whitney test for two groups and, for more groups, the Kruskal-Wallis test, which should be accompanied by post-hoc tests (paired tests) in cases of significance, where it is appropriate to use the p-value correction (most often the Bonferroni correction) (Elliott and Hynan, 2011). The R and its extensions were used in the study.

3. Results and discussion

In both countries, 20 factors were identified and studied considered during purchase of honey. The level of importance was measured on a seven-point bipolar scale, with 1 representing complete unimportance and 7 representing maximum importance. The generic descriptive indicators for individual factors are shown in Table no. 2.

Table no. 2. The revealed importance of purchasing factors in the honey market

Factors	Slovakia			Hungary		
	Median	Mean	Std. Dev.	Median	Mean	Std. Dev.
Quality	7	6.59	1.30	7	6.47	1.20
Country_of_origin	7	6.39	1.46	7	5.64	1.89
Locality	6	5.75	1.70	4	4.13	2.8
Manufacturer	7	5.74	1.79	6	5.48	1.91
Type_of_honey	6	5.64	1.56	6	5.78	1.57
Recommendations	6	5.56	1.72	6	5.21	1.87
Consistency	6	5.47	1.66	6	5.79	1.50
Colour	6	5.19	1.74	6	5.48	1.61
Point_of_sale	6	5.13	1.89	5	4.72	2.6
Ecological_aspect	5	4.74	1.94	4	4.5	2.6
Packing material	5	4.72	2.7	5	4.35	2.3
Price	5	4.61	1.81	6	5.45	1.58
Package_size	5	4.27	2.3	5	4.39	1.98
Family_budget	5	4.15	1.98	5	4.72	1.86
Brand	4	4.1	2.14	4	3.91	2.9
Awards	4	3.99	1.96	4	3.94	2.5

Factors	Slovakia			Hungary		
	Median	**Mean**	**Std. Dev.**	**Median**	**Mean**	**Std. Dev.**
Discount	4	3.65	2.1	5	4.45	1.95
Bottle_shape	3	3.26	2.8	4	3.82	2.14
Label design	3	3.13	2.2	3	3.41	2.6
Advertisement	2	2.99	2.00	2	3.00	2.4

The results showed that in both countries, the most important factors included honey quality, country of origin, and honey type. Locality, manufacturer, recommendations, consistency, colour, and point of sale were of higher importance for honey consumers in Slovakia, while the following factors were more important for Hungarian honey consumers: consistency, producer, colour, price, and recommendations. On the contrary, the least important factors in both countries were advertisement, label design, and bottle shape. Price as a purchasing factor is less important for Slovak consumers while discounts are more important for Hungarian consumers.

The acquired results reflect findings from the comparative study, which reviewed the most important factors in Visegrad region (Hungary, Slovakia, Czech Republic and Poland), where the most significant factors were quality, origin, type of honey, method of production, taste, crystallisation and place of purchase (Vida and Ferenczi, 2023).This finding aligns as well with Sparacino et al. (2022), which emphasised that honey consumers are quality-sensitive and may prioritise the organoleptic properties of honey. The variation of factor evaluation between countries can be attributed to regional differences described by Blanc et al. (2021). The significance of price was observed in both countries, but was rated higher in Hungary than in Slovakia. According to Roman et al. (2013a), price can be a limiting factor for low-income consumers, which is particularly relevant in the Hungarian market. Similar results were obtained by Batt and Liu (2012) where price was not the most important factor out of 13 variables considered at honey purchase. Ecological aspects and packaging were given relatively low priority in both samples, contrasting with Italian consumer preferences described by Mascarello et al. (2024). Moreover, the Hungarian population is typically price-sensitive and seeking value-for-money products (Pólya et al., 2024), but increasingly concerned about both environment and sustainability (Fogarassy et al., 2018). Ethnocentrism is a long-term unbroken behavioural trend in Hungary (Mucha et al., 2020; Garai-Fodor and Popovics, 2021; Madarász et al., 2022), which is also the case for the honey market (Oravecz and Kovács, 2019; Oravecz et al., 2020).

The exploratory factor analysis (EFA) was carried out to identify and study latent factors. Since the analysis has assumptions, it was necessary to verify them in advance. First, it was necessary to demonstrate the relationships between the variables. Since 20 variables (factors) were examined, the graphical representation was applied by using a network plot for clarity, whose links are displayed based on estimator correlation (Figure no. 1). According to the results, correlation links are present. Although a strong positive link can be identified between some factors (for example, quality and country of origin), a negative correlation also appeared (for example, quality and advertisement). In terms of the the assumptions of relationships, it can be concluded that this assumption was fulfilled. The KMO test and Bartlett's test were performed. It can be stated that the level of KMO is at an acceptable level (MSA = 0.87), and it can also be stated that Bartlett's test (p-value < 0.001). Determining the number of factors was based on the latest methods and recommendations, which mention parallel analysis as currently the most feasible method for determining the number of factors. Figure no. 2 shows the simulation of data from parallel analysis, as well as other factor selection methods.

According to the results of parallel analysis, there are 4 factors. Based on the above, the 4 factors will be applied. It is necessary to add that the parallel analysis method was based on FA. The initial solution (without rotation) did not bring clear results; therefore, it was appropriate to apply rotation. Considering the assumption of inter-factor correlation as well as the nature of the data, the oblique rotation, namely promax, was selected.

