Doctoral School of Business and Management

THESIS SUMMARY

Zalán Márk Maró

What is inside the bottle? - a comprehensive analysis of the supply and demand side of the Hungarian pálinka sector

Ph.D. thesis

Supervisor:

Áron Török, PhD
Associate Professor

Budapest, 2024

Department of Agricultural Economics

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1. Research background and objectives

Almost every country has its own national drink, which is decisive from a cultural, social, and economic point of view. What whisk(e)y was in the former British Empire, tequila in Mexico, cognac in France, or grappa in Italy, undoubtedly is pálinka in Hungary. Pálinka is a distillate made exclusively from fruit, which can only be made in Hungary. The only exception to this is apricot pálinka, which name can be used in four Austrian provinces (Lower Austria, Vienna, Burgenland, and Styria). In Hungary, the pálinka culture has a centuries-old past (see e.g., Békési - Pándi, 2005; Harcsa et al., 2014). Before the 21st century, pálinka was considered an extremely low-quality spirit (Török, 2013); the turning point in terms of quality occurred at the very beginning of the 21st century, as a result of which pálinka is experiencing its renaissance (Géczi et al, 2018; Harcsa, 2017a; Harcsa 2017b) thanks to changes in Hungarian and EU legislation, the efforts of the Hungarian governments, the establishment of the Pálinka National Council (PNC) the acquisition of the EU Geographical Indication (GI) and the distinguished Hungaricum status.

According to the current regulations (Act LXVIII of 2016 on excise duties), an alcoholic product (distillate or pálinka) can currently be made from fruit in three ways: by private distilling, in contract distilleries and in commercial distilleries. We talk about private distillation when someone makes distillate from (typically) their own fruit, with their own distillation equipment, in their home. When someone uses the services of a contract distillery to make their own fruit, we are talking about a contract distillate. If a specialized company produces distillate for commercial purposes, typically from purchased raw materials, the product made here can only be called pálinka. It is important to point out that products from private and contract distillation can only be described as distillates (with a few exceptions).

The pálinka, and the ‘törköly’ (marc) pálinka made from grapes, is a product with a geographical indication according to Hungarian and EU legislation, in addition to fourteen other regional pálinka receive such international protection (European Commission, 2023). Emphasizing the relationship between the geographical origin and quality of individual products (especially foodstuffs) goes back thousands of years, but its economic role only became of particular importance with the globalization of trade. The relationship between food quality and origin has been regulated for a long time in many countries, primarily in Southern Europe (e.g., France or Italy), but in the European Union, regulations in this direction have only been in force since 1992. It was the Trade-Related Aspects of Intellectual

Property Rights (TRIPs) agreement concluded at the end of the Uruguay Round in 1994, which put this type of regulation on the agenda of the WTO (Török et al., 2020; Viju et al., 2013).

Although geographical indications do not (yet) play a decisive role in the establishment of international trade agreements (Jámbor - Török, 2019), the European Union has made it clear during its negotiations that the question of the place of origin of foodstuffs is unavoidable. As a result, in the trade agreements recently concluded by the EU, a separate chapter always discusses the interpretation and use of the system of geographical indications for the contracting parties (Engelhardt, 2015). There are two types of geographical indications in the EU: protected designations of origin (PDO) are very similar to the already existing French Appelation d'Origine Contrôlée (AOC) and Italian Denominazione di Origine Controllata (DOC) systems (Ilbery et al., 2000; Lamarque – Lambin, 2015). The protected geographical indication (PGI) is of German origin, but it is less likely to be linked to a specific area (Gangjee, 2006). The biggest difference between the two types is that in the case of the PDO, each step in the production of the product takes place in a given geographical area, while in the case of the PGI, part of the production of the product can be linked to a specific geographical area. The European Union's policy in the field of geographical indications is most decisive in the Mediterranean member states, since both the number of registered products and their economic importance are the highest in these countries (Török – Maró, 2020).

