



## Research article

## Examining the factors shaping consumer attitude towards the popular alcoholic beverages in Hungary

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## ABSTRACT

The study of consumer attitudes is particularly important for products related to tradition. Pálinka is Hungary's national beverage; the homemade distillate is primarily legally different from pálinka and it cannot be marketed. The main goal of the research is to analyse the role of the three attitude components (cognitive, affective and conative), consumer ethnocentrism and drinking motives in shaping the consumer attitude towards the Hungarian pálinka and the homemade distillate and a popular, but not Hungarian beverage, whisky.

Data were collected by questionnaires using a quota sampling method, resulting in a sample of 626 respondents.

In this paper we demonstrate the importance of the affective component using structural equation modelling, and the way consumer ethnocentrism influences the favorable consumer attitude to homemade distillate through emotions. The study has revealed the opposite effect of consumer ethnocentrism in the case of whisky, and the lack of effect in the case of pálinka.

The social alcohol drinking motivation also shapes the favorable consumer attitudes towards the homemade distillate and whisky. The consumer preference is also supported by using the Multiattribute Attitude Model and the conjoint-analysis.

The scientific value of the study lies in using different methods for understanding the factors that can shape the consumer attitude towards national beverages.

Improving the consumer attitude towards pálinka requires a comprehensive marketing strategy covering all three attitudinal components, and from a consumer ethnocentrism perspective, the positioning of pálinka as a national drink needs to be strengthened by the producers.

The study has ignored the role of brand, tradition, packaging and nostalgia. Future research can examine the role of these factors in consumer attitude towards national alcoholic beverages. By inserting the conceptual model of this study into the Theory of Planned Behaviour model, the effects of the subjective norms and perceived behavioral control can also be analysed.

## 1. Introduction

To understand the context of the research, it is necessary to clarify the concepts of pálinka and homemade distillate first.

In Hungary, distillates made from aromas or real fruits have been made for several centuries, which have been called pálinka, regardless of the quality or production technology. Since 2002, the production of pálinka has been regulated by [Codex Alimentarius Hungaricus \(2002\)](#) and then by the so-called "Pálinka Law" ([Hungarian Parliament, 2008a](#)), which is based on the general EU legislation on fruit spirits. According to the law, an alcoholic beverage can only be called pálinka if it is fermented

exclusively from fruit grown in Hungary and does not contain any additional ingredients; it is made and packaged in Hungary; it is bottled with a minimum alcohol content of 37.5% and sold commercially ([Kovács et al., 2018](#); [László et al., 2016](#); [Pham et al., 2021](#)). Pálinka is Hungary's national drink; it has been a Hungarikum since 2013. According to the [Hungarian Parliament \(2012\)](#) "Hungarikum is a collective term, which in a unified classification, registration system denotes a value worthy of distinction and emphasis, which with its characteristic uniqueness, specialness and quality characteristic of the Hungarians, is the top performance of the Hungarians." ([Varga and Kemény, 2016](#)). From 2010, the regulation of excise duty made it possible for individuals

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in Hungary to distill up to 86 L/year of spirits for their own consumption tax-free. However, since the final product produced by home distillation or subcontract-distillation cannot be monitored according to the requirements of the “Pálinka Law”, it can only be called a homemade spirit, and only the final product produced in a commercial distillery can be called a pálinka. Homemade distillate is a very popular drink in Hungary (Harcza, 2016). Despite the fact that homemade distillate cannot be sold for money, it still does happen, and according to the Hungarian Pálinka National Council (PNC, 2019), the sector is not transparent, a fact which puts pálinka producers in a difficult situation. The consumption of homemade spirits can entail health risks due to the use of inappropriate technology (Szucs et al., 2005). Due to the changes in the legal environment and the authorization, the homemade distillate has become very popular and the commercial pálinka brewers have suffered significant damage.

Alcohol consumption can symbolize ethnic or cultural identity and belonging to a group (Banister et al., 2019; Cherrier and Gurreri, 2013; Ross-Houle et al., 2015). Several studies have investigated different national spirits (schnapps, whisky, vodka, gin, grappa) from a technological (Bevan and Wengrow, 2016; Botelho et al., 2020; Dubinina and Alieva, 2015; Fejér et al., 2018; Heap, 2008; Wiśniewska, Śliwińska, et al., 2015) and consumer (Gauthier and Mazières, 2013; Glenk et al., 2012; Merlino et al., 2019) perspective. These researches have primarily focused on consumer preferences, the importance of local ingredients and sensory qualities. In the case of Grappa, Merlino et al. (2019) highlight that consumers already take into account emotional product attributes such as brand, product origin or the presence of geographical indications when choosing a drink. Wang (2020) examined the consumer attitudes using the Theory of Planned Behavior model in the case of beer, but in their research, consumer attitudes were generally related to the consumption of alcoholic beverages rather than to the type of the beverage. Wanninayake and Chovanová (2012) analyzed consumer attitudes towards local and foreign beer brands based on six dimensions: quality, alcohol containment, price, aroma, health impact and taste. However, these studies have not investigated the role of the attitude components and the effects of other factors (e.g. consumer ethnocentrism, drinking motives) that can shape attitudes towards national beverages.

The role of consumer ethnocentrism in relation to alcoholic beverage brands, however, has been the focus of several researchers. The impact of consumer ethnocentrism on consumer perceptions of wine brands was investigated by Bernabéu et al. (2013), for beer by Siemieniako et al. (2011) and Wanninayake and Chovanová (2012). These studies have revealed the impact of consumer ethnocentrism on consumer preference for local brands, but have not analyzed the mechanism of its effect. It was not investigated through which attitude component the consumer attitude is influenced. These studies have focused on consumer perceptions of local and foreign brands of alcoholic beverages.

It is very important to underline the specificity of the Hungarian situation, as in this case it is not a comparison between domestic and foreign products. The pálinka and the homemade distillate are primarily legally different from each other. That is the reason why it is necessary to examine consumer attitudes towards the two drinks.

In order to investigate consumer attitudes towards pálinka and homemade distillate, we have included whisky as well, which is a popular drink both internationally (Stupak et al., 2018; Wiśniewska, Dymerski, et al., 2015) and in Hungary (Statista, 2021). The popularity of whisky was not the only reason for its inclusion in the study. Like pálinka, whisky has a centuries-old history, its production requires expertise and its consumption is symbolic.

It can be concluded that the analysis of the factors shaping consumer attitude towards national beverages is not a well-documented area of research; therefore our research aims at filling this gap.

The study is definitely not intended to promote alcohol consumption. Identifying the factors which influence consumer attitudes will allow pálinka manufacturers to develop a right marketing communication strategy that they need in order to curb the illegal trade of homemade distillates.

The main goal of the research is to analyse the role of the following factors in shaping the consumer attitude towards the Hungarian pálinka and the homemade distillate and a popular, but not Hungarian beverage, whisky: the three attitude components (cognitive, affective and conative), consumer ethnocentrism and drinking motives.

The objectives of this research are as follows.

First, to determine the customer attitude (the overall orientation) toward three popular alcoholic beverages in Hungary (pálinka, homemade distillate and whisky).

Second, to analyze the three attitude components (cognitive, affective and conative) in the case of the three beverages.

Third, to analyze the role of consumer ethnocentrism and drinking motives in the customer attitude toward pálinka, homemade distillate and whisky.

The research questions based on the research objectives are composed as follows:

**Q1.** Which of the three drinks is associated with the most favorable consumer attitude?

**Q2.** What role do the attitude components play in consumer attitudes towards the three beverages under study?

**Q3.** What role does consumer ethnocentrism play in consumer attitudes towards the three beverages under study?

**Q4.** What role do the drinking motives play in consumer attitudes towards the three beverages under study?

Following this introduction, Section 2 of this paper provides a literature review on the consumption of pálinka, homemade distillate and whisky, consumer attitudes, consumer ethnocentrism, alcohol drinking motives and the conceptual framework. Section 3 describes the procedure and the sample, data sources and measurement and the methodology of our survey. Section 4 presents the results and data analysis, Section 5 provides the discussion, Section 6 is the final section which provides the conclusions, contributions, implications, limitations and the future guidelines of this research.

## 2. Literature review and hypotheses development

### 2.1. Pálinka and homemade distillate consumption habits

The production and consumption of pálinka has a centuries-old history in Hungary. It played an important role in the everyday life of rural people primarily, and was consumed at family celebrations, weddings and festivities, and during pig slaughtering. It was a sign of belonging to the nation and the community. At that time, pálinka was mainly a low-quality, homemade drink in most cases. After the change of regime in Hungary in 1990, pálinka was promoted at an increasing number of pálinka festivals (Harcza, 2017). The Pálinka Act mentioned in the Introduction allowed for commercial pálinka brewers to become the pioneers in the acceptance of pálinka as a high-quality valuable Hungarian drink (Henig and Makovicky, 2017).

The research of Szegedyné Fricz et al. (2017) on the consumption of pálinka of a national representative sample of 1014 people has shown that Hungarian consumers consider pálinka to be a perfect gift product. Most people drink it during festive occasions. The type of fruit used as the raw material for the pálinka is the main factor in the purchase decision. It is typical of Hungarian consumers to toast with a shot of pálinka with their relatives on a distinguished occasion. Drinking pálinka in company starts a conversation and adds a festive atmosphere to the gathering, making it an excellent way to create a good mood and relieve tension. Pálinka is a traditional and highly-valued drink, and its consumption is ceremonial. Among young people, pálinka is a popular pre-party mood enhancer, accelerator, and it is a kind of sacral drink in the eyes of older people. Research has revealed low levels of brand awareness and knowledge about origin protection. These results were confirmed by Maró et al. (2022).