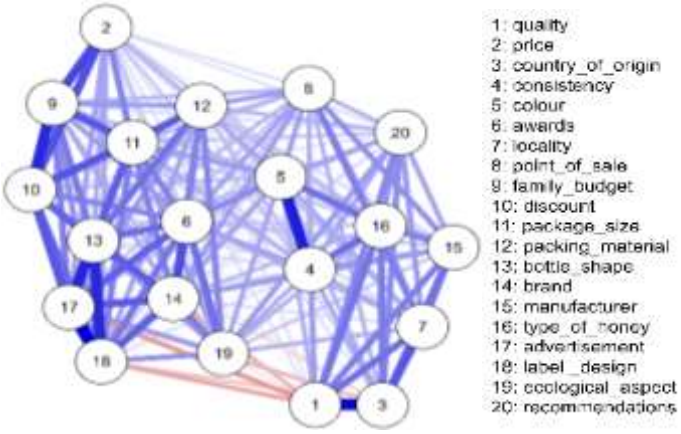

Figure no. 1. Network plot of purchasing factors in Slovakia

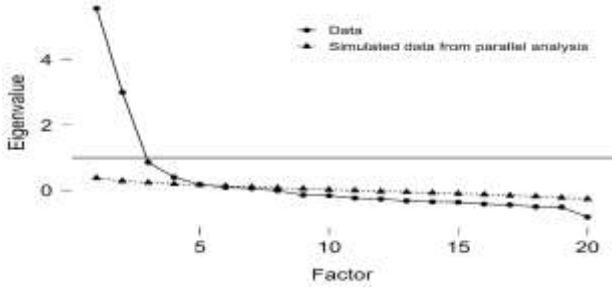

Figure no. 2. Scree plot of factors in Slovakia

The results of EFA factors in Slovakia are shown in Table no. 3 while the model is visualised in figure no. 3. The results showed the existence of four factors. Factor 1 involves advertisement, label design, bottle shape, brand, awards, ecological aspect, and packing material. This factor can be described as a marketing aspect, as it is a marketing tool that aims at promotion. Factor 2 contains quality country of origin, locality, manufacturer, recommendations, point of sale, and type of honey, while this factor thus represents a certain perception of quality. Factor 3 includes package size, family budget, price, and discount. In terms of the mentioned elements, the factor can be described as a price or an aspect of the price. The last factor (4) contains the item's consistency and colour, so this factor can be understood as a visual effect. In terms of the quality of the model, it can be stated that the four latent factors explain roughly 56% of the variability, which can be considered acceptable. Given that it is essentially a structural model, it is appropriate to examine its other qualitative indicators as well. It can be stated that the model achieves qualitative parameters at an acceptable level (CFI = 0.911; RMSEA 90% confidence =<0.085-0.097; SRMR = 0.033).

Table no. 3. Results of EFA factors in Slovakia

Factor Loadings	Factor 1	Factor 2	Factor 3	Factor 4
Advertisement	0.86			
Label design	0.826			
Bottle_shape	0.79			
Brand	0.781			
Awards	0.677			
Ecological_aspect	0.504			
Quality	-0.463	0.891		
Packing_material	0.43			
Package_size	0.353		0.426	
Country_of_origin		0.957		
Locality		0.713		
Manufacturer		0.577		
Recommendations		0.469		
Point_of_sale		0.391		
Type_of_honey		0.368		0.358
Family_budget			0.819	
Price			0.76	
Discount			0.72	
Consistency				0.918
Colour				0.858
Eigenvalues	6.222	3.83	1.524	1.175
Proportion var.	0.207	0.158	0.111	0.086
Cumulative	0.207	0.365	0.476	0.562

Note: Factor loadings are shown only if they are greater than 0.35.

However, it can be stated that some items also have prerequisites for other factors. In this case, the factual interpretation is important. The impact of quality on the marketing aspect (factor 1) can be considered very interesting. It can be assumed that the oversaturation of marketing incentives causes them to be perceived as less trustworthy and promote lower-quality products. According to Nascimento et al. (2022), the packaging design of honey influences its perceived level of quality and authenticity. In general, consumers judge the product quality based on packaging elements such as information, visual stimuli, and functionality attributes (Bou-Mitri et al., 2021). Another study confirmed significant influence of product quality variables and promotion variables on honey purchasing decisions (Febrainto et al., 2023). The results suggest that the package size, as a purchase factor, could also be included in marketing activities. It is logical, since it is precisely within the product policy of marketing activities that deciding on the size of the package is also crucial. The type of honey is also a factor that could also be an element of visual effect, as different types of honey have different consistency and colour. The choices of honey types are mostly influenced by social and psychological factors, while the financial situation and convenience factor have an impact afterwards (Roman et al., 2013b). These results suggest some differences, so further investigation is appropriate. Figure no. 3 indicates that there are certain relationships between the latent factors, which basically confirms the feasibility of our choice of rotation type.

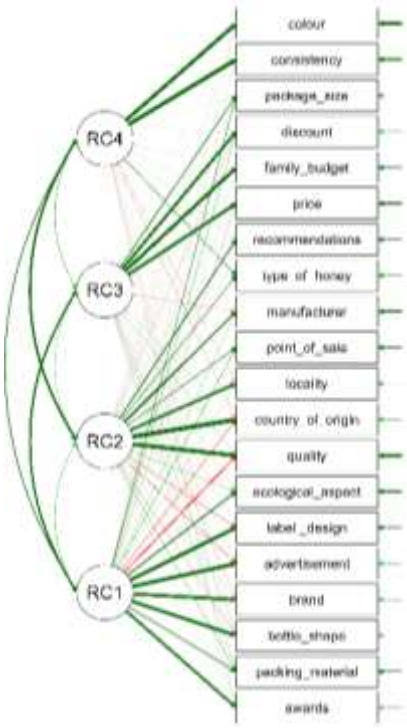

Figure. no. 3. Visualisation of the EFA model for the Slovak market

The quantification of the correlation in the form of a correlation matrix is shown in Table no. 4. As the results indicate, there are positive associations between the latent factors, the strongest being between factor 2 and factor 4 (r=0.59), which indicates a strong association between quality perception and visual effects. There are strong connections between and between factor 1 and factor 3 (r=0.534). This relationship can be objectively interpreted from the point of view of consumers, when greater importance and perception of marketing aspects cause greater importance of perceived price.

