

# Analysis of the Impact of Consumption Taxes on the Development of Alcohol Addiction in Selected OECD Countries and Slovakia

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**INTRODUCTION:** In recent years, the governments of several countries around the world have focused on consumption taxes, which they use from two important points of view – the first point of view is the state budget, where through the increase of the point of consumption tax, revenues to the budget are increased. The second, no less important point of view is health and the environment. These political goals and the structure of consumption taxes as a means of influencing the consumption behavior of the population are, in many ways, the same in OECD countries. However, the difference is in the specific rates within the individual OECD countries, which independently set the consumption tax amount at their discretion. **METHODS:** The tax burden on specific goods subject to excise duty can differ significantly due to the application of reduced rates e.g. This regulation of alcohol consumption tax should positively affect alcohol consumption and alcohol addictions in the

studied OECD countries. Data sources for this research-comparative analysis were available from the WHO, GISAH, CDC, Tax Foundation, OECD and Eurostat.

**RESULTS:** The presented analysis points to the results of research focused on the impact of consumption taxes (specifically consumption taxes on alcohol) on the development of alcohol addiction in selected OECD countries and Slovakia. **CONCLUSIONS:** By comparing the results of analyses in selected countries, we concluded that the increase in excise taxes on alcohol does not directly affect the consumption of alcohol in the country and the related addiction to alcohol.

**Keywords** | Excise Tax – Alcohol – Consumption Behavior – Public Health and Environment

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## 1 INTRODUCTION

We define tax as a mandatory, as a rule, recurring payment established by law, which taxpayers remit from their tax base to the state budget within a clearly defined deadline. There are several forms and types of taxes, and they are most often divided according to the subject of the tax, the subject of taxation, and the impact on tax subjects (Černaj, 2022; Simonidesová et al., 2021). Consumption taxes represent indirect taxes of a selective nature, which apply only to a selected, specific type of goods (the subject of taxation). Consumption taxes are a single-level tax, which means that they are collected in principle when the selected type of goods is removed from the manufacturer (at one level) because the goods become taxable as soon as they are produced or when they are transported or imported into the territory of the given state (Csikosova et al., 2021). Consumption taxes are divided into four basic groups:

- electricity, coal and natural gas,
- mineral oils – for example, motor gasoline, diesel fuel, LPG, heating oil, etc.,

- tobacco products – cigarettes, cigars, tobacco, tobacco raw materials (tobacco leaves, tobacco residue, tobacco foil),
- alcoholic beverages – wine, intermediate product, beer and spirits.

Unlike Value Added Tax (VAT), which is collected through a gradual collection process by all stakeholders in the value chain up to the stage of final consumption, excise duties are usually collected only once, from the registered operator, at the time the goods are shipped, released until consumption. In the European Union, the movement of products subject to excise duty between member states occurs under a tax suspension regime until these products are released into free circulation. In the United States, excise taxes are levied by the federal government and many states and local governments. The Internal Revenue Service collects federal excise taxes, while states can impose the tax according to their own rules and rates (Finančná správa Slovenskej republiky, n.d.).

Income from consumption taxes represents a non-negligible income of the state budget, which depends on the final consumption of selected types of goods, which is also indirectly