However, these studies have shown that consumers identify their national drink with the homemade distillate. A significant proportion of consumers do not know where pálinka can be produced and are not aware of the range of ingredients that can be used.

In our view, this problem also stems from the impact of factors influencing the components of consumer attitudes, and therefore it is necessary to explore these relationships.

Like in the case of the study of [Areiza-Padilla et al. \(2021\)](#), the hypotheses follow the chapters of the literature. H1 hypothesis was formulated to answer which one of the three drinks is associated with the most favorable consumer attitude (Q1).

Based on chapter 2.1, we created our first hypothesis.

H1: In Hungary, the consumer attitude towards the homemade distillate is the most favorable one of the three analysed beverages.

## 2.2. Whisky

The first records of whisky date back 600 years, with Ireland recorded as the country of origin. Although the distilling technology of whisky has spread from Ireland and the UK to many countries (US, Canada, Japan, India), the two most valuable whiskies are still the Irish and the Scotch whisky ([Power et al., 2020](#)). According to [Burns \(2011\)](#) whisky is the most complex beverage on earth. Whisky is produced in many parts of the world ([Buglass, 2011](#)). Whisky is produced by going through a complex production process, with ageing in special casks over several years. Carefully crafted over many years through a variety of processes, including malting, fermentation, distillation and maturation, whisky contains over 300 flavouring compounds. Combinations of these ingredients provide a wealth of flavour profiles ([Buxton and Hughes, 2020](#)). According to [Roullier-Gall et al. \(2020\)](#), the maturation of the finished spirit should last at least three years in wooden casks of up to 700 L. It is common practice to allow for a longer maturation period of up to 12 years. According to [Gauthier and Mazières \(2013\)](#), the final character of whisky is determined by climate, geological composition of the soil, vegetation or proximity to the sea. According to [EU Commission Regulation \(EU\) 2019/787/EU \(European Commission, 2019\)](#), whisky must be produced by distillation with or without whole grains of unmalted cereals, fermented by the action of yeast, with all distillation at less than 94.8% vol.

Experience and knowledge play an important role in whisky consumption behaviour. The consumer's perception of the taste of the whisky is individual and depends on taste assessment and experience. External product attributes (brand, price, experience, packaging, origin, expectation) play an important role in the consumption of whisky ([Stewart and Russell, 2014](#)). The majority of whisky advertisements in the media target the male population and focus on brand attributes and brand identification rather than product attributes and comparisons ([Piggott et al., 1990](#)). [Gauthier and Mazières \(2013\)](#) used a qualitative method to investigate whisky consumption behaviour among women and men, regular and irregular drinkers. In their study, they identified two consumer profiles, experts and novices. They found that product category knowledge and expertise are key factors in decision making. Expert whisky consumers use multiple product attributes when selecting and evaluating a drink. It was found that whisky consumption among expert consumers shows similar sophistication to wine consumption. On average, eleven different criteria are taken into account when selecting whisky.

The inclusion of whisky in the study is supported by the parallel which can be drawn in consumer behaviour between pálinka and whisky. However, consumer attitudes towards whisky have not been examined in the international literature yet, so the present study can provide a good starting point for that.

## 2.3. Attitude

According to the most generally accepted formulation, attitude is a state of nervous and mental readiness created through consumer experience, a psychological tendency to perceive a product as favorable or

unfavorable ([Allport, 1933](#)). Consumer attitudes, ie positive or negative feelings towards products or brands, have a strong effect on actual consumer behavior, attitudes always have direction, degree and intensity and can be positive or negative towards a product or brand ([Solomon and Panda, 2004](#)). Attitude mediates between beliefs and behavioral intentions ([Mandy et al., 2008](#)), the attitude is the tendency of an individual to evaluate a product positively or negatively ([Cook and Ryan, 2015](#)). Behavioral intention is determined by the consumer's belief or feeling about the product or service ([Alsamydai et al., 2014](#)). Attitude is also linked to behaviour, and therefore predicts consumer intention, attitude is a fundamental concept in understanding consumer behaviour ([Nijssen and Douglas, 2011](#); [Serrem and Illés, 2017](#)). In marketing and advertising, attitude can be used as a dependent variable ([Youn and Kim, 2008](#)). Attitude is a complex element of consumer beliefs, feelings, and behavioral intentions in a marketing approach ([Dunay et al., 2018](#); [Lars, 2012](#)).

To understand attitude, it is also necessary to explore the components of attitude, the most common view in the marketing literature ([Hawkins and Mothersbaugh, 2015](#); [Schiffman and Wisenblit, 2015](#)) is that attitude has three components. The cognitive component refers to the knowledge and beliefs related to the subject of the attitude. In connection with information from direct experience or from various sources, it is important to highlight that this is not simply objective knowledge. The consumer's knowledge may be incomplete or erroneous, in which case it is more accurate to use the terms belief, opinion or conviction.

The affective component refers to the emotions and feelings related to the subject of the attitude, while the conative component refers to the actual intent to consume ([Ajzen, 2006](#); [Fabrigar et al., 2005](#)). Consumers' perceptions of a given product or brand are influenced by a combination of attitude components ([Beerli and Martin, 2004](#)). Consumers mix cognitive and affective components to form their attitude towards a product (service, brand). But according to [Ajzen and Fishbein \(2005\)](#) and [Brink \(2008\)](#), the analysis of attitudes should consider all three components, which are often contradictory ([Beerli and Martin, 2004](#); [Brink, 2008](#)), but people are able to create a harmony between the three components. The reason is that if some components of the attitude contradict each other, consumers feel uncomfortable. This phenomenon is what psychology calls cognitive dissonance. In order to reduce cognitive dissonance, the attitude components are tailored to eliminate the contradiction between them. Consistency between attitude components suggests that a change in one component may result in a change in the other components, this phenomenon is one of the foundations of marketing strategy ([Grimm, 2005](#); [Homer, 2006](#)).

A favorable attitude may result in a higher likelihood of using the product, while a less favorable attitude may result in a lower likelihood of using the product ([Grimmer and Miles, 2017](#); [Hawkins and Mothersbaugh, 2015](#); [Schiffman and Wisenblit, 2015](#)).

H2 and H3 were formulated to answer what role the attitude components play in consumer attitudes towards the three beverages under study (Q2).

Based on chapter 2.3 about the role of the attitude components, we formulated our second hypothesis.

H2: The consumer attitude to the homemade distillate, pálinka and whisky is shaped by

- (a) cognitive
- (b) affective
- (c) conative attitude components.

It is very common that the affective component of the attitude influences the whole attitude ([Batra and Ray, 1986](#); [Holbrook and Hirschman, 1982](#); [Hovorushchenko et al., 2020](#)), and the over-concentration on the cognitive component hinders understanding the whole consumer attitude ([Schwarz, 1997](#)). [Morris et al. \(2002\)](#) analyzed 23,000 responses to 240 advertising messages and found that the affective component dominated the prediction of action. The

developed attitude in consumers may persist (Clow and James, 2013), so changing them is a very difficult marketing task (Egan, 2014; Hawkins and Mothersbaugh, 2015; Iacobucci, 2010). The effect of the affective component has not been investigated yet with regard to national beverages, but based on the literature and the previous studies by the authors, we believe that the emotional component is the dominant one in the case of the homemade distillate as well, by shaping its favorable consumer attitude.

Based on chapter 2.1 and 2.3, we formulated our third hypothesis.

H3: The favorable consumer attitude to the homemade distillate is caused by the emotions of Hungarian consumers.

### 2.4. Consumer ethnocentrism

Consumer ethnocentrism plays a significant role in Hungarian consumers' attitude towards traditional food products (Garai-Fodor and Popovics, 2021; Szakály et al., 2016). Tetla and Grybś-Kabocik (2019) investigated the level of consumer ethnocentrism in the case of alcoholic beverages, focusing on the national beverage, vodka.

Consumer ethnocentrism (CE) was defined by Sumner (1960) and Shimp and Sharma (1987) as a term that refers to consumer behavior that refuses to purchase foreign goods (Baruk, 2019). In the opinion of Sharma (2015), the scale they developed is able to predict purchasing intentions and actual buying behavior for domestic and foreign products in different product categories in many countries around the world. As Sharma (2015) highlights, CE is not just a personal trend, but an attitude toward domestic and foreign products and services. Understanding the ethnocentric tendencies of consumers is useful e.g. in predicting the emphasis on national identity and pride (Sun et al., 2021; Thelen and Honeycutt Jr, 2004). According to Siamagka and Balabanis (2015), ethnocentric consumers perceive foreign products as a threat to the domestic economy and jobs, ethnocentrism is also related to patriotism (Balabanis et al., 2001). However, according to Areiza-Padilla et al. (2021), strong ethnocentric emotions do not preclude a consumer from having a positive attitude towards a brand or a product. According to Sharma (2015), cultural openness and higher levels of individualism are consistent with lower CE. According to Yen (2018) and Rašković et al. (2020), CE is not a strong purchase driver for young people.