The relevance of the topic is further enhanced by the fact that in 2015 the Hungarian Government announced the ‘Geographical Indication Program’, the aim of which is to significantly increase the number of Hungarian food and beverages with geographical indications recognized by the EU, and that the potential inherent in the protection of origin is better exploited (Hungarian Government, 2015). As a result, a large jump can be observed in Hungary in terms of the number of ongoing registrations (European Commission, 2023). In addition to all of this, since March 2013, pálinka has been classified as a Hungaricum based on the decision of the Committee for Hungaricums. Hungaricums are unique values of the Hungarian nation that should be preserved and symbolize belonging, unity, and national self-awareness. According to the definition, Hungaricum products, in contrast to GI products, are not necessarily linked to a specific geographical area (Kassai et al., 2016).

The importance of the research is further justified by the fact that Hungary has placed great emphasis on improving the image of palinka, as a Hungarian national drink, and that the budget receives significant revenue from the excise tax on pálinka. Pálinka is Hungary's national treasure and (alcoholic) drink, the quality of which has undergone significant changes in recent decades, and more and more foreign consumers are interested in this product. In addition, in the European Union, more and more emphasis is being placed on products with protected origin, including alcoholic beverages.

In addition to the physical characteristics of the product, the consumer behavior and the purchasing preferences of the respondents are also influenced by social, cultural and psychological factors (Auger et al., 2010; Shimp and Sharma, 1987), thus, in my thesis, consumer ethnocentrism regarding a natiaonal and GI product was also exmanied. Shimp and Sharma's (1987) study considered the basis of the concept of consumer ethnocentrism. Consumer ethnocentrism refers to consumers' beliefs about the validity and morality of purchasing non-domestic products. More ethnocentric consumers show less willingness to buy foreign products and attach more importance to the country in which a product is produced or manufactured. Ethnocentrism appears as a market segmentation option in most developed countries. In the case of food and beverages, it can be observed that European consumers prefer domestically produced products (Balabanis - Diamantopoulos, 2004; Evanschitzky et al., 2008; Gao et al., 2014).

In the 1990s and early 2000s, researches examining Hungary showed that Hungarian consumers considered foreign products to be of better quality (Papadopoulos et al., 1990, Malota, 2003). This trend began to change with time and Hungarian products, especially those with a trademark, became more and more popular (Malota, 2011). Based on the most recent studies (Mucha et al., 2020a; Szakály et al., 2016), it can be concluded that the perception of foreign foodstuffs is less positive and that the respondents prefer to buy Hungarian foodstuffs. Today, Hungarian consumers can be considered ethnocentric, which is largely influenced by age and education. So, the question is, to what extent is ethnocentrism present in a quality drink, especcially in the case of pálinka? It provides the further basis and relevance of the investigation, that many studies (Akbarov, 2021; Balabanis – Diamantopoulos, 2004; Chryssochoidis et al., 2007; Evanschitzky et al., 2008) have emphasised the importance of testing the impact of consumer ethnocentrism on different products.

My doctoral dissertation is article based. My first article analyses the profitability and economic performance of the supply side of pálinka. Special attention was given to the type of the distilleries: commercial distilleries or contract distilleries. The second article contains the general results of the questionnaire survey of 1,000 people. In this article, the most important aspects during pálinka purchasing were analysed. The third article analysed the relationships between ethnocentrism (CETSCALE statements) and socio-demographic variables. Based on this, cluster analysis was applied, which identified four different consumer groups. The fourth article purpose was to examine consumer preferences with a discrete choice experiment, paying special attention to the role of ethnocentrism (latent variable) in decision-making situation. The presence of the most important and investigated product attributes (price, the brand of the pálinka, geographical indication (GI), and production method of the drink), and willingness to pay (WTP) were explored.

2. Research methodology

2.1 Research questions

The aim of my research is to examine on the one hand, the distilleries that exclusively carry out contract distilling (contract distilleries) and those that also carry out contract and commercial activities (commercial distilleries) along different dimensions (e.g., profitability, economic performance). Based on the examined dimensions, I am looking for answers to the following questions:

Q1. Is there a difference between contact distilleries and commercial distilleries in terms of economic dimensions and performance?

Q2. Is there a connection between the economic performance of the pálinka distilleries (e.g., net sales revenue, profit after tax, number of employees) and the examined characteristics (e.g., total assets, number of employees, the type of the distillery)?