Table no. 4. Correlation matrix of latent factors (Slovakia)

Factor Correlations	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1	1			
Factor 2	0.26	1		
Factor 3	0.534	0.142	1	
Factor 4	0.398	0.59	0.265	1

Simultaneously, exploratory factor analysis (EFA) was applied to identify latent purchase factors in Hungary. First, the existence of relationships and connections between the investigated variables were verified and shown by utilising visualisation through a network plot (Figure no. 4), where the links are displayed based on estimator correlation. According to the results, the correlations are present. While a strong positive relationship can be identified between some factors (consistency and colour; family budget and discount, etc.), a negative correlation also appears (quality and advertisement). In terms of the the

assumptions of relationships, it can be concluded that this assumption was fulfilled. The possibility of using EFA was verified by applying KMO test and Bartlett's test. The results showed that KMO is at an acceptable level (0.882) and Bartlett's test was significant (p-value < 0.001). The parallel analysis was applied to determine the number of latent factors.

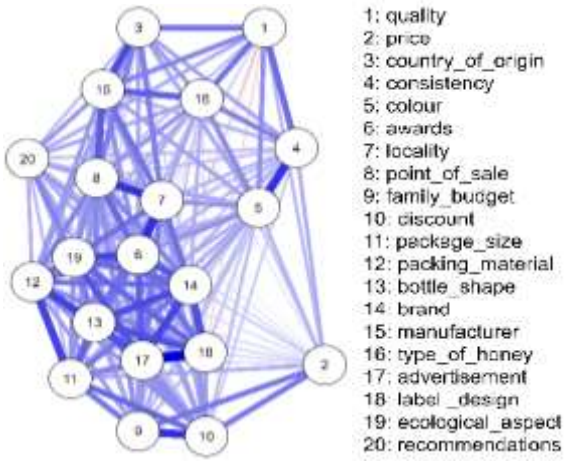

Figure no. 4. Network Plot of factors in Hungary

Figure no. 5 shows the simulation of data from parallel analysis, as well as other factor selection methods. According to the results of parallel analysis, there are 6 factors. Based on the above, the 6 factors will be applied. The initial solution (without rotation) did not give clear results; therefore, rotation was applied. Considering the assumption of inter-factor correlation as well as the nature of the data, the oblique rotation namely promax was selected.

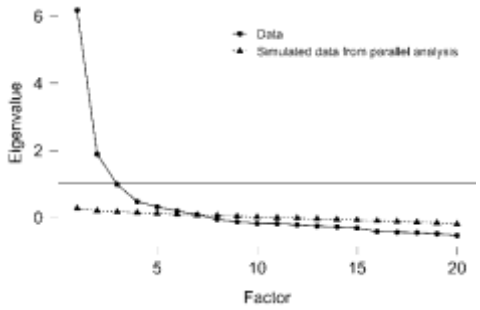

Figure no. 5. Scree plot of factors in Slovakia

The results of the EFA factors are shown in Table no. 5 while the model is visualised in figure no. 6. The results revealed the existence of six factors. Factor 1 involves label design, advertisement, brand, and ecological aspects. This factor can be referred to as a name, as it is a marketing tool that aims to promote. Factor 2 contains manufacturer, quality, country of origin, type of honey, and recommendations, while this factor thus represents a certain perception of quality and can therefore be described as a quality indication factor. Factor 3 includes locations, points of sale, and awards. This factor can be described as a geographical aspect. Factor 4 contains elements such as family budget, price, and discount. In terms of the

mentioned elements, the factor can be described as a price or an aspect of the price. Factor 5 includes packing material, package size, and bottle shape, which clearly point to the product design factor of the product itself. The last factor 6 contains the item's consistency and colour, so this factor can be understood as visual effects. In terms of the quality of the model, it can be stated that the six latent factors explain roughly 60% of the variability, which can be considered acceptable. Given that it is essentially a structural model, it is appropriate to examine its other qualitative indicators as well. It can be stated that the model achieves qualitative parameters at an acceptable level (CFI = 0.965; RMSEA 90% confidence =<0.058-0.068>; SRMR = 0.019).

Table no. 5. Results of EFA factors in Hungary

Factors	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Label design	0.991					
Advertisement	0.961					
Brand	0.519					
Ecological aspect	0.511					
Manufacturer		0.754				
Quality		0.718				
Country of origin		0.576				
Type_of_honey		0.567				
Recommendations		0.386				
Locality			0.901			
Point of sale			0.599			
Awards			0.533			
Family budget				0.837		
Discount				0.756		
Price				0.588		
Packing material					0.881	
Package size					0.636	
Bottle shape					0.525	
Consistency						0.842
Colour						0.688
Eigenvalues	6.81	2.657	1.749	1.171	0.952	0.881
Proportion var.	0.149	0.111	0.098	0.087	0.083	0.07
Cumulative	0.149	0.259	0.358	0.444	0.527	0.597

Note: Factor loadings are shown only if they are greater than 0.35.

Figure no. 6 indicates that there are certain relationships between the latent factors, which basically confirms the feasibility of our choice of rotation type. The acquired results suggest that honey purchasing decisions are more diverse among Hungarian consumers, especially regarding geographical and product design aspects, also suggests that Hungarian consumers place greater emphasis on the external appearance of products, consistent with the regional preferences noted by Trentinaglia et al. (2023).