Salman and Naeem (2015) employed the structural equations model to show that consumer ethnocentrism shapes consumer attitudes towards domestic products. As Garai-Fodor and Popovics (2021) and Szakály et al. (2016) highlighted, CE was important in the Hungarian consumer attitude towards traditional food products. There is a strong connection between consumer ethnocentrism and consumers' emotions (Sharma, 2015; Siamagka and Balabanis, 2015). Szegedyné Fricz et al. (2017) highlighted that many respondents considered the homemade distillate to be the true Hungarian drink. Based on these researches, we have formulated the following hypothesis.

H4 was formulated to answer what role the consumer ethnocentrism plays in consumer attitudes towards the three beverages under study (Q3).

H4: Emotions related to homemade distillate are caused by consumer ethnocentrism.

### 2.5. Drinking motives

Compulsory drinking is a part of Hungarian culture and social norms (Pados et al., 2020), and refusal to drink can result in non-verbal and even physical intimidation (Bartram et al., 2017; Paton-Simpson, 2001). Previous research on the consumption of pálinka and homemade distillate (chapter 2.1) also emphasizes the cultural and social nature of these two beverages. The two drinks are closely intertwined with Hungarian traditions, weddings, funerals, family events, as well as drinking out of sorrow. These dimensions can be measured using the internationally widely used drinking motivation scale.

Research on the causes of alcohol consumption began in the 1940s, using qualitative methods (Riley et al., 1948). One of the best-known theoretical models, already based on the motivations for alcohol consumption was created by Cox and Klinger (1988), according to them people can be internally or externally motivated and feel positive or negative reinforcement. Initially, a two-dimensional (coping and social), then a three-dimensional (coping, social, enhancement) (Cooper et al., 1992; Stewart et al., 1996), and then a four-dimensional (coping, social, enhancement, conformity) (Cooper, 1994) approach to alcohol motivation was developed for adolescents. The motivation for enhancement (internal/positive reinforcement) makes someone drink to feel better. Coping (internal/negative reinforcement) refers to avoiding internal negative states (anxiety, tension). Social (external/positive reinforcement) motivation anticipates positive experience in a social context. Conformity (external/negative reinforcement) means avoiding unpleasant social situations.

According to the WHO (2019), the countries with the highest alcohol consumption are those in Central and Eastern Europe, with significant alcohol consumption in Hungary. Compulsory drinking is part of Hungarian culture and social norms (Pados et al., 2020), and refusal to drink can result in non-verbal or even physical intimidation (Bartram et al., 2017; Paton-Simpson, 2001). Increase in alcohol consumption may result from strong social norms and expectations of social drinking (Mäkelä and Maunu, 2016).

H5 (a,b,c,d) was formulated to answer what role the drinking motives play in consumer attitudes towards the three beverages under study (Q4).

H5: The favorable consumer attitude to the homemade distillate is caused by

- (a) social
- (b) enhancement
- (c) coping
- (d) conformity drinking motives

### 2.6. Conceptual framework

Figure 1 shows the conceptual framework and the hypotheses.

### 3. Data and methodology

#### 3.1. Procedure and sample

The research was conducted in three steps. After analyzing the literature, a qualitative study was conducted through focus group and individual interviews. Two focus groups with eight and nine members were created and five individual interviews were carried out. The respondents

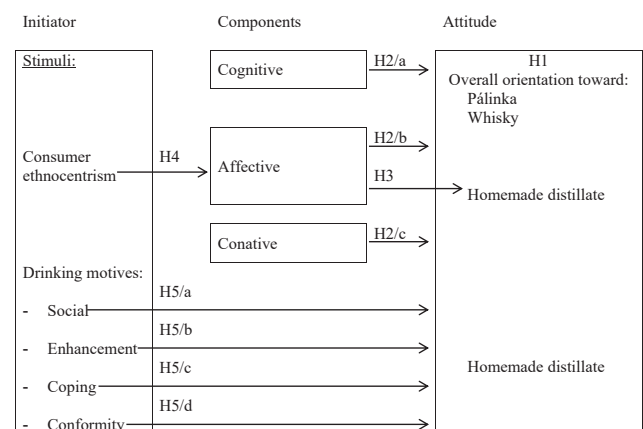


Figure 1. Conceptual framework. Note: based on Hawkins and Mothersbaugh (2015) p. 393.

came from the adult Hungarian population over the age of 18 who had consumed pálinka and other spirits in the three months preceding the interviews. Respondents' participation in the qualitative study was entirely consensual, anonymous and voluntary. The qualitative study had three purposes. Firstly, it has confirmed that whisky is a popular alcoholic beverage in Hungary and therefore suitable for inclusion in the study. Secondly, it has determined the most important purchase attributes of beverages, which can be applied in the Multiattribute Attitude Model. Thirdly, the product attributes and their levels in the conjoint analysis were determined on the basis of the qualitative study.

After the qualitative part of the research, a pilot questionnaire of 205 people was conducted in the quantitative research. The creation of the final questionnaire was assisted by a psychologist.

Data were collected by questionnaires, using a quota sampling method between the end of 2019 and the beginning of 2020. Non-random samples, such as quota sampling, can provide a good estimate of the population characteristics (Malhotra, 2016), when the researcher is unable to obtain a probability sample, but they are still trying to create a sample that is as representative as possible of the population being studied (Sharma, 2017). The respondents came from the adult Hungarian population over the age of 18 who had consumed pálinka in the three months preceding the survey. Quota variables were gender, age group and geographical location (regions). Interlocking quotas (Ochoa and Porcar, 2018) with a sample of 600 people was defined. We aimed a sample size that was large enough to use the covariance-based structural equation modelling and to achieve a high degree of precision and representativeness. This study applied an online survey for data collection using LimeSurvey platform. The survey was sent out to different people, until the gender, age group and region distribution close to that of the general population is reached. The distribution of the quotas was compared by the authors to the general population (HCSO, 2019a, 2019b). Respondents that did not exceed the

target quotas were allowed to participate, while the rest were discarded. Ethical approval was obtained from the Ethics Committee of Budapest Business School University of Applied Sciences. Respondents' participation was entirely consensual and anonymous, and they were informed that they could withdraw from this study by not completing the LimeSurvey questionnaire. Due to the difficulty of the questionnaire method, only non-interlocking quotas were achieved in the sample, that is why each quota applies to the total sample separately. The final sample consisted of 626 individuals. The composition of the sample (Table 1) is the same for the Hungarian population over 18 years of age in terms of gender, age group and region.

The study focuses on the results of the quantitative research.

### 3.2. Measurement

This chapter describes the questionnaire completed by respondents.

Based on the qualitative study and the literature, the most three popular spirits in Hungary were compared: homemade distillate, pálinka and whisky. The tested characteristics of the spirits were price, quality, prestige, fashion and Hungarian origin. The brand is an important buying aspect, but it cannot be interpreted in relation to the homemade distillate, so it was not examined. Respondents determined on a three-point scale (not important, indifferent, important) the importance of the five attributes to them when buying spirits. Then on a 1–7 Likert scale they rated the performance of the three spirits on the five attributes. The questionnaire continued with a comparison of pálinka, homemade distillate and whisky. For analyzing the cognitive component and the ideal drink, 14 claims, for the affective 11 claims, and for the conative 6 claims were formulated on a polarity scale (Osgood et al., 1957), 1–7 Likert scales were used.

A conjoint analysis was used to compare the purchase of homemade distillate and pálinka, by using cards with different product attributes.

**Table 1.** Demographic characteristic of the respondents (N = 626).

		Sample		Proportion of the Hungarian population over 18 years old (HCSO, 2019a, 2019b)
		Frequency	Percentage (%)	Percentage (%)
Gender	Women	326	52.07%	52.15%
	Men	300	47.92%	47.85%
Age (in years)	18–24 years	67	10.70%	9.42%
	25–34 years	109	17.41%	15.4%
	35–44 years	117	18.69%	19.08%
	45–54 years	106	16.93%	16.84%
	55–64 years	99	15.81%	15.82%
	older than 65 years	128	20.45%	23.44%
Hungarian Regions	Budapest	114	18.21%	13.09%
	Central Transdanubia	68	10.86%	10.83%
	North-Great Plain	93	14.86%	14.85%
	North Hungary	72	11.50%	11.53%
	Pest	82	13.10%	13.09%
	South-Great Plain	79	12.62%	12.66%
	South-Transdanubia	57	9.11%	9.00%
	West-Transdanubia	61	9.74%	10.12%
Educational background	Up to 8 years of schooling	29	4.63%	26.50%
	Vocational school	101	16.13%	20.90%
	Secondary technical school/grammar school	256	40.89%	33.40%
	Higher education degree	240	38.33%	21.80%
Income	They don't have enough money for even the most necessary things	59	9.41%	n.d.
	They only have enough money for everyday life	233	37.22%	n.d.
	They can also save money	283	45.20%	n.d.
	Wealthy people	51	8.14%	n.d.

Source: The authors. Note: gender ( $\chi^2 = 0.5208$ ,  $p = 0.501$ ), age group ( $\chi^2 = 5.334$ ,  $p = 0.376$ ) and region ( $\chi^2 = 0.115$ ,  $p = 1.000$ ); n.d: no data.