The aim of my research is, on the other hand, to explore the supply side of the Hungarian pálinka industry, examining Hungarian consumers (e.g., preferences, consumption and purchasing habits); and to formulate policy and marketing. Based on all of this, I am looking for answers to the following questions:

Q3. Has there been a change in Hungarian people’s pálinka consumption habits and attitudes compared to research in recent years?

Q4. How important do the respondents consider the purchasing preferences (e.g., production in Hungary, colour of the pálinka, packaging, colour of the bottle, alcohol content, result achieved in a palinka competition)? How do the respondents prioritize these preferences?

Q5. Are consumers aware of the difference between pálinka and distillate? Do the respondents know the pálinka seal? If so, can it be distinguished from the seals of the distillate and other spirits?

Q6. Where do consumers buy and how often do they consume pálinka?

Q7. To what extent is ethnocentrism present among Hungarian consumers? How does all of this affect consumer decision-making when purchasing pálinka?

Q8. What factors affect shopping preferences? What effect do different product attributes (e.g., brand, GI variety, production method) have on the purchasing-decision, do they represent a price premium?

Table 1. The methodology used during my research and the method of data collection to examine the various areas, as well as the published and upcoming publications

Examined area	Data collection and applied methodology	Published/upcoming publication
Supply side	• Central Excise Department of the National Tax and Customs Administration database • M&A Research Catalyst business database • Descriptive statistical analysis and visualization • Two-sample t-test • Panel regression analysis	Török, Á., & Maró, Z. M. (2020). Profitability patterns in the Hungarian pálinka industry - The performance of the commercial distilleries. Georgicon for Agriculture, 24(3), 86-97. Maró, Z. M., Maró, G., & Török, Á. (2022): A magyar pálinkaágazat - a bérfőzdék és a kereskedelmi főzdék összehasonlító elemzése. Gazdálkodás, 66(4), 354-364. doi: doi.org/10.53079/GAZDALKODAS.66.4.t.pp_354-364
Demand side	• Online questionnaire survey • Expert interviews • Descriptive statistical analysis • Regression (o-logit) analysis • Latent profile analysis (LPA) • Discrete choice experiment (DCE-model)	Maró, Z. M., Török, Á., Balogh, P., & Czine, P. (2022). Pálinkavásárlási preferenciák vizsgálata a magyar fogyasztók körében – egy diszkrét választási modell építése. Statisztikai Szemle, 100(1), 44-67. doi:10.20311/stat2022.1.hu0044 Maró, Z. M., Török, Á., Balogh, P., & Czine, P. (2023). What is Inside the Bottle? - Factors Influencing Pálinka Consumption. AGRIS on-line Papers in Economics and Informatics, 15(1), 83-98. doi:10.22004/ag.econ.334661 Maró, Z. M., Balogh, P., Czine, P., & Török, Á. (2023). The roles of geographic indication and ethnocentrism in the preferences of Central European spirit consumers: The case of pálinka. Food Quality and Preference, 108, 104878. doi: 10.1016/j.foodqual.2023.104878 Czine, P., Balogh, P., Török, Á., & Maró, Z. M. (2024). The role of ethnocentrism in relation to national and GI products – The case of Hungarian palinka. Journal of Agriculture and Food Research – Under review (2nd round)

2.2 Methodology and data

During the examination of the supply side, those enterprises with legal personality in Hungary that operate as commercial, or contract distilleries were identified in the first round.

The list of 30th June, 2017 of contract and commercial distilleries received from the Central Excise Department of the National Tax and Customs Administration, with the M&A Research Catalyst business database, in which companies principal or secondary activity was ‘to produce distilled spirits, were compared. From this business database, the most important economic data of a total of 462 identified distilleries (net sales revenue, operating profit, after-tax profit, balance sheet total, equity, number of employees, headquarters, location, and year of foundation) for the business years of 2009-2017 were downloaded.