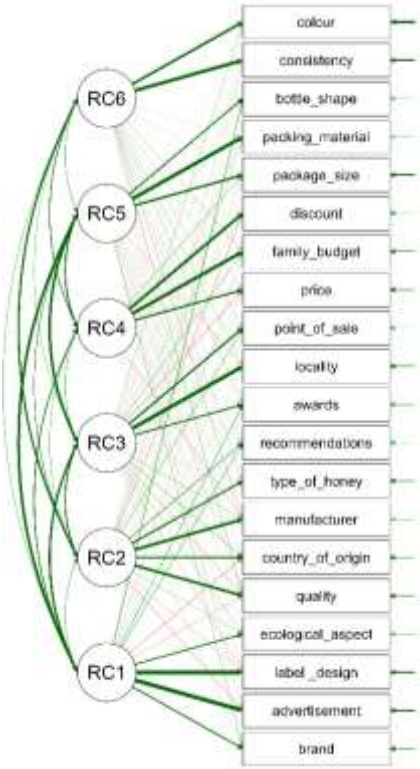

Figure no. 6. Visualisation of the EFA model for the Hungarian market

In the Slovak sample, quality factors such as country of origin, locality, etc. are included in a common latent dimension, while in the Hungarian sample they are separate factors (quality indication). Such a division may indicate that, for Hungarian consumers, quality aspects are multidimensional and are evaluated along separate priorities. In both countries, marketing is a lower priority, but in Hungary this factor is more intertwined with ecological aspects than in Slovakia. This may suggest that Hungarian consumers are more sensitive to marketing activities that emphasise ecological aspects of sustainability. Price-related factors play an important role in both samples, but in Hungary price perception is more prominent among consumers (as a separate dimension). This may be related to the Hungarian economic environment, where price sensitivity is more dominant, as shown by the research of Lányi et al. (2024) and Pólya et al. (2024). Furthermore, geographic factor as another latent factor in Hungary indicates a preference for local products, whereas in Slovakia these factors appear more in combination with quality aspects. The preference for local and domestic products is widespread throughout Hungary (Mucha et al., 2020; Garai-Fodor and Popovics, 2021; Madarász et al., 2022) and is particularly prevalent for honey and beekeeping products (Oravecz and Kovács, 2019; Oravecz et al., 2020). The quantification of the correlation in the form of a correlation matrix is shown in Table no. 6. As the results indicate, there are positive connections between the latent factors, the strongest between factor 1 and factor 5 ($r = 0.64$) and factor 3 and factor 5 ($r = 0.63$).

Table no. 6. Correlation matrix of latent factors (Hungary)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Factor 1	1					
Factor 2	0.275	1				
Factor 3	0.565	0.437	1			
Factor 4	0.413	0.241	0.264	1		
Factor 5	0.64	0.313	0.63	0.45	1	
Factor 6	0.245	0.515	0.169	0.392	0.264	1

Both research samples are representative based on gender and age (generational affiliation); therefore, these two demographic variables were further examined. In terms of the Slovak honey market, 4 hypotheses for each demographic factor were formulated. In the first step, gender-oriented hypotheses were addressed. Considering the nature of the data, the examined normality (based on the Shapiro-Wilk test), as well as the test of equality of variances (Levene's), the Mann-Whitney test was applied to verify the hypotheses. Results are shown in Table no. 7 indicate that there are a statistically significant differences in the perception of the identified factors within gender. It can be concluded that women attached a higher (average and median) level of importance to all latent factors.

Table no. 7. Differences in purchasing factors between genders (Slovakia)

Hypothesis	Test	alpha	p-value
H1a	Mann-Whitney	0.05	8.398×10^{-5}
H1b	Mann-Whitney	0.05	7.299×10^{-4}
H1c	Mann-Whitney	0.05	1.044×10^{-4}
H1d	Mann-Whitney	0.05	0.024

When examining differences within generations, the Kruskal-Wallis test was applied due to the nature of the data. Results shown in Table no. 8 indicate that for each factor, there are statistically significant differences in at least two groups. In view of these findings, it is advisable to perform pairwise comparison post hoc testing, which will determine in more detail which generational groups have significant differences.

Table no. 8. Key results of the Kruskal-Wallis test (generations in Slovakia)

Hypothesis	Test	alpha	df	p-value
H2a	Kruskal-Wallis test	0.05	3	1.036×10^{-5}
H2b	Kruskal-Wallis test	0.05	3	8.288×10^{-8}
H2c	Kruskal-Wallis test	0.05	3	0.003
H2d	Kruskal-Wallis test	0.05	3	0.033

Results of the Dunn post hoc test (with Bonferroni correction) are shown in Table no. 9. The results indicate that within factor 1, there are differences within Babyboomers and Gen X, as well as within Babyboomers and Gen Y. Within Factor 2, significant differences were identified between Babyboomers and Gen X, Babyboomers and Gen Y, and Babyboomers and Gen Z, which indicates a significant difference in the perception of the Babyboomers, as well as the differences between Gen X and Gen Z. Differences were observed in the perceptions of Babyboomers and Gen X within factor 3 and the differences in the perception of factor 4 in the cases of Babyboomers and Gen Y.