Figure 1 | VAT rates in selected OECD countries in Europe



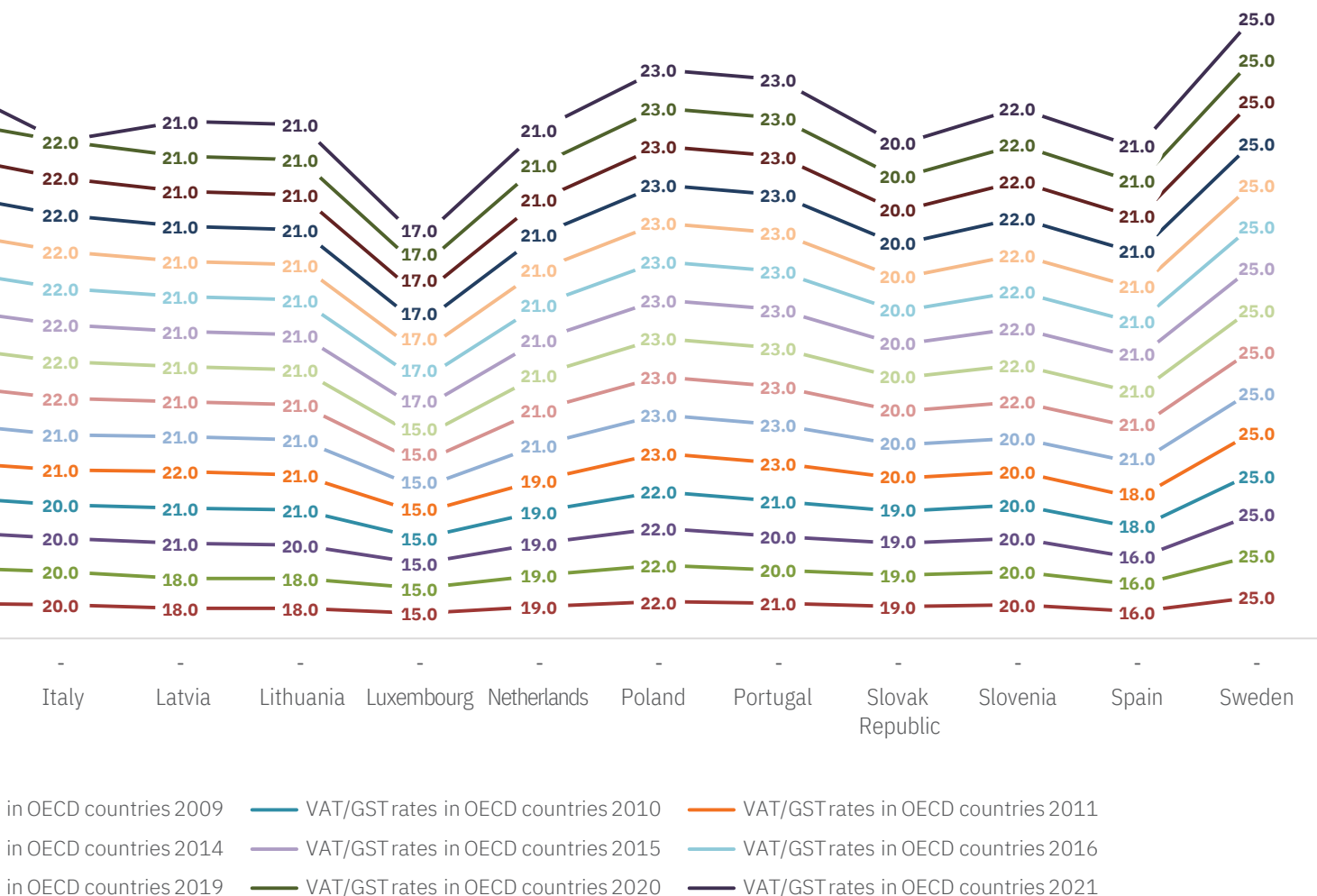
Source: modified by OECD Tax Database (2023)

regulated by the amount of the tax burden. Excise taxes are not taxes that directly affect natural persons or legal entities. However, they are affected indirectly, namely when purchasing the listed selected types of goods, as the consumption tax is included in the selling price of the goods (Finančná správa Slovenskej republiky, n.d.). Most economic models predict that the increase or decrease of consumption tax will not only affect the state budget and state revenues but that higher taxes on alcohol from producers or sellers of alcohol will subsequently be reflected in higher sales prices of these goods. Those, which could ultimately have a direct impact on the amount of alcohol consumed in a given state and the associated negative impact on the health of consumers (Ištók & Taušová, 2021).

The effect of a tax-induced price increase on alcohol consumption depends on the projection and elasticity of demand. Pass-through is the ratio of a price increase to a tax increase. The textbook Cournot oligopoly model (Scherer & Ross, 1990) predicts that high industry concentration and low-price elasticity will lead to excessive tax shifting to consumers. However, there has been little research on alcohol tax transmission in the past. One of the few studies that have examined this issue in the case of Alaska is Kenkel (2005), who found that the al-

cohol tax is passed on in more ways than one. Shrestha and Markowitz (2016) confirm this result in the case of beer tax increases at the state and federal levels in the USA. This result is also confirmed by Hindriks and Serse (2019), who show that the degree of excess pass-through of the liquor tax increase in Belgium depended on the proximity of stores to low-tax Luxembourg. Researchers have typically used data from surveys such as the Behavioral Risk Factor Surveillance Survey (BRFSS; Ruhm & Black, 2002), the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC; Nelson, 2013), or the Panel Study of Income Dynamics (PSID) and Health and Retirement Study (HRS; Dave & Saffer, 2008). Of course, survey data can suffer from social desirability bias. For teenagers, in particular, it is difficult to determine the direction of this bias. Furthermore, these data typically offer only a crude measure of consumption, which also relies on respondents' ability to recall their drinking behavior.

According to a study conducted by the National Institute on Alcohol Abuse and Alcoholism (2020a), the economic cost of the negative impact of alcohol use in the United States in 2010 was approximately US\$249 billion, and over 88,000 deaths per year. Alcohol has thus become the fourth most common



cause of death in the USA and a major risk factor for various serious diseases, such as heart disease, various forms of cancer, and poor birth outcomes (Nilsson, 2017), etc. However, alcohol often plays a significant role in traffic accidents (Saffer, 1997; Dee, 1999), crime (Carpenter, 2007), risky sexual behavior (Markowitz et al., 2005), but also unemployment (Cook & Moore, 2002).