On the database thus obtained, the differences between the two types of distilleries were examined using econometric methods with the version 15.0 of the STATA program package; while the charts were created using version 10.2 of the ArcGIS software. Firstly, charts were used to show in which part of the country the identified contract distilleries and commercial distilleries are located, where they are geographically most concentrated, and which are the areas where the number of distilleries is relatively high or low. After that, a two-sample t-test was carried out in relation to the individual economic characteristics (plant size, number of employees, age) to see if there was a statistically significant difference between the two types of distilleries. Finally, panel regression calculations (Best – Wolf, 2013) were conducted regarding which factors influence the economic performance of the Hungarian pálinka sector in the case of distilleries:

In order to examine the demand side of the pálinka industry, the data collection of an online questionnaire, with the help of an online research software (Qualtrics), was carried out by a professional market research company, called InnoFood Marketing Ltd. The data collection took place between April and July 2021. The questionnaire was optimized for both computers and mobile devices to ensure a larger number of potential respondents. The questionnaire was aimed to analyse the behaviour related to the purchase and consumption of pálinka, as well as assessing the knowledge of the respondents on the subject. To form the basis of the questionnaire, an extensive literature review (see the literature section) and expert interviews (with the president and secretary of the Pálinka National Council) were prepared. After that, a pilot survey (n=73) was conducted, based on which the questions and the answers were finalized. Based on this, the questionnaire consisted of four parts, which were as follows: (1) analysis of the behaviour related to the purchase and consumption of pálinka, and the assessment of the respondents’ knowledge of the subject; (2) discrete choice experiment (DCE) to analyse pálinka-related preferences; (3) using CETSCALE to examine ethnocentrism; and (4) collecting socio-demographic characteristics of respondents.

After data cleaning (e.g., exclusion of incomplete or improperly completed questionnaires) from the data of the final Hungarian survey conducted with the participation of 1,000 Hungarian people, 760 responses were evaluated. The sample is representative for the Hungarian alcohol consuming population. Table 2 contains the most important characteristics of the respondents.

Table 2. Presentation of the sample

	Survey	HSCO census
Total respondents / Population	1,000	9,937,628
Respondent involved	760	-
Gender		
Female (%)	36.45	52.52
Male (%)	63.55	47.48
Average age (years)	54.73	41.39
Residence		
Village (%)	26.45	30.52
City (%)	40.92	34.35
Large city (%)	32.63	35.13
Education		
Basic education	2.37	31.72
Secondary education	43.42	51.31
Higher education	54.21	16.97
Average number of people living in a household (person)	2.77	2.60

Source: own composition based on survey and HSCO (2013)

In addition to the descriptive statistical analyses, a regression (o-logit) analysis was applied to understand what factors influence Hungarian palinka consumers' preferences. If the dependent variable we want to model has an ordinal measurement level, we have the option of building and estimating an ordinal logit (OL) regression model (McCullagh, 1980). This approach often appears when analysing the data of research where statements based on rating-scale-based-statements are used in the context of a questionnaire survey (Bellizzi et al., 2018; Eygu and Gulluce, 2017; Harrel, 2015).

In the second stage of the analysis, CETSCALE statements/variables were to create consumer groups/clusters associated with different perceptions using latent profile analysis (LPA). Although the original CETSCALE consists of a seven-item Likert-type scale (Shimp – Sharma, 1987), a five-point Likert-type scale (1 – 'strongly disagree' to 5 – 'strongly agree') was used (Akbarov, 2021; Douglas - Nijssen, 2003). To choose the correct cluster number, several solutions were tested (Coakley et al., 2022; Dana et al., 2021; Spurk et al., 2020;