Table no. 9. Dunn post hoc test (Slovakia)

Factors	F1	F2	F3	F4
Babyboomers – Gen X	0.004	0.032	0.013	0.367
Babyboomers – Gen Y	4.576×10^{-6}	1.490×10^{-6}	0.112	0.031
Babyboomers – Gen Z	0.951	9.257×10^{-6}	1	1
Gen X – Gen Y	0.496	0.051	1	1
Gen X – Gen Z	1	0.023	0.05	1
Gen Y – Gen Z	0.101	1	0.228	0.531

Simultaneously, gender-oriented hypotheses were addressed in terms of Hungarian honey market. Considering the nature of the data, the examined normality (based on the Shapiro-Wilk test), as well as the test of equality of variances (Levene's), the Mann-Whitney test was implemented to verify the hypotheses. The results are shown in Table no. 10 indicate that there are no significant differences in the identified latent factors. It can therefore be concluded that gender has no influence on purchasing factors when choosing honey in Hungarian market.

Table no. 10. Differences in purchasing factors between genders (Hungary)

Hypothesis	Factor	Test	alpha	p-value
H3a	1	Mann-Whitney	0.05	0.051
H3b	2	Mann-Whitney	0.05	0.309
H3c	3	Mann-Whitney	0.05	0.233
H3d	4	Mann-Whitney	0.05	0.315
H3e	5	Mann-Whitney	0.05	0.655
H3f	6	Mann-Whitney	0.05	0.269

When studying differences in the perception of identified purchase factors within generations, the Kruskal-Wallis test was applied due to the nature of the data. Results shown in Table no. 11 showed that only within factors 2, 3, and 6 exist statistically significant differences among at least two generational groups. In view of these findings, it is advisable to perform pairwise comparison post-hoc testing, which will determine in more detail which generational groups have significant differences.

Table no. 11. Key results of the Kruskal-Wallis test (generations in Hungary)

Hypothesis	factor	Test	alpha	p-value
H4a	1	Kruskal-Wallis test	0.05	0.181
H4b	2	Kruskal-Wallis test	0.05	2.277×10^{-10}
H4c	3	Kruskal-Wallis test	0.05	1.052×10^{-4}
H4d	4	Kruskal-Wallis test	0.05	0.438
H4e	5	Kruskal-Wallis test	0.05	0.088
H4f	6	Kruskal-Wallis test	0.05	2.541×10^{-6}

Results of the Dunn post hoc test (with Bonferroni correction) are shown in Table no. 12. The results show that within Factor 2 there exist statistically significant differences in perception within Babyboomers – Gen Z, Gen X – Gen Y, Gen X – Gen Z, Gen Y – Gen Z. In Factor 3 there were acquired differences in perception between Babyboomers and Gen Z, Gen X and Gen Y, as well as between Gen X and Gen Z. Within Factor 6, differences can also be observed within Babyboomers and Gen Y; Babyboomers and Gen Z; Gen X and Gen Y, but also Gen X and Gen Z.

Table no. 12. Dunn post hoc test (Hungary)

	F1	F2	F3	F4	F5	F6
Babyboomers – Gen X	-	0.058	0.586	-	-	1
Babyboomers – Gen Y	-	1	1	-	-	0.013
Babyboomers – Gen Z	-	4.378×10^{-5}	0.036	-	-	0.002
Gen X – Gen Y	-	0.002	0.012	-	-	4.863×10^{-4}
Gen X – Gen Z	-	6.207×10^{-11}	1.421×10^{-4}	-	-	1.432×10^{-4}
Gen Y – Gen Z	-	3.033×10^{-4}	0.374	-	-	1

These differences align with Grontkowska and Grzyb (2019) and Kopcsay et al. (2020) findings that women are generally more sensitive to product quality and aesthetic features. Generational differences were also significant in Slovakia, particularly in terms of perception of quality and price. Older generations placed greater value on local and high-quality products, while younger generations responded more positively to visual and innovative marketing solutions. According to Murmura et al. (2024), older generations (Babyboomers and Gen X) tend to associate the quality of honey with the label and prefer to buy from local producers; while younger generations (Gen Z and Millennials) tend to rely on the physical characteristics of honey and attach importance to the brand of the product. In addition, there are marked differences between Babyboomers and younger generations (Gen X, Gen Y) in Slovakia. These differences suggest a different evolution of cultural priorities and buying habits. In Hungary, generational differences were primarily evident in packaging and visual effects, aligning with findings by Kleisiari et al. (2023). In Hungary, no significant gender differences were identified, suggesting that gender roles have less impact on honey purchasing decisions. This finding diverges from the Slovak sample and may reflect specific cultural characteristics of Hungarian society. Generational differences were evident in Hungary, especially concerning packaging and visual effects. Younger generations pay more attention to design and brand communication, whereas older generations prioritise quality and price. This trend is consistent with the tendencies described by Blanc et al. (2021) and Batt and Liu (2012).

Conclusion

Focusing on Slovakia and Hungary, this study provides a cross-country perspective on the decision-making processes of honey consumers in Central Europe. The research identifies 20 Buying Factors and examines how they relate to each other. Four latent factors were identified in Slovakia (quality, price, marketing and visual), while six were identified in Hungary (quality, marketing, geographical, product design and visual). In both countries, significant generational differences in honey purchasing behaviour were also observed. From a theoretical perspective, by including a wider range of intrinsic and extrinsic factors considered in the honey purchase process, the paper extends consumer choice-oriented research.

From a managerial perspective, the paper provides valuable insights into consumer decision making process in honey purchase by identifying latent factors arising from various intrinsic and extrinsic factors. Honey producers (beekeepers) can develop more effective customer-oriented marketing strategies by understanding the hidden relationships between the factors. The identified generational differences suggest an urgent need to implement generation-specific marketing approaches. Advertising should focus more on the authenticity and quality

of the product, for example, by emphasising its origin, local character, and environmental sustainability. Avoiding an overly promotional, manipulative approach, authentic, informative, and target-group-specific marketing messages can be more effective.