The product attributes on the cards were explored in the literature (Barabás and Szigeti, 2015) and in the qualitative analysis used to establish the conjoint analyses (expert and group interviews) (Wittink and Cattin, 1989). Three attributes (origin, price, fruit) and their levels (homemade/commercial; 3,000/6,000/9,000 HUF/liter; plum/pear/-peach) were analyzed.

To measure CE, the 17 item CETSCALE from Shimp and Sharma (1987) was used, which has mainly been researched and validated in many countries around the world, including Hungary (Jiménez-Guerrero et al., 2014).

Alcohol consumption motivations were measured using a shortened 12-item version of the original Drinking Motives Questionnaire (Kuntsche and Kuntsche, 2009). The DMQ-R has mainly been researched and validated in students and adolescents – also in a Hungarian sample (Bóthe et al., 2015; Németh et al., 2011) – but in the last decade several studies have also examined it in the general population (Cheng et al., 2016; Nehlin et al., 2018) and in older adults (Crutzen and Kuntsche, 2013; Öster et al., 2017).

The questionnaire was filled out completely by the respondents without any missing data.

### 3.3. Methodology

Normality was checked using skewness, kurtosis, and Kolmogorov-Smirnov test. The correlations were examined using cross-tabulations, the level of statistical significance of the correlations of the variables was determined by Pearson's  $\chi^2$  (Chi-square), the significant relations within crosstabs were examined on the basis of corrected standardized residues (Malhotra, 2016).

To understand consumer attitudes towards alcoholic beverages, the Multiattribute Attitude Model was used. On the one hand, the model measures the importance of the given product attribute for respondents, and on the other hand, it measures respondents' evaluation of the goodness/badness of the attribute (Wassenaar et al., 2019). The Multiattribute Attitude Model was calculated based on Eq. (1) (Fishbein, 1976; Hawkins and Mothersbaugh, 2015).

$$A_b = \sum_{i=1}^n W_i X_{ib} \tag{1}$$

where

- $A_b$  = Consumer's attitude toward a particular brand b
- $X_{ib}$  = Consumer's belief about brand b's performance on attribute i
- n = Number of attributes considered
- $W_i$  = The importance the consumer attaches to attribute i

However, the Multiattribute Attitude Model assumes that more (or less) is always better, in this approach there is an ideal point of attributes, over which further increases no longer represent greater utility (Eq. (2)).

$$A_b = \sum_{i=1}^n W_i |I_i - X_{ib}| \tag{2}$$

where

- $I_i$  = Consumer's ideal level of performance on attribute i

The attitude index is more favorable the closer it is to zero, the difference between the answers obtained for the ideal spirit and the given spirit, expressed in absolute value, is the smallest. According to Lee et al. (2012) consumers consider several attributes simultaneously in the Multiattribute Attitude Model, when forming their attitude towards a given object and according to Hovorushchenko et al. (2020) the advantage of the model is the simplicity of the calculation. The disadvantages of the model are the possibility of selecting parameters that do not

accurately describe the quality of the product and the potentially high cost of surveying respondents (Hovorushchenko et al., 2020).

One of the most popular methods in marketing for measuring consumer preferences and analysing consumer trade-offs is conjoint analysis (Green et al., 2001; Gustafsson et al., 2013; Wittink et al., 1994), which can be used to understand the importance of the attributes of products under study and the utility of the levels of these attributes. The method helps to understand the consumer's decision in a specific shopping situation (de Andrade et al., 2016; Huertas-Garcia et al., 2014), by simulating a real buying situation, participants in the study make more realistic decisions (Green and Rao, 1971).

The basic conjoint analysis model is calculated by the following formula (Eq. (3)) (Malhotra, 2016; Velčovská and Larsen, 2021):

$$U(X) = \sum_{i=1}^m \sum_{j=1}^k \alpha_{ij} x_{ij} \tag{3}$$

where:

- $U(X)$  = overall utility of a product profile,
- $\alpha_{ij}$  = the part-worth contribution or utility associated with the  $j$ th level ( $j = 1, 2, \dots, k$ ) of the  $i$ th attribute ( $i = 1, 2, \dots, m$ ),
- $x_{ij} = 1$  if the  $j$ th level of the  $i$ th attribute is present, 0 otherwise,
- $k_i$  = number of levels of attribute  $i$ ,
- $m$  = number of attributes.

The importance of an attribute,  $I_i$ , is defined in terms of the range of the part-worths,  $\alpha_{ij}$ , across the levels of that attribute (Eq. (4)):

$$I_i = \{ \max(\alpha_{ij}) - \min(\alpha_{ij}) \} \text{ for each } I. \tag{4}$$

The relative importance weight of attribute,  $W_i$ , is calculated as follows (Eq. (5)):

$$W_i = \frac{I_i}{\sum_{i=1}^m I_i} \tag{5}$$

A full profile conjoint analysis was used, this method provides a more realistic description of stimuli by determining the levels of each attribute, and also considers the possible environmental correlation between the factors (Chang et al., 2009; Green and Srinivasan, 1990; Yangui et al., 2019). Table 2 lists the attributes and the levels used in the conjoint analysis (García-Torres et al., 2016; Kucukusta and Guillet, 2014; Menon and Sigurdsson, 2016; Yu and Bogue, 2013).

In the design of the cards representing the different product variations, the so-called orthogonal design method (Menon and Sigurdsson, 2016) was used, which according to Malhotra (2016) is a special type of reduced layout, that allows for efficient estimation of all main effects. By the orthogonal design technique, 9 cards of the 18 variations were formed (see Table 3).

Structural Equation Modeling (SEM) combines factor analysis and path analysis to explain the type of relationship between latent variables,

**Table 2. Attributes and levels.**

Attributes	Levels
Origin	Homemade
	Commercial
Fruit	Plum
	Pear
	Peach
Price	3,000 HUF/liter
	6,000 HUF/liter
	9,000 HUF/liter

Source: The authors.

**Table 3.** Product cards presented to respondents.

Card	Origin	Fruit	Price (HUF/liter)
Card 1	Homemade	Pear	6,000
Card 2	Commercial	Peach	3,000
Card 3	Homemade	Plum	3,000
Card 4	Homemade	Peach	6,000
Card 5	Commercial	Plum	6,000
Card 6	Homemade	Plum	9,000
Card 7	Homemade	Peach	9,000
Card 8	Commercial	Pear	9,000
Card 9	Homemade	Pear	3,000

Source: The authors.

SEM is able to measure the reliability and validity of the data and the model generated, as well as the fit of the model (Hair et al., 2010). According to its specifications, SEM was carried out in several steps. First, an exploratory factor analysis for the attitude components was carried out, using a Maximum Likelihood method with promax rotation, which is the approach used in AMOS. This was necessary because we have used internationally not validated questions to measure these factors, and the attitude components are often difficult to separate; their measurement and definition are not straightforward (Kind et al., 2007; van Aalderen-Smeets and Walma van der Molen, 2015). The conditions of the factor analysis were checked using the KMO value calculated from the anti-image correlation matrix and the Bartlett test. The exploratory factor analysis was followed by a confirmatory factor analysis. Convergence and reliability validity were checked with average variance extracted (AVE > 0.5) and composite reliability (CR > 0.7), and scale reliability with Cronbach's alpha ( $\alpha > 0.7$ ) (Cronbach, 1951; Hair et al., 2010). Discriminant validity was tested by comparing the correlation between factors and the square root of the AVE (Fornell and Larcker, 1981) and by HTMT analysis (Henseler et al., 2015), the square root of the AVE must exceed the values of the correlations (Hair et al., 2010), and the correlation should not exceed 0.85 (Kline, 2015). For model fit testing the most commonly used parameter indices (Absolute and Comparative indices) were used with the cut-off points:  $p > 0.05$ ;  $\chi^2/df < 3$ ; GFI, CFI, NFI, TLI > 0.90; RMSEA < 0.06, SRMR < 0.08 (Byrne, 2016; Hair et al., 2010; Hu and Bentler, 1999; Jackson et al., 2009; Kline, 2015; Schermelleh-Engel et al., 2003). Bootstrapping (2000; CI: 95%) method for analyzing the indirect effects, and Multi Group Analysis (MGA) for analyzing the effects of demographics variables were used. All results presented in the study are as significant at  $p < 0.05$  and |standardized residues| > 2. The explanations of the effects are methodologically and professionally formulated. Data were analyzed with Excel, IBM SPSS 22 and AMOS 24.

## 4. Data analyses and results

### 4.1. Measuring the attitude and hypotheses (H1, H2) testing

In this chapter, while testing H1 and H2, consumer attitude is measured first, followed by the measurement of the attitude components of the three drinks under study. When calculating the consumer attitude (ATT) related to the most three popular alcoholic beverages in Hungary, the higher the score the more positive the attitude (see Table 4). Hereinafter referred to as  $ATT = Eq. (1)$ .

The consumer attitude towards homemade distillate is the most favorable, while pálinka is in the last place. In terms of quality and price, homemade distillate was considered the most appropriate, and whisky was considered by respondents to be a high-quality, prestigious and fashionable drink. In the following, for analyzing the cognitive component responses to the ideal drink were compared with the homemade distillate (HD), whisky (W) and pálinka (P) (see Table 5).

**Table 4.** Results of the Multiattribute Attitude Model measurement related to Hungary's most three popular alcoholic beverages.