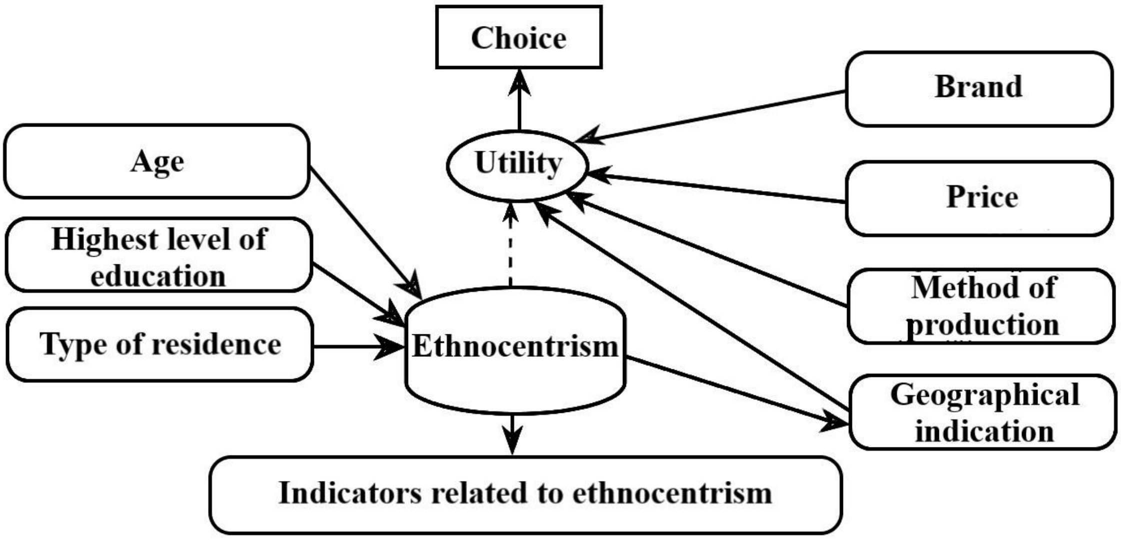
Wardenaar, 2021). The analysis was performed using the tidyLPA package of the R program (R Core Team, 2020).

In the third stage of the analysis of the demand side, DCE was applied (see e.g., Field, 2009; Louviere, et al., 2010), which was performed in three steps. First, as it was mentioned, a comprehensive literature review and interviews with experts was conducted. Based on these, five product attributes (brand, GI, production method, price, alcohol content), which potentially influence the purchasing habits, were ranked during the pilot survey (n = 73). A D-efficient experimental design was created using the selected attributes using the Ngene 1.2 software (Choicemetrics, 2018; Rose & Bliemer, 2009). Each decision-making situation (the respondents faced 8 decision-making situations) included three hypothetical pálinka alternatives and an opt-out (no choice) option. The final questionnaire was prepared using a Bayesian D-efficient experiment design, where the prior coefficients of the attributes were determined based on the results of the pilot study (Bliemer et al., 2008). After evaluating the pilot survey results, we excluded alcohol content due to the strong correlation with the price, since a higher alcohol content means a higher price according to the Hungarian legislation. The respondents, in the final questionnaire, were also faced with eight choice situations (see Figure 1). Each case contained three hypothetical alternatives and an opt-out (no choice) option.

Figure 1. An example of a consumer decision-making situation

During our hybrid modeling (Figure 2), latent variable (ethnocentrism) was examined, which was approximated through 17 indicators/evaluative (Likert scale from 1 to 5) statements (Shimp & Sharma, 1987). The hypothetical model is illustrated in Figure 2. Apollo 0.2.1 package of the R program was used to perform our model estimations (Hess & Palma, 2019; Hess & Palma, 2021; R Core Team, 2020).

Figure 2. The structure of the hybrid choice model



3. Main results of the thesis

3.1 Reflections on the research questions

The dissertation investigated nine, main research questions, which this chapter answers (see the answers in the articles in more detail).

Q1. Is there a difference between contact distilleries and commercial distilleries in terms of economic dimensions and performance?

The different business models of the two types of distilleries can be observed. Contract distilleries penetrate the country, since they are concentrated in the fruit growing regions. In the case of contract distilleries, it is important that they are close to the fruit-producing areas, as this can reduce the transportation costs of private individuals, thus the total price of the pálinka. In contrast, commercial distilleries buy the raw fruit during their business activities. Since we are talking about large quantities of purchases, the transportation cost is proportionally much less. It follows that when choosing a location, proximity to fruit-growing areas is not necessarily a primary consideration.

Commercial distilleries are significantly bigger in all terms of all economic level. Due to the historical tradition, the tendering activity, and the more expensive technology, these distilleries have a much larger plant size (1,6 million EUR vs. 200 thousand EUR). The commercial distilleries have more employees (20 vs. 5 employees) in general than contract distilleries. Contract distilleries are much more seasonal (they work after the harvest), while commercial distilleries usually operate throughout the year. Commercial distilleries have a higher average age (15.8 vs. 13.5 years) than contract distilleries. Many commercial distilleries already existed before the regime change, and in the case of contract distilleries, the fluctuation is much higher, especially after the 'golden age' (Harcsa, 2016; Zsótér-Molnár, 2015).