Although the study provides important findings and useful perspectives, it has certain limitations. One of the main limitations is the exclusion of external factors such as market trends, cultural influences, awareness levels, and environmental and health concerns. These factors may have played a significant role in consumers' choices, but were not considered in this research. Furthermore, the methodological focus on gender and age meant that the impact of other sociodemographic factors, such as income or education, could not be explored. Future studies could extend this research to provide a more comprehensive understanding of the honey purchasing decision process by incorporating external factors such as cultural influences, market trends, and environmental concerns. Furthermore, using regression analysis could provide a clearer understanding of the influence of different factors on consumer decisions and allow comparing the relative influence of each factor across different countries. These future studies would improve our understanding of generational and behavioural differences.

Acknowledgements

This work was supported by project VEGA no. 1/0310/24 titled as "Research of Innovative Forms of Marketing for Regional Food Brands".

References

Akanda, M.K.M., Mehjabin, S. and Masud Parvez, G.M., 2024. Honey for nutrition and health benefits: an overview. In: R. Kumar, Y.A. Hajam, S.B. Dhull and A. Giri eds., 2024. *Honey in food science and physiology*. Singapore: Springer, pp.35-56.

Batt, P.J. and Liu, A., 2012. Consumer behaviour towards honey products in Western Australia. *British Food Journal*, [e-journal] 114(2), pp.285-297. https://doi.org/10.1108/00070701211202449.

Blanc, S., Zanchini, R., Di Vita, G. and Brun, F., 2021. The role of intrinsic and extrinsic characteristics of honey for Italian millennial consumers. *British Food Journal*, [e-journal] 123(6), pp.2183-2198. https://doi.org/10.1108/BFJ-07-2020-0622.

Bou-Mitri, C., Abdessater, M., Zgheib, H. and Akiki, Z., 2021. Food packaging design and consumer perception of the product quality, safety, healthiness and preference. *Nutrition & Food Science*, [e-journal] 51(1), pp.71-86. https://doi.org/10.1108/NFS-02-2020-0039.

Brščić, K., Šugar, T. and Poljuha, D., 2017. An empirical examination of consumer preferences for honey in Croatia. *Applied Economics*, [e-journal] 49(58), pp.5877-5889. https://doi.org/10.1080/00036846.2017.1352079.

Ćirić, M. and Ignjatijević, S., 2017. The influence of demographic characteristics of consumers on honey buying behaviour. In: s.n., *Sustainable agriculture and rural development in terms of the Republic of Serbia strategic goals realization with the Danube region – development and application of clean technologies in agriculture*. Belgrade, Serbia, 15-16 December 2016. Belgrade: Institute of Agricultural Economics.

Crittenden, A.N., 2011. The Importance of Honey Consumption in Human Evolution. *Food and Foodways*, [e-journal] 19(4), pp.257-273. https://doi.org/10.1080/07409710.2011.630618.

Čvirik, M., 2024. The importance of music as a mood regulator: Adaptation of Music in Mood Regulation Scale in the conditions of Slovakia. *Ceskoslovenska psychologie*, [e-journal] 68(3), pp.255-272. https://doi.org/10.51561/cspsych.68.3.255.

Elliott, A.C. and Hynan, L.S., 2011. A SAS® macro implementation of a multiple comparison post hoc test for a Kruskal–Wallis analysis. *Computer Methods and Programs in Biomedicine*, [e-journal] 102(1), pp.75-80. https://doi.org/10.1016/j.cmpb.2010.11.002.

Epskamp, S., Cramer, A.O.J., Waldorp, L.J., Schmittmann, V.D. and Borsboom, D., 2012. qgraph: Network Visualizations of Relationships in Psychometric Data. *Journal of Statistical Software*, [e-journal] 48(4), pp.1-18. https://doi.org/10.18637/jss.v048.i04.

Febrianto, N., Akhiroh, P., Masyithoh, D., Helmi, M. and Hartono, B., 2023. Factors affecting consumers' loyalty and purchase decisions on honey products: An emerging market perspective. *Open Agriculture*, [e-journal] 8(1), article no. 20220235. https://doi.org/10.1515 /opag-2022-0235.

Fogarassy, C., Nguyen, H.H., Oláh, J. and Popp, J., 2018. Transition management applications to accelerate sustainable food consumption-comparative analysis between Switzerland and Hungary. *Journal of International Studies*, [e-journal] 11(3), pp.2071-8330. https://doi.org/10.14254/2071–8330.2018/11–3/3.

Garai-Fodor, M. and Popovics, A., 2021. Hungarian food consumers' preferences, from the aspect of ethnocentrism. *Acta Polytechnica Hungarica*, 18(8), pp.105-121.

Grontkowska, A. and Grzyb, I., 2019. Honey in the opinion of consumers. *Annals of The Polish Association of Agricultural and Agribusiness Economists*, [e-journal] 21(2), pp.107-116. https://doi.org/10.5604/01.3001.0013.2164.

Howard, M.C., 2016. A Review of Exploratory Factor Analysis Decisions and Overview of Current Practices: What We Are Doing and How Can We Improve? *International Journal of Human-Computer Interaction*, [e-journal] 32(1), pp.51-62. https://doi.org/10.1080/10447318.2015.1087664.

Hungarian Central Statistical Office, 2021. *Népesség korév és nem szerint*. [online] Available at: <https://www.ksh.hu/docs/hun/xstadat/xstadat_eves/i_wdsd009.html > [Accessed 8 November 2024].