But what is most striking is that these direct and indirect costs of controlling excessive alcohol use are a public health priority, mainly because most of these costs are borne by the government and non-drinkers. An important part of government policy to address the aforementioned external costs of alcohol use was not alcohol taxation (for example, Grossman, 2017) but anti-drinking campaigns themselves. Instead of adjusting taxes, they focused on enacting minimum legal age for consuming and purchasing alcoholic beverages and a radical tightening of penalties and fines for driving a motor vehicle under the influence of alcohol (Simonidesova et al., 2021; Gehrsitz et al., 2020).

## 2 METHODS

We decided to perform a comparative analysis of the input information based on a non-systematic review of the literature providing an overview of the impact of the amount of excise taxes on the direct consumption of alcohol and the related impact on the health and morbidity of the population. The tax burden on specific excise goods may vary significantly due to the application of reduced rates e.g., the standard beer excise rates can be mitigated by applying reduced rates to small breweries. This alcohol excise regulation should positively affect alcohol consumption and alcohol addiction in the OECD countries studied. Data sources for this exploratory comparative analysis were provided by the World Health Organization (WHO), Global Information System on Alcohol and Health (GISAH), Center for Chronic Disease Prevention (CDC), Tax Foundation, Organization for Economic Co-operation and Development (OECD) and Eurostat. The search criteria were mainly publications written in English and published between 2006 and 2022.

## 3 RESULTS AND DISCUSSION

Decades of research on the price elasticity of demand for alcohol declares a negative correlation between alcohol consumption and price. A recent meta-study by Wagenaar et al. (2009) presented the research conclusions that the average elasticity estimates are -0.46 for beer; -0.69 for wine and -0.80 for spirits, while demand elasticity lower than 1 represents low elastic demand.

**However, previous studies are subject to two main problems:**

1. they use arguably unreliable price measures, often from a limited sample of stores and products that have been shown to be prone to over elasticity and thus the effectiveness of alcohol taxes (Ruhm et al., 2012);

2. previous research has used observational study designs such as interrupted time series or simple panel models, which may suffer from endogeneity problems (Gehrsitz et al., 2020).

Research has been carried out in the USA that overcomes the abovementioned problems. They used detailed data from retail scanners on alcohol sales in thousands of stores across the US to construct pricing measures based on a representative basket of consistent products over time. They obtained plausible causal effects from this new data by using an experiment in Illinois where spirits and wine taxes sharply and unexpectedly increased. The excise tax increase resulted in higher prices for spirits and wine but no change in beer prices. This resulted in higher beer sales, largely offsetting the wine and spirits sales decline. It was also found that consumers started looking for cheaper spirits and wine. This study thus highlights the importance of substitution induced by changes in relative tax rates (Gehrsitz et al., 2020).

Although taxes on alcoholic beverages are among the oldest sources of government revenue, the increasing importance of other forms of excise taxes, especially general excise taxes such as VAT, has greatly reduced the share of these taxes in total taxation. In recent years, however, there has been a resurgence of interest in specific taxation of alcoholic beverages to influence consumer behavior in line with public health policy. The development of excise tax rates in selected OECD countries for the period 2007–2022 is shown in *Figure 1*.

As shown in *Figure 1*, there have been significant changes in the amount of consumption taxes in European OECD countries. We can state that taxes increased between 2007 and 2022 or remained unchanged for all countries. However, this tax was not reduced in any of the analyzed states. Luxembourg had the lowest consumption tax for the analyzed period, only 15% (from 2007 to 2015) and in 2015, there was an increase to 17%, and this amount of tax is until 2022. Among other OECD countries, which rank among the states with the lowest excise tax rate, we can also include Spain (16%, from 2010 to 18% and from 2012 to 21% until now), Estonia (18% and from 2009 to 20% until now), Latvia (18%, from in 2009 21%) and Lithuania (18% and from 2010 21%). On the contrary, Hungary (27%), Denmark, and Sweden have the highest consumption tax rate. Denmark and Sweden have an unchanged tax rate of up to 25% for the analyzed period from 2007 to 2022. The highest increase in taxes occurred in Greece (from 19% to 24%) and Spain (from 16% to 21%) by 5% and up to 7% in Hungary (from 20% in 2007 to 27% since 2012). From 2007 to 2022, consumption taxes increased by an average of 2.29% in selected OECD countries.

Alcoholic beverages exist worldwide in a wide variety and are produced from a wide variety of fermented or distilled raw materials (grapes, apples, malt, rice, etc.). The customs code of the Combined Nomenclature (CN) provides the