Q2. Is there a connection between the economic performance of the pálinka distilleries (e.g., net sales revenue, profit after tax, number of employees) and the examined characteristics (e.g., total assets, number of employees, the type of the distillery)?

The total assets have a positive (and statistically significant) impact on all the three levels of profitability: the higher the distillery is, the higher its revenue, EBIT and profit. For instance, if a distillery's total asset is 1 EUR more, than its revenue ceteris paribus (c.p.) is expected to increase by 0.325 EUR. However, the number of employees only has an impact on revenue: if a distillery employs 1 person more, its revenue c.p. is 60.673 EUR higher. The number of closed business years, like the total assets, has a positive impact on all the three levels of profitability, the longer a distillery has been operating, the higher its level of profitability is expected to be. In the case of profit after tax, a distillery that has one more closed business year, its profit expected to be 6.332 EUR higher. Finally, the distillery type has a proven explanatory power for operating profit and profit after tax, which suggests that if the total assets of a contract distillery and a commercial distillery is the same as the number of employees and the number of closed business years, EBIT and profit after tax will be lower in the case of the commercial distillery. The most profitable distilleries are older, contract distilleries with large plant size and high employment rate.

Q3. Has there been a change in Hungarian people's pálinka consumption habits and attitudes compared to research in recent years?

Overall, it can be concluded that the knowledge of Hungarian consumers about pálinka can still be considered low (e.g.: the differentiation between pálinka and distillate, the knowledge of the seal). According to the consumer research, 541 people (71%) stated that they knew the difference between pálinka and distillate, but less than one in two respondents (only 31% of all respondents) knew the difference between distillate and pálinka. Although some studies (Totth et al., 2018) have reported an increase in awareness, the most recent publications on the subject (Mucha et al., 2020b, Mucha et al., 2020c) found a similar result to this study. The most important aspect when purchasing the products, except for price and quality, is the production in Hungary. This is consistent with the research of Mucha et al. (2020b). The appearance of the pálinka (colour of the bottle, capacity of the bottle) was not considered as important as the location of the production or the alcohol content. In the early 2010s, consumers placed even more emphasis on the appearance of the beverage (Totth et al., 2011), however, in a recent study (Mucha et al., 2020b) we can already see results similar to our research.

Q4. How important do the respondents consider the purchasing preferences (e.g., production in Hungary, colour of the pálinka, packaging, colour of the bottle, alcohol content, result achieved in a palinka competition)? How do the respondents prioritize these preferences?

The aspects (quality and price) analysed by most studies observed using a discrete choice experiment (DCE) (see the results in Question 8). The most important aspect that arises during the purchase of pálinka is that the drink should be made in Hungary (average value of 4.11 on the 5-point Likert scale). It also follows that the respondents are not aware that, except for apricot pálinka, pálinka can only be of Hungarian origin, so it is likely that people often buy different spirits instead of pálinka.

The aspects concerning the appearance of the drink, i.e., the colour of the bottle (3.09) and the capacity of the bottle (3.02), had equivalent results. Respondents on average do not really consider it important for the drink to have colour (2.74) when purchasing. Overall, the appearance of the pálinka was not considered as important by consumers as the aspects presented earlier. According to the respondents, the least decisive factor when buying pálinka is whether the pálinka has a result in a competition (2.53). However, those who still found the results of the competition important mentioned the National Pálinka and Törkölypálinka Competition spontaneously.

Q5. Are consumers aware of the difference between pálinka and distillate? Do the respondents know the pálinka seal? If so, can it be distinguished from the seals of the distillate and other spirits?

More than half (460 people) of the 760 respondents (or one of their families) use the services of a contract distillery. If we look at private distillation, it is less common than contract distillation, as only 29% of respondents said that someone in the family distillates at home. 541 people (71%) stated that they knew the difference between pálinka and distillate, but less than one in two respondents (only 31% of all respondents) knew the difference between distillate and pálinka.