Ilia, G., Simulescu, V., Merghes, P. and Varan, N., 2021. The health benefits of honey as an energy source with antioxidant, antibacterial and antiseptic effects. *Science & Sports*, [e-journal] 36(4), pp.272.e1-272.e10. https://doi.org/10.1016/j.scispo.2020.10.005.

Janšto, E., Chebeň, J., Šedík, P. and Savov, R., 2024. Influence of Labelling Features on Purchase Decisions: Exploratory Study into the Generation Z Beverage Consumption Patterns. *Amfiteatru Economic*, [e-journal] 26(67), pp.927-942. https://doi.org/10.24818/EA/ 2024/67/927.

Kleisiari, C., Kleftodimos, G. and Vlontzos, G., 2023. Be (e) ha (i) viour (e): assessment of honey consumption in Europe. *British Food Journal*, [e-journal] 125(4), pp.1374-1389. https://doi.org/10.1108/bfj-12-2021-1300.

Kopcsay, L., Mucha, L. and Oravecz, T., 2020. Honey consumption habits in Hungary [Mézfogyasztási szokások vizsgálata Magyarországon]. In: J.T. Karlovitz ed., 2020. *Jogok és lehetőségek a társadalomban*. Komárno, Slovakia: International Research Institute.

Kowalczuk, I., Jeżewska-Zychowicz, M. and Trafiałek, J., 2017. Conditions of honey consumption in selected regions of Poland. *Acta Scientiarum Polonorum Technologia Alimentaria*, [e-journal] 16(1), pp.101-112. https://doi.org/10.17306/J.AFS.2017.0446.

Lai, K. and Green, S.B., 2016. The Problem with Having Two Watches: Assessment of Fit When RMSEA and CFI Disagree. *Multivariate Behavioral Research*, [e-journal] 51(2-3), pp.220-239. https://doi.org/10.1080/00273171.2015.1134306.

Lányi, B., Jakopánecz, E., Csóka, L. and Neulinger, Á., 2024. Competing Aspects in Hungarians' Household Consumption – The Importance of Price Sensitivity and Environ mental Consciousness. *Budapest Management Review*, [e-journal] 55(1), pp.27-38. https://doi.org/10.14267/VEZTUD.2024.01.03.

Luo, L., Arizmendi, C. and Gates, K.M., 2019. Exploratory Factor Analysis (EFA) Programs in R. Structural Equation Modeling: *A Multidisciplinary Journal*, [e-journal] 26(5), pp.819-826. https://doi.org/10.1080/10705511.2019.1615835.

Madarász, T., Kontor, E., Antal, E., Kasza, G., Szakos, D. and Szakály, Z., 2022. Food purchase behavior during the first wave of COVID-19: the case of Hungary. *International Journal of Environmental Research and Public Health*, [e-journal] 19(2), article no. 872. https://doi.org/10.3390/ijerph19020872.

Mascarello, G., Pinto, A., Crovato, S., Tiozzo Pezzoli, B., Pietropaoli, M., Bertola, M., Mutinelli, F. and Formato, G., 2024. Consumers' Perceptions and Behaviors Regarding Honey Purchases and Expectations on Traceability and Sustainability in Italy. *Sustainability*, [e-journal] 16(20), article no. 8846. https://doi.org/10.3390/su16208846.

Mata, F. and Dos-Santos, M., 2023. Attitudes, perceptions, and trends of honey consumption in Portugal. *Acta Alimentaria*, [e-journal] 52(1), pp.82-90. https://doi.org/10.1556/066.2022.00186.

Mucha, L., Kovács, I., Oravecz, T. and Totth, G., 2020. The Role of Ethnocentrism in Consumer Decisions. *Scientific Journal on Agricultural Economics*, [e-journal] 64(1), pp.35-54. https://doi.org/10.22004/ag.econ.302631.

Murmura, F., Liberatore, L., Musso, F., Bravi, L. and Pierli, G., 2024. Organic Honey-Comparison of Generational Behaviour and Consumption Trends After Covid-19. *Journal of Food Products Marketing*, [e-journal] 30(3), pp.67-88. https://doi.org/10.1080/10454446.2024.2320649.

Nascimento, A.G.M., Toledo, B.S., Guimarães, J.T., Ramos, G.L.P.A., da Cunha, D.T., Pimentel, T.C., Cruz, A.G., Freitas, M.Q., Esmerino, E.A. and Márs ico, E.T., 2022. The impact of packaging design on the perceived quality of honey by Brazilian consumers. *Food Research International*, [e-journal] 151, article no. 110887. https://doi.org/10.1016/j.foodres.2021.110887

Oravecz, T. and Kovács, I., 2019. Qualitative study of preferences and attitudes towards honey consumption in Hungary. *Analecta Technica Szegedinensia*, [e-journal] 13(2), pp.52-58. https://doi.org/10.14232/analecta.2019.2.52-58.

Oravecz, T., Mucha, L., Magda, R., Totth, G. and Illés, C.B., 2020. Consumers' Preferences for Locally Produced Honey in Hungary. *Acta Universitatis Agriculturae et Silviculturae*

Mendelianae Brunensis, [e-journal] 68(2), pp.407-418. https://doi.org/10.11118/actaun202068020407.

Pocol, C.B. and Bolboacă, S.D., 2013. Perceptions and trends related to the consumption of honey: A case study of North- West Romania. *International Journal of Consumer Studies*, [e-journal] 37(6), pp.642-649. https://doi.org/10.1111/ijcs.12046.

Pólya, É., Máté, Z. and Oravecz, T., 2024. The impact of changes in consumption patterns in the post-pandemic period in Hungary. *Society and Economy*, [e-journal] 46(4), pp.462-482. https://doi.org/10.1556/204.2024.00021.