Features in order of importance (means on 1–3 scale)	Consumer's belief about the performance of spirits on features on 1–7 Likert, means (SD)		
	Homemade distillate	Whisky	Pálinka
Quality (2.75)	5.78 (1.48)	5.61 (1.41)	3.68 (1.83)
Price (2.48)	5.28 (1.50)	3.55 (1.75)	3.87 (1.72)
Hungarian origin (1.99)	6.36 (1.24)	2.38 (1.58)	4.42 (1.71)
Prestige (1.91)	3.09 (1.75)	4.82 (1.88)	2.59 (1.64)
Mode (1.55)	4.40 (1.70)	4.81 (1.70)	3.31 (1.73)
Eq. (1)	53.91	45.38	38.24
Rank	1	2	3

Source: The authors.

The ideal spirit is rich in aroma and taste, not too expensive, has a pleasant, silky taste, which preferably does not cause a hangover, the special label, the elegant packaging and the special availability are not particularly important. The respondents were aware of the foreign origin of whisky, but the difference between the Hungarian origin of homemade distillate and pálinka indicates a lack of knowledge, as does the perception of pálinka as flavored. In terms of alcohol content, whisky was the closest to the ideal level. The ideal spirit is low in calories. The ideal drink is rather homemade, a criterion which is met by homemade distillate. Pálinka only competes with whisky in terms of modernity and calorie content, it is less favored in all other respects. Whisky is the most ceremonial drink in terms of consumption. According to the respondents, the pálinka can surpass the homemade distillate only with its elegant packaging. Hungarian consumers' knowledge about pálinka is incomplete and incorrect.

Respondents are most emotionally attached to homemade distillate, with whisky being the second and pálinka the last (see Table 6). Of the three drinks the taste and smell of homemade distillate are preferred, the consumption of which is a patriotic act. In terms of the statement on patriotism, respondents thought the consumption of pálinka and whisky was equally less patriotic. In terms of consistently good quality, pálinka lags far behind whisky and homemade distillate. Respondents clearly consider homemade distillate as being higher quality than pálinka, which is not only an emotional but also a cognitive problem. Another cognitive and affective problem is the issue of Hungarikum, as homemade distillate is not a Hungarikum. Comparing the three spirits, the consumption of whisky is clearly a status symbol. Analyzing the demographic background variables, we found that men are more emotionally attached to whisky than women. Men even consider consuming whisky as more patriotic than drinking pálinka. A positive result for pálinka producers is that women do not sense a big difference between homemade distillate and pálinka in terms of reliability and quality. Young people are also dominated by the emotions associated with the homemade distillate, but whisky is very popular. Among people over 55, homemade distillate is preferred the most. The hopes of pálinka producers may be in the 35–55 age group, they don't have such a bad feeling about pálinka.

The analysis of the conative component (see Table 7) shows that respondents prefer homemade distillate in all aspects, followed by whisky, and pálinka ending the list. Examining the home stock of the products, the difference in favor of homemade distillate is even more striking. Whisky in the 25–34 age group reaches the level of homemade distillate in almost all respects. According to respondents for home consumption or for offering it to guests, homemade distillate is the best choice of the three drinks.

A conjoint analysis of the actual choice illustrates the consumer preference between homemade distillate and pálinka. According to the conjoint analysis, simulating a real buying situation, price was found to be the most important attribute (40%), followed by the fruit (37.9%) and finally the origin (22.1%) (see Table 8).

**Table 5.** Measuring the cognitive component of the attitude of homemade distillate, whisky, pálinka and ideal spirit and the examination of the consumer attitude index.

	Ideal	HD	W	P			
$\alpha$	0.702	0.707	0.727	0.837	HD	W	P
Item	Means (SD) (1–7 Likert scale)				Distance from ideal in absolute terms		
aroma: poor/rich	5.78 (1.45)	6.05 (1.44)	5.37 (1.61)	4.09 (1.89)	0.27	0.41	1.69
unlabelled/labelled	5.02 (1.68)	3.61 (1.99)	6.04 (1.25)	5.23 (1.65)	1.41	1.02	0.22
taste: poor/rich	5.95 (1.40)	6.03 (1.36)	5.66 (1.46)	4.21 (1.76)	0.09	0.28	1.74
alcohol content: low/high	5.03 (1.54)	5.82 (1.41)	5.60 (1.29)	4.40 (1.61)	0.79	0.56	0.64
modern/traditional	4.74 (1.63)	6.10 (1.36)	4.27 (1.97)	4.11 (1.67)	1.36	0.47	0.64
flavored/100% natural	5.38 (1.67)	6.18 (1.33)	4.57 (1.70)	3.26 (1.84)	0.79	0.82	2.13
industrial/homemade	5.05 (1.64)	6.40 (1.24)	2.79 (1.64)	2.34 (1.56)	1.35	2.26	2.71
throat-scratching/silky	5.45 (1.66)	4.51 (2.07)	4.26 (1.76)	3.74 (1.70)	0.93	1.19	1.71
causes/does not cause a hangover	5.73 (1.61)	4.42 (2.08)	3.90 (1.85)	3.18 (1.73)	1.31	1.83	2.55
packaging is simple/elegant	4.63 (1.79)	3.19 (1.91)	5.71 (1.40)	4.41 (1.72)	1.44	1.07	0.22
available everywhere/in special places	3.64 (1.80)	4.47 (1.97)	3.65 (1.78)	2.69 (1.72)	0.83	0.00	0.96
consumption for everyday/celebration	4.51 (1.77)	4.15 (1.77)	5.02 (1.56)	3.96 (1.62)	0.37	0.50	0.55
calories: high/low	4.89 (1.51)	4.11 (1.56)	3.74 (1.45)	3.62 (1.57)	0.77	1.14	1.27
unhealthy/healthy	5.31 (1.57)	5.03 (1.70)	4.01 (1.55)	3.43 (1.68)	0.29	1.30	1.88
$\Sigma$ (Eq. (2)) (rank)					12.00 (1)	12.85 (2)	18.91 (3)

Source: The authors.

**Table 6.** Measuring the affective component of the attitude.

	HD	W	P
$\alpha$	0.829	0.814	0.852
Item	Means (SD) (1–7 Likert scale)		
I like its taste.	4.82 (2.05)	3.92 (2.08)	2.82 (1.63)
I like its aroma.	4.91 (2.01)	4.16 (2.02)	3.16 (1.72)
I think it's patriotic to consume it.	4.83 (2.06)	2.63 (1.62)	2.52 (1.54)
The consumption of it cheers me up.	5.26 (1.81)	4.59 (1.82)	4.05 (1.87)
Reliable, consistently good quality drink.	4.71 (1.90)	4.98 (1.62)	3.27 (1.73)
Not fattening.	4.01 (1.85)	3.38 (1.68)	3.05 (1.68)
Non addictive.	2.93 (1.87)	2.81 (1.67)	2.77 (1.78)
The consumption of it is masculine.	4.14 (1.98)	4.61 (1.92)	2.88 (1.68)
Hungarikum.	6.14 (1.40)	1.88 (1.35)	3.17 (1.91)
The consumption of it is fashionable.	4.40 (1.70)	4.81 (1.70)	3.31 (1.73)
The consumption of it is a status symbol.	3.09 (1.75)	4.82 (1.88)	2.59 (1.64)

Source: The authors.

**Table 7.** Measuring the conative component of the attitude.

	HD	W	P
$\alpha$	0.908	0.923	0.906
Item	Means (SD) (1–7 Likert scale)		
I buy it for myself regularly.	3.38 (2.15)	2.77 (1.87)	1.96 (1.36)
I will continue to buy it for myself.	3.99 (2.20)	3.11 (2.04)	2.22 (1.55)
I buy it regularly as a gift.	3.75 (2.06)	3.42 (1.93)	2.46 (1.63)
I will continue to buy it as a gift.	3.67 (2.05)	3.25 (1.90)	2.35 (1.64)
I prefer to buy this one of the spirits.	3.79 (2.18)	3.03 (2.03)	1.91 (1.40)
I always keep it at home for my own consumption or to offer it to guests.	4.68 (2.17)	3.08 (2.07)	2.12 (1.56)

Source: The authors.

**Table 8.** Mean part-worth and relative importance for all respondents.

Attributes	Importance values (%)	Levels	Utility estimate
Price	40	6,000	0.370
		3,000	-0.014
		9,000	-0.355
Fruit	37.9	Peach	0.247
		Plum	0.057
		Pear	-0.304
Origin	22.1	Homemade	0.085
		Commercial	-0.085

Source: The authors.

Notes: Pearson's R = 0.737, p < 0.001; Kendall's tau = 0.556, p < 0.05.

In the price factor, respondents attributed the highest utility to the price of HUF 6,000 per liter, followed by HUF 3,000 and then HUF 9,000 [Friedman test:  $\chi^2$  (df = 2, N = 626) = 42.663, p < 0.001]. The most preferred fruit species were peaches, followed by plums and pears [Friedman test:  $\chi^2$  (df = 2, N = 626) = 35.905, p < 0.001]. Homemade origin has a higher utility than commercial (Wilcoxon paired test: Z = -2.138, p = 0.033). Respondents also preferred homemade origin in a real shopping situation. From the utility values obtained during the conjoint analysis, three groups of respondents were formed: those attributing greater utility to domestic origin; those attributing greater utility to commercial origin; and respondents who attributed equal utility to the two origins. Men are more likely to belong to the group that considers home origins to be more useful. Respondents younger than 35 years of age attributed a higher utility to commercial origin, while older ones clearly preferred homemade origin. Respondents living in communes and villages attributed greater utility to the domestic origin. For those with equal utility, price is not an important purchase criterion, but prestige is important and they prefer whisky. The attitude measures are supporting H1 and H2 and the results of conjoint analysis are supporting that Hungarian consumers also prefer homemade origin to commercial origin in a real buying situation (see Table 9).