The seal represents a guarantee of quality and certifies that the alcoholic drinks has been placed on market in accordance with the law, thus excluding the possibility of counterfeiting. The seal is reddish-brown on the pálinka, green on the distillate and blue on the other spirits. 60% of the respondents stated that they are aware that the pálinka, that can be bought commercially in Hungary, has a unique seal that is different from all other alcoholic products. However, when these respondents had to choose between the three different seal types, only 41% (165 people) correctly marked the reddish-brown seal.

By increasing the knowledge of the seal, the turnover of quality, commercial pálinkas can clearly increase. The spread of real pálinka could also be helped by more and more consumers purchasing the product directly from pálinka distilleries. The more a consumer knows the rules and regulations for pálinka (for example, because it is consumed many times), the more likely he or she is to choose the product in a purchasing situation, and the appearance of the drink (e.g., colour of the drink) is less and less important to such consumers. Furthermore, it is also clear from the results that those who have already chosen home-made distillate (e.g., makes pálinka at home) are less likely to buy pálinka more regularly. They cannot be considered as a consumer group to be targeted by companies.

Q6. Where do consumers buy and how often do they consume pálinka?

Most respondents purchase pálinka in a hypermarket or supermarket (38%) or directly from the distillery (27%). The least common place of purchase was the national tobacco shop (less than 1%). Shopping goals include consumption with friends (33%), consumption within the family (27%), shopping for gift (23%), and personal consumption (17%). As the knowledge of Hungarian consumers about pálinka is still extremely incomplete, in many cases pálinka-like drinks (e.g., Fütyülős) may be purchased in hypermarkets or supermarkets.

Most respondents (202 people) consume pálinka a few times a year, followed by weekly (160 people), monthly (156 people) and several times a week (149 people) consumptions with almost the same values. The least common of the fillers is that they never (47 people) or less than a year (46 people) consume pálinka.

Q7. To what extent is ethnocentrism present among Hungarian consumers? How does all of this affect consumer decision-making when purchasing pálinka?

The average value of the CETSACLE items is 50.04 (standard deviations is 19.04). This value is not different much from the Hungarian studies (Mucha et al., 2020a, Szakály et al., 2016), but it can be considered higher than in other developed countries (Chryssochoidis et al., 2007; Hult et al., 2012; Shimp – Sharma, 1987). All this means in practice that Hungarian producers, distilleries, or retailers should emphasize the Hungarian origin of the products much more.

Four consumer groups were identified according to ethnocentrism and socio-demographic characteristics. Rural Ethnocentrists (47 respondents), had the smallest group size, but are characterized by being most strongly ethnocentric. There are significantly fewer respondents from large cities with a higher education and an above-average income but significantly more respondents with a (maximum) secondary education and below-average income. This group cannot be considered a target group for palinka distilleries and distributors due to the limited financial capacity or the less expensive competitors. In the group of Aging Ethnocentrists (134 respondents), with also a strong level of ethnocentrism, there are significantly fewer consumers under the age of 45 but significantly more over the age of 60. Typical pálinka consumers are also from the older age groups (see e.g., Szegedyné Fricz et al., 2017) and in this case, a good corporate strategy would be to emphasise the Hungarian origin of pálinka.

Wealthy Metropolitans (518 respondents) are characterized by a lower level of ethnocentrism, but their ethnocentricity is still stronger than in many other countries and for other products. In contrast to the second cluster, contains significantly fewer respondents over 60 but more under 45. In terms of education, the group is characterized by significantly more people with a higher level of education and fewer with a maximum of secondary education. Examining the income situation of the respondents in this cluster, we conclude that there are significantly fewer respondents with a below-average income and significantly more with an income that is above average. They could be a potential future consumer of palinka (solvent demand and emphasis on the Hungarian origins). Finally, in the case of the Underprivileged Metropolitans (61 respondents), lowest level of ethnocentrism, a significant effect can only be identified regarding the classification of the place of residence since there are significantly more members of this group living in big cities.

Q8. What factors affect shopping preferences? What effect do different product attributes (e.g., brand, GI variety, production method) have on the purchasing-decision, do they represent a price premium?