Roman, A., Popiela-Pleban, E. and Kozak, M., 2013a. Factors influencing consumer behavior relating to the purchasing of honey part 1. The buying process and the level of consumption. *Journal of Apicultural Science*, [e-journal] 57(2), pp.159-172. https://doi.org/10.2478/jas-2013-0026.

Roman, A., Popiela-Pleban, E., Kozak, M. and Roman, K., 2013b. Factors influencing consumer behavior relating to the purchase of honey part 2. Product quality and packaging. *Journal of Apicultural Science*, [e-journal] 57(2), pp.175-185. https://doi.org/10.2478/ jas-2013-0027.

Schroth, H., 2019. Are You Ready for Gen Z in the Workplace? *California Management Review*, [e-journal] 61(3), pp.5-18. https://doi.org/10.1177/0008125619841006.

Šedík, P., Horska, E., Skowron-Grabowska, B. and Illés, C.B., 2018. Generation marketing in strategic marketing management: case study of honey market. *Polish Journal of Management Studies*, [e-journal] 18(1), pp.326-337. https://doi.org/10.17512/pjms.2018.18.1.24.

Šedík, P., Hudecová, M. and Predanócyová, K., 2023. Exploring Consumers' Preferences and Attitudes to Honey: Generation Approach in Slovakia. *Foods*, [e-journal] 12, article no. 1941. https://doi.org/10.3390/foods12101941.

Shrestha, N., 2021. Factor Analysis as a Tool for Survey Analysis. *American Journal of Applied Mathematics and Statistics*, [e-journal] 9(1), pp.4-11. https://doi.org/10.12691/ajams-9-1-2.

Sparacino, A., Merlino, V.M., Blanc, S., Borra, D. and Massaglia, S., 2022. A choice experiment model for honey attributes: Italian consumer preferences and socio-demographic profiles. *Nutrients*, [e-journal] 14(22), article no. 4797. https://doi.org/10.3390/ nu14224797.

Statistical Office of the Slovak Republic, 2023. *Vekové zloženie – SR, oblasti, kraje, okresy, mesto, vidiek*. [online] Available at: < http://statdat.statistics.sk/cognosext/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.action=run&ui.object=storeID%28%22i40A03AF2150C41DE8BE98D0C0C41A764%22%29&ui.name=Vekov%C3%A9%20zlo%C5%BEenie%20-%20SR%2C%20oblasti%2C%20kraje%2C%20okresy%2C%20mesto%2C%20vidiek%20%5Bom7009rr%5D&run.outputFormat&run.prompt=true&cv.header=false&ui.backURL=%2Fcognosext%2Fcps4%2Fportlets%2Fcommon%2Fclose.html&run.outputLocale=sk >[Accessed 3 October 2024].

Taasoobshirazi, G. and Wang, S., 2016. The performance of the SRMR, RMSEA, CFI, and TLI: An examination of sample size, path size, and degrees of freedom. *Journal of Applied Quantitative Methods*, 11(3), pp.31-40.

Testa, R., Asciuto, A., Schifani, G., Schimmenti, E. and Migliore, G., 2019. Quality determinants and effect of therapeutic properties in honey consumption. An exploratory

study on Italian consumers. *Agriculture*, [e-journal] 9(8), article no. 174. https://doi.org/10.3390/agriculture9080174.

Trentinaglia, M.T., Cavicchioli, D., Pocol, C.B. and Baldi, L., 2023. Where was my cup of honey made? PDO honey and sub-regional ethnocentric consumer segments. *British Food Journal*, [e-journal] 125(13), pp.296-315. https://doi.org/10.1108/BFJ-07-2022-0640.

Vida, V. and Ferenczi, A.F., 2023. Trends in honey consumption and purchasing habits in the European Union. *Applied Studies in Agribusiness and Commerce*, [e-journal] 17(1), pp.47-58. https://doi.org/10.19041/APSTRACT/2023/1/6.

Williams, B., Onsman, A. and Brown, T., 2010. Exploratory Factor Analysis: A Five-Step Guide for Novices. *Australasian Journal of Paramedicine*, [e-journal] 8, pp.1-13. https://doi.org/10.33151/ajp.8.3.93.

Xia, Y. and Yang, Y., 2019. RMSEA, CFI, and TLI in structural equation modeling with ordered categorical data: The story they tell depends on the estimation methods. *Behavior Research Methods*, [e-journal] 51(1), pp.409-428. https://doi.org/10.3758/s13428-018-1055-2.

Yadav, S. and Kapoor, S., 2023. Adopting artificial intelligence (AI) for employee recruitment: the influence of contextual factors. *International Journal of System Assurance Engineering and Management*, [e-journal] 15, pp.1828-1840. https://doi.org/10.1007/ s13198-023-02163-0.

Yang, Y. and Xia, Y., 2015. On the number of factors to retain in exploratory factor analysis for ordered categorical data. *Behavior Research Methods*, [e-journal] 47(3), pp.756-772. https://doi.org/10.3758/s13428-014-0499-2.

Zanchini, R., Blanc, S., Pippinato, L., Di Vita, G. and Brun, F., 2022. Consumers' attitude towards honey consumption for its health benefits: First insights from an econometric approach. *British Food Journal*, [e-journal] 124(12), pp.4372-4386. https://doi.org/10.1108/BFJ-09-2021-0992.

Zeng, M., Yan, W.Y. and Zeng, Z.J., 2023. Analysis of Consumers' Willingness to Pay for Honey in China. *Sustainability*, [e-journal] 15(2), article no. 1500. https://doi.org/10.3390/su15021500.