4.2. Reliability analyses, EFA and CFA

To understand causality, structural equation modelling was used in the study. This chapter describes the steps of SEM.



**Table 9.** Results of hypotheses testing H1, H2.

Hypothesis	Used method	Supported
H1	Multiattribute Attitude Model, conjoint analysis	Yes
H2 (a, b, c)	Multiattribute Attitude Model	Yes

Source: The authors.

**4.2.1. EFA of the attitude components**

The cognitive (COG), affective (AFF), and conative (CON) attitude components of the three spirits were designed with professional, methodological, and comparability considerations in mind (see Table 10).

For pálinka and homemade distillate the TEV did not reach 60%, but according to Tuan et al. (2005) and Taber (2018), the factor analysis can still be considered appropriate.

**4.2.2. CFA**

The latent factors included in the confirmatory factor analysis were the three attitude components for the three spirits (COGP/HD/W; AFFP/HD/W; CONP/HD/W), the consumer ethnocentrism (CE), the social (SOC), -conformity (CONF), -enhancement (ENH) and coping (COP) alcohol consumption motivations, and the attitude (Eq. (1)/ATT) calculated from the Multiattribute Attitude Model as the measured variable.

**Table 10.** Attitude components for the three drinks, factor loadings.

Question	HD		W		P		
	Item	Loading	Item	Loading	Item	Loading	
COG	aroma: poor/rich		CogW1	.645			
	taste: poor/rich		CogW3	.905	CogP3	.680	
	modern/traditional	CogHD5	.661		CogP5	.853	
	flavored/100% natural	CogHD6	.667	CogW6	.481	CogP6	.692
	industrial/homemade	CogHD7	.794				
unhealthy/healthy	CogHD14	.716			CogP14	.710	
AFF	I like its taste.	AffHD1	.925	AffW1	.872	AffP1	.944
	I like its aroma.	AffHD2	.935	AffW2	.840	AffP2	.876
	The consumption of it cheers me up.	AffHD4	.495	AffW4	.370	AffP4	.406
	Reliable, consistently good quality drink.	AffHD5	.417			AffP5	.505
CON	I buy it for myself regularly.	ConHD1	.962	ConW1	.972	ConP1	.600
	I will continue to buy it for myself.	ConHD2	.854	ConW2	.914	ConP2	.625
	I buy it regularly as a gift.	ConHD3	.706			ConP3	.935
	I will continue to buy it as a gift.	ConHD4	.618			ConP4	.956
	I prefer to buy this one of the spirits.			ConW5	.703		
	I always keep it at home for my own consumption or to offer it to guests.			ConW6	.721		

Source: The authors.

Notes: P [KMO = 0.823; Bartlett test: ( $\chi^2 = 4136.905$ ,  $df = 66$ ,  $p < 0.001$ ); total explained variance (TEV) = 59.70%; Goodness-of-fit Test ( $\chi^2 = 444.318$ ,  $df = 33$ ,  $p < 0.001$ )]; HD [KMO = 0.854; Bartlett test: ( $\chi^2 = 3930.862$ ,  $df = 66$ ,  $p < 0.001$ ); TEV = 59.40%; Goodness-of-fit Test ( $\chi^2 = 146.452$ ,  $df = 33$ ,  $p < 0.001$ )]; W [KMO = 0.863; Bartlett test: ( $\chi^2 = 4007.920$ ,  $df = 45$ ,  $p < 0.001$ ); TEV = 64.92%; Goodness-of-fit Test ( $\chi^2 = 91.905$ ,  $df = 18$ ,  $p < 0.001$ )]

**Table 11.** Reliability, convergent and discriminant validity in the case of the homemade distillate.

	CR	AVE	$\alpha$	1	2	3	4	5	6	7	8
1 COGHD	0.804	0.507	0.800	<b>0.712</b>							
2 AFFHD	0.848	0.591	0.841	0.270***	<b>0.769</b>						
3 CONHD	0.888	0.668	0.886	0.153**	0.674***	<b>0.817</b>					
4 SOC	0.840	0.637	0.845	0.111*	0.141**	0.214***	<b>0.798</b>				
5 CONF	0.800	0.571	0.795	-0.201***	-0.031	0.182***	0.584***	<b>0.756</b>			
6 ENH	0.786	0.554	0.777	0.029	0.181***	0.303***	0.842***	0.591***	<b>0.744</b>		
7 COP	0.818	0.600	0.817	-0.046	0.151**	0.313***	0.587***	0.618***	0.750***	<b>0.774</b>	
8 CE	0.947	0.515	0.948	0.132**	0.299***	0.311***	-0.019	0.058	-0.006	0.097*	<b>0.718</b>

Source: Results of SEM AMOS processing.

Note. \*\*\*p < 0.001, \*\*p < 0.05. Data in bold shows square root of AVE.

Tables 11, 12, and 13 show the reliability and convergent validity. For the cognitive component of whisky, the AVE is 0.498 (see Table 12), which, considering the CR value (0.745) is still acceptable (Fornell and Larcker, 1981; Malhotra, 2016). Multicollinearity analysis was performed using the Heterotrait-Monotrait ratio of correlations (HTMT) criteria. According to Henseler et al. (2015), HTMT values should ideally be below 0.85, for social and enhancement it is 0.86, which is still below the desirable level (0.90). According to the reliability and discriminant validity values (see Tables 11, 12, and 13), the Fornell & Larcker criterion does not hold to social and enhancement. The variables and the models were retained for the following reasons: the HTMT, reliability and convergence validity are acceptable, the DMQ-R scale has been validated several times internationally, the meta-analysis of Bresin and Mekawi (2021) also shows a high correlation between social and enhancement factors. In the study of Németh et al. (2011) the inter-correlations of drinking motives between social and enhancement factors were also high: Spanish: 0.84\*\*; Hungarian: 0.88\*\* (for adolescents).

The confirmatory factor analysis indicators for the three beverages show acceptable model fit (see Table 14).

**4.3. Model and hypotheses (H2, H3, H4, H5) testing**

This chapter describes the effects between the attitude indices calculated in Table 4 and the attitude factors included in the study.

**Table 12.** Reliability, convergent and discriminant validity in the case of the whisky.

		CR	AVE	$\alpha$	1	2	3	4	5	6	7	8
1	COGW	0.745	0.498	0.736	<b>0.705</b>							
2	AFFW	0.849	0.663	0.827	0.551***	<b>0.814</b>						
3	CONW	0.912	0.723	0.914	0.316***	0.756***	<b>0.850</b>					
4	SOC	0.840	0.637	0.845	0.176***	0.363***	0.317***	<b>0.798</b>				
5	CONF	0.800	0.571	0.795	-0.020	0.174***	0.263***	0.584***	<b>0.756</b>			
6	ENH	0.786	0.554	0.777	0.110*	0.317***	0.347***	0.842***	0.591***	<b>0.744</b>		
7	COP	0.818	0.600	0.817	0.023	0.235***	0.286***	0.587***	0.618***	0.750***	<b>0.774</b>	
8	CE	0.947	0.515	0.948	-0.026	-0.101*	-0.153***	-0.019	0.058	-0.006	0.097*	<b>0.718</b>

Source: Results of SEM AMOS processing.

Note. \*\*\*p < 0.001, \*\*p < 0.05. Data in bold shows square root of AVE.

**Table 13.** Reliability, convergent and discriminant validity in the case of the pálinka.

		CR	AVE	$\alpha$	1	2	3	4	5	6	7	8
1	COGP	0.824	0.542	0.823	<b>0.736</b>							
2	AFFP	0.835	0.566	0.827	0.478***	<b>0.752</b>						
3	CONP	0.867	0.627	0.885	0.262***	0.527***	<b>0.792</b>					
4	SOC	0.840	0.637	0.845	-0.125**	0.156***	0.146**	<b>0.798</b>				
5	CONF	0.800	0.571	0.795	-0.025	0.192***	0.283***	0.584***	<b>0.756</b>			
6	ENH	0.786	0.554	0.777	-0.051	0.145**	0.177***	0.842***	0.591***	<b>0.744</b>		
7	COP	0.818	0.600	0.817	-0.052	0.144**	0.162***	0.587***	0.618***	0.750***	<b>0.774</b>	
8	CE	0.947	0.515	0.948	0.014	0.032	0.034	-0.019	0.058	-0.006	0.097*	<b>0.718</b>

Source: Results of SEM AMOS processing.

Note. \*\*\*p < 0.001, \*\*p < 0.05. Data in bold shows square root of AVE.