All the examined product characteristics (Bestillo brand, Gönci GI variety, Small-pot production method) positively affect consumer preferences. The existence of the Gönci GI variety increases consumers' sense of utility to the greatest extent; and as the level of ethnocentrism increases, the perceived utility related to the Gönci GI variety also increases. A significant standard deviation parameter for each attribute was estimated, which indicates the existence of heterogeneity in the preferences of the consumers, that is, separable groups can be formed among pálinka consumers. In addition to the positive effect of the three product attributes, the price harms consumer preferences. There is a willingness to pay between EUR 18,52 and EUR 20,12 for the Bestillo brand, and respondents would pay a premium between EUR 6,92 and EUR 8,19 for the Small-pot production method. The highest willingness to pay is shown in the case of the Gönci GI variety and amounts to approximately EUR 24,26–24,58.

3.2 Managerial and policy implication

In view of the above and the results of the articles, some recommendations could be made, based on this, the government, or the players of the market (e.g., pálinka distilleries or retailers) selling the spirit can even better understand how important certain product properties and attributes are considered by the consumers. The wave of globalization has led to the evolution of global marketing, therefore, knowing consumers' buying and purchasing motivations is necessary for remaining competitive in an increasingly crowded marketplace.

Despite the significant changes (e.g., in the legislation), the knowledge of Hungarian consumers about pálinka can still be considered low (e.g.: the differentation between concepts, the knowledge of the seal). To increase the awareness of the spirit, it is essential to get to know the consumers. To do this, as in the early 2000s, it is essential to launch further well-positioned (marketing) campaigns and to make marketing strategies (e.g., segment the market based on different product attributes or ethnocentrism, as we seen earlier), customized for consumer groups.

Despite globalization, thus growing consumer cosmopolitism and openness to non-domestic products, consumer ethnocentrism remains a significant issue in the Hungarian (alcoholic beverage) market. There was a strong consensus among Hungarian (pálinka) consumers that buying non-domestic products harms the Hungarian economy and lead to job losses. Hungarian consumers are happy to choose Hungarian products, and these are considered to be the best quality. However, according to the respondents, imported products also have a place on the market, especially if there is no Hungarian alternative, and there is also agreement that foreign companies should put their products on the Hungarian market. A significant group of Hungarian consumers can be considered price sensitive and pálinka's competitors on the Hungarian market (vodka or whiskey) are typically cheaper. In market conditions, it is common for consumers to choose these products. However, of course, there is also a group of consumers in Hungary who are willing to choose and willing to pay more for pálinka.

In general, people make purchasing decisions based on only a few details, therefore, the information that appears on the bottle is crucial. Companies must emphasize Hungarian origin and quality (e.g., with the GI logo), because each of these (may) add value to consumers. There is stronger ethnocentrism with national and GI products, which product characteristics should be also emphasized by distilleries or retailers. But also, from this point of view, education and a change of attitude are needed since while the GI label and its underlying content are known in Western or Southern Europe, many consumers in the CEE region are not really familiar with these markings or logos. Education and change of attitude also needed in the field of the basic of the product, since Hungarian consumers consider distillate a national drink, but only pálinka should be considered as such according to the legislation. Although pálinka is a GI product, its consumption outside of Hungary is quite low due to the absence of knowledge of the foreign consumers and popularity of the drink (e.g., high alcohol content). However, there are good foreign examples when a GI product becomes known and recognized throughout Europe.

3.3 Future research lines

In the future, the economic performance of the distilleries can be examined along several other dimensions (e.g., the presence of the GI pálinka, tax changes, marketing activity, hospitality industry activity). At the same time, the situation in multiple countries and/or national and GI products should be investigated to improve understanding of ethnocentric tendencies, especially the relationship between socio-demographic variables and consumer ethnocentrism. It would be worthwhile to include even more consumers interested in pálinka, even foreign ones, to get an even more accurate palinka industry analysis. Furthermore, these articles and discrete choice modeling can serve as a basis for examining other alcoholic beverages. The Central and Eastern European region has many GI spirits, so it would be worthwhile to expand or jointly explore these alcoholic beverages and their consumers.

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5. List of own (or co-authored) publications related to the topic

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