**Table 14.** Overall model fits of the measurement models.

	$\chi^2$	df	p	CMIN/DF	GFI	TLI	CFI	NFI	RMSEA	SRMR	Model fit
Benchmark			>0.05	<3	>0.90	>0.90	>0.90	>0.90	<0.06	<0.08	
HD	2198.962	770	<0.001	2.856	0.842	0.900	0.910	0.869	0.054	0.063	acceptable
W	1813.119	691	<0.001	2.624	0.858	0.919	0.929	0.890	0.051	0.053	acceptable
P	2309.193	777	<0.001	2.972	0.830	0.894	0.905	0.864	0.056	0.054	acceptable

Source: Results of SEM AMOS processing.

**Table 15.** Overall model fits of the structural models.

	$\chi^2$	df	p	CMIN/DF	GFI	TLI	CFI	NFI	RMSEA	SRMR	Model fit
Benchmark			>0.05	<3	>0.90	>0.90	>0.90	>0.90	<0.06	<0.08	
HD	35.205	12	<0.001	2.934	0.988	0.981	0.994	0.991	0.056	0.030	good
W	34.117	12	<0.001	2.843	0.988	0.983	0.994	0.992	0.054	0.030	good
P	37.918	15	<0.001	2.528	0.987	0.986	0.994	0.991	0.049	0.022	good

Source: Results of SEM AMOS processing.

The fit indices for the structural models suggesting good fits (see Table 15).

According to the results of the direct (see Table 16) and indirect (see Table 17) effects, the cognitive component has a strong direct effect on attitude for all three spirits, with the strongest effect for pálinka. For all three drinks, the affective component has a direct effect on the cognitive component of attitudes towards the drink. This effect is the weakest for homemade distillate and is not even significant in the 18–24 and over-65 age groups. The affective component also has a direct, strong effect on the conative component in all three beverages, but only in the case of homemade distillate does it have a direct (medium strength) effect on consumer attitudes, supporting H3. The indirect effect of the affective

component is also significant, strongly influencing attitudes for all three drinks. The direct effect of the conative component on attitude is not significant in the case of homemade distillate, which is surprising considering that the majority of Hungarian consumers keep it at home or as a gift. However, there is a significant effect in case of men (0.171\*), those with higher educational degree (0.153\*) and the wealthy people (0.326\*). For these respondents, it can be stated with certainty that the behavior related to homemade distillate influences consumer attitudes. The effect of the conative component on the attitude is the strongest in the case of whisky, whoever keeps whisky at home or buys it as a gift has the more favorable attitude. This effect is not significant in case of those with primary school and vocational education, which is not a surprising

**Table 16.** Direct effects in the models.

			HD			W			P		
			$\beta$	t-value	p	$\beta$	t-value	p	$\beta$	t-value	p
AFF	→	COG	.228	5.835	***	.879	29.845	***	.566	17.248	***
	→	CON	.686	23.888	***	.638	19.603	***	.569	18.309	***
	→	ATT	.210	4.054	***						
COG	→	ATT	.310	8.646	***	.489	10.680	***	.831	35.349	***
CON	→	ATT	.080	1.612	.107	.265	4.428	***	.085	3.640	***
CE	→	ATT	.172	4.786	***				.049	2.262	.024
	→	AFF	.475	9.926	.004	-.100	-2.724	.006			
	→	CON	.405	4.246	***	-.080	-3.693	***			
SOC	→	COG	.746	7.820	***	.363	4.319	***	-.624	-6.742	***
	→	AFF				.389	10.558	***			
ENH	→	AFF	.475	9.926	***						
	→	CON	.405	4.246	***	.426	6.703	***			
	→	COG							.610	5.083	***
CONF	→	AFF							.219	5.614	***
	→	CON	.100	2.640	.008	.100	3.266	***	.263	6.869	***
	→	COG	-.355	-7.132	***	-.129	-2.925	.003	-.094	-1.980	.048
COP	→	ATT							.088	2.087	.037

Source: Results of SEM AMOS processing.  
 Note.  $\beta$ : standardized regression weight, \*\*\*:  $p < 0.001$ .

**Table 17.** Indirect effects in the models.

			HD				W				P			
			$\beta$	SE	CI	p	$\beta$	SE	CI	p	$\beta$	SE	CI	p
AFF	→	ATT	.125	.040	.049–.210	.002	.522	.064	.395–.652	***	.519	.027	.462–.571	***
CE	→	CON	.242	.027	.189–.295	***	-.088	.032	-.158–.028	.004				
	→	COG	.080	.015	.053–.113	***	-.064	.026	-.123–.017	.009				
	→	ATT	.158	.020	.121–.198	***	-.030	.022	-.074–.011	.150				
SOC	→	COG					.248	.026	.200–.302	***				
	→	CON					.257	.032	.193–.321	***				
	→	ATT	.202	.051	.106–.305	***	.188	.051	.092–.295	***	-.527	.094	-.700–.333	***
ENH	→	CON	.326	.035	.256–.392	***								
	→	COG	.108	.023	.069–.161	***								
CONF	→	CON	-.265	.035	-.333–.195	***	.257	.007	.006–.035	.003	.125	.023	.078–.170	***
	→	COG	-.088	.019	-.131–.055	***					.124	.024	.076–.171	***
	→	ATT	-.231	.030	-.290–.174	***	.188	.023	-.077–.013	.150				
COP	→	AFF					-.011	.006	-.029–.002	.014				
	→	ATT									-.123	.050	-.220–.017	.024

Source: Results of SEM AMOS processing.  
 Note.  $\beta$ : standardized regression weight, \*\*\* $p < 0.001$ , SE: standard error, CI: confidence interval.

result considering the prestige consumption of whisky. The three attitude components directly or indirectly shape the attitude towards all three beverages, thus supporting H2.

Table 18 shows the results of hypotheses tested by SEM.

CE has a strong direct effect on both affective and conative components in the case of homemade distillate. CE also directly affects the attitude associated with the homemade distillate. CE has a strong direct effect on AFF for homemade distillate, but this is not significant in the 18–24 age group, in the affluent, and in respondents who attribute the same utility to homemade and commercial origin. Consumer ethnocentrism also indirectly influences the cognitive and conative components and attitudes of homemade distillate through the emotional component. These results are supporting H4. In the case of pálinka, consumer ethnocentrism has a negligible effect on attitudes only in the 25–34 age group (0.103\*). Consumer ethnocentrism has a negative effect on emotions related to whisky, with a significant effect for men (–0.152\*\*), for

those aged 45–54 (–0.193\*), for those with higher education (–0.114\*) and for those who attribute greater utility to the domestic origin (–0.122\*). Consumer ethnocentrism also has a negative effect on whisky-related behavior.

Social motivation has a very strong direct effect on consumer perceptions of the homemade distillate. Social motivation has a medium effect on the consumer perceptions of whisky. According to these results, the homemade distillate and whisky are also popular social drinks. The unfavorable attitude towards pálinka can also be observed in the case of social activities (strong negative effect), Hungarian consumers prefer to consume homemade distillate instead of pálinka at important family and friends gatherings. Social motivation has a significant direct effect on AFF only for whisky, indicating that social motivation increases consumers' emotional commitment to whisky. For those with a primary school education, this effect is not significant (which is not surprising given the fact that the consumption of whisky is a prestige). The effect of social

**Table 18.** Results of hypotheses testing H2 (a/b/c), H3, H4, H5 (a/b/c/d).

Hypothesis	Pathway	$\beta$			Supported
		HD	W	P	
H2/a	COG→ATT	.310***	.489***	.831***	Yes
H2/b	AFF→ATT	.210***	i.e.: .522***	i.e.: .519***	Yes
H2/c	CON→ATT	.080	.265***	.085***	Yes
H3	AFF→ATT	.210***	n.s.	n.s.	Yes
H4	CE→AFF	.475**	-.100**	n.s.	Yes
H5/a	SOC→COG→ATT	.202***	.188***	-.527***	Yes
H5/b	ENH→ATT	No direct or indirect effect			Partly
H5/c	COP→ATT	n.s.	n.s.	.088**	No
H5/d	CONF→COG→ATT	-.231***			Yes

Source: The authors.

Note: \*\*,\*\*\* Significance at the 0.05 and 0.01 levels, respectively; n.s.: no significant; i.e.: indirect effect.

motivation indirectly influences the cognitive and conative components and attitudes of whisky, and only the attitude in the case of homemade distillate. For these two drinks, the social motivation is both directly and indirectly decisive. Social motivation also has an indirect negative effect on consumer attitudes towards pálinka. These results are supporting H5/a.

Enhancement has a significant (strong) direct effect on AFF only in the case of homemade distillate. The result confirms previous Hungarian studies that the positive favorable attitude towards homemade distillate is partly due to the drink's "party-starting" properties. If the Hungarian consumer wants to have fun, they prefer to drink homemade distillate. The enhancement has a strong direct effect on the conative component in the case of homemade distillate and whisky, which shows that Hungarian consumers like to keep whisky at home and give it as a gift in order to enhance the mood. However, enhancement drinking motivation has a strong effect on the cognitive component only in the case of pálinka. This effect is not significant in case of those with primary education, the wealthy, and those of equal utility. According to this result, the enhancement as a motivation to drink alcohol has a positive effect on the opinion about pálinka.

Enhancement as a motivation to drink has a medium indirect effect on the cognitive and conative components through the affective component in the case of homemade distillate. However, it has neither a direct nor an indirect effect on overall attitudes, so H5/b is only partially acceptable.

Coping had no significant effect on the attitude towards homemade distillate, H5/c was not supported.

Conformity has a direct effect on the conative component for all three beverages. This may be because consumers are also trying to please their environment by keeping alcoholic beverages in their homes or giving them as gifts. Conformity has the opposite direct effect on the cognitive component for all three beverages, and has a positive effect on AFF only in the case of pálinka. Emotions in connection with pálinka are therefore influenced by the expectations of the environment. In the case of pálinka conformity indirectly effects the cognitive and conative components through the affective component. For whisky, it has a medium indirect effect on the conative component and attitude. In the case of homemade distillate, conformity indirectly counteracts the cognitive and conative components, and the overall attitude. This may reveal that the attitude towards homemade distillate is neither shaped by the expectation of the environment, nor by conformity constraints, but by other, examined (e.g. ethnocentrism, enhancement or social drinking motivation) and not examined (e.g. price, traditions, nostalgia) factors in the model. However, the favorable consumer attitude to the homemade distillate is caused by conformity, which is supporting H5/d.

In all three models, the input variables explain a large proportion (>0.25) of attitude (Cohen, 1988) (see Table 19).

The large differences show that the model factors best explain consumer attitudes for pálinka, but in the case of the homemade distillate

**Table 19.** Coefficient of determination in the case of the three beverages.

	HD	W	P
		R <sup>2</sup>	
COG	.284	.441	.359
AFF	.247	.156	.048
CON	.612	.716	.425
ATT	.309	.266	.708

Note. R<sup>2</sup>: coefficient of determination.

this proportion is less than half of the pálinka's. These results suggest that the research was only partially successful in explaining the difference in consumer attitudes towards the two drinks.

The proportion of the variation in the attitude towards whisky is predictable from the independent factors; and it is the lowest one of the three beverages. To gain an accurate understanding of consumer attitudes towards whisky, it is necessary to examine the impact of other factors not included in this research.

## 5. Discussion

All three attitude components shape consumer attitudes towards the three beverages under study. The study also confirmed the approach (Allen et al., 1992; Brown and Stayman, 1992; Morris et al., 2002; Schwarz, 1997), that consumer attitudes are shaped by emotions. The study of consumer attitudes in the case of traditional beverages is particular important (Merlino et al., 2019). Consumer preferences must be interpreted and seen by the producers as a key factor to deal with marketing strategies. Both the attitude measurement and the conjoint analysis confirmed that Hungarian consumers prefer homemade distillate to pálinka and whisky. Consumer perception of pálinka shows an improving trend – like that of Italian grappa (Antoninetti, 2011; Merlino et al., 2019) – but does not reach that of the homemade distillate. The affective component, and the social alcohol motivation, and CE are important factors in shaping the preference for homemade distillate.

The most important result of the research is that CE has a strong attitude-shaping effect in the case of homemade distillate, despite the fact that the difference between homemade distillate and pálinka is primarily of legal origin (Harcza, 2016) and that pálinka is Hungary's national drink (Hungarikum), not homemade distillate. Our study showed the opposite effect of consumer ethnocentrism in the case of whisky, which did not confirm the research of Areiza-Padilla et al. (2021). The consumer attitudes of ethnocentric Hungarian respondents towards whisky were counteracted by consumer ethnocentrism. CE did not have a strong impact on young people (Rašković et al., 2020; Yen, 2018). Our study confirms the findings of Tetla and Grybš-Kabocik (2019) that

ethnocentrism among young consumers is moderate in the case of alcoholic beverages. Despite the fact that they perceive their national drink, vodka, to be of higher quality than foreign ones, this does not affect their consumption preferences.

Previous research on pálinka consumption (Henig and Makovicky, 2017; Maró et al., 2022; Szegedyné Fricz et al., 2017) found that social influences were key factors in pálinka consumption. However, our research has revealed that this effect is significant only in the case of the homemade distillate.

We have also proved that conformity – the coercive effect of the environment – has a negative effect in the case of homemade distillate.

Enhancement as a drinking motivator had no effect on attitudes, and the party-starting, conversation-initiating effect described in the literature was found only to be due to the social effect.

Coping did not have an effect for the three spirits, which is somewhat surprising given the prevalence of alcohol as a means of relieving anxiety among Hungarian consumers (Németh et al., 2011).

The significance of the present study is that it examines consumer attitudes towards national beverages by considering the combined effects of attitudinal components, consumer ethnocentrism and alcohol drinking motivations through the logical application of multiple methodologies. The combination of the Multiattribute Attitude Model and conjoint analysis, which are popular in marketing research, and the SEM method, which is widely used in consumer behaviour studies, allows understanding consumer attitudes even in a specific situation like the Hungarian one, where consumers consider a homemade drink as their national beverage.

Hungarian research on the consumption of pálinka has shown a consumer preference for homemade distillate compared to pálinka (Henig and Makovicky, 2017; Maró et al., 2022; Szegedyné Fricz et al., 2017). Research on local and foreign beverage brands has shown the impact of consumer ethnocentrism on consumer preference for local beverages brands (Bernabéu et al., 2013; Siemieniako et al., 2011; Wanninayake and Chovancová, 2012). Compared to previous research, the present study examines the components of attitude in more detail and provides empirical evidence to support the importance of the emotional component and the impact of factors influencing emotion in relation to the three beverages under investigation.

The study ignored the brand and the packaging; product characteristics that have previously been found to be determinants of whisky consumption (Stewart and Russell, 2014).

## 6. Conclusions, managerial implications, limitations and future research

### 6.1. Conclusions and managerial implications

Examining the consumer attitudes towards homemade distillate, pálinka and whisky, our results show that consumers have the most favorable attitudes towards homemade distillate, followed by whisky and then pálinka. We have found that consumer attitude components play an important role in shaping consumer attitudes towards all three beverages. It has been shown that the affective component of the attitude is the dominant one in the case of the homemade distillate in a direct way. The consumer ethnocentrism and the social drinking motive clearly have a positive attitude-shaping effect in the case of the homemade distillate. Hungarian consumers consider homemade distillate to be their national drink, not pálinka; that is why consumer ethnocentrism has a positive effect only in the case of this beverage. The study showed the opposite effect of consumer ethnocentrism in the case of whisky, and the lack of effect in the case of pálinka.

The lessons can be learned from this study on an international level:

The ethnocentric consumer emotions and the social drinking motive play a significant role in shaping consumer attitudes towards national drinks. However, clear communication from the industry and the government actors about the given national drink is very important. Due to

the changes in the legal environment in Hungary, the homemade distillate has become very popular and the commercial pálinka brewers have suffered significant damage. Consumers' ethnocentric sentiments have emerged towards the homemade distillate.

Improving the favorable attitude towards pálinka is important in order to reduce the illegal trade in case of the homemade distillate. Therefore, without any promotion of alcohol consumption, we make the following suggestion: The promotion of pálinka as a mood-enhancing and social drink is only possible with extremely strict restrictions due to the Hungarian legislation restricting the advertising of alcoholic beverages (Hungarian Parliament, 2008b). The elegant packaging of pálinka is important to consumers, which increases positive attitudes – similarly to vodka (Prentice and Handsjuk, 2016) – it is worthwhile for producers to place great emphasis on this in the future. Behind the unfavorable attitude towards pálinka compared to homemade distillate, there are not only gaps in knowledge, but also emotional and behavioral reasons. Improving the favorable attitude towards pálinka requires a comprehensive marketing strategy covering all three attitudinal components, and from a CE perspective, the positioning of pálinka as a national drink needs to be strengthened, especially in the under-35 age group. The affective and conative components can be changed by the organization of pálinka festivals, where the tasting of pálinkas and the proper information about this beverage can lead to the development of a positive consumer attitude towards pálinka.

### 6.2. Limitations

This research has several limitations listed as followings. In quota sampling the projection of the research findings to the total population is risky, and it is not possible to calculate the sampling error. In the conjoint analysis respondents were asked to rank the cards without the goal of buying. Some researches of the literature clearly show that consumers choose spirit as a gift at a significantly higher price than for their own consumption. The study ignored the role of brand, tradition, nostalgia and the factors shaping consumer ethnocentrism. The study is only based on results from Hungary. Nevertheless, due to the new approach to research and the results confirming the previous literature, the conclusions, theoretical and empirical results may also be relevant in an international context.

### 6.3. Future research

The research provides a good understanding of consumer attitudes towards pálinka, but the values of determination coefficient show that 69.1% of consumer attitudes towards homemade distillate are explained by other variables not included in the study. The unexplained proportion for whisky is 73.4%.

Future research can be conducted in two directions. One direction is to insert the current conceptual model into the Theory of Planned Behaviour model. In terms of consumer attitudes towards national beverages, the impact of the environment is a key determinant (subjective norms), while availability and price are also important factors in the case of pálinka and homemade distillate (perceived behavioral control) in Hungary. The second direction is to examine the role of brand, tradition, nostalgia in consumer attitude towards national alcoholic beverages.

## Declarations

### Author contribution statement

László Mucha: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Kornélia Vámosi: Contributed reagents, materials, analysis tools or data; Wrote the paper.

Gedeon Totth: Conceived and designed the experiments; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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#### Data availability statement

Data will be made available on request.

#### Declaration of interests statement

The authors declare no conflict of interest.

#### Additional information

No additional information is available for this paper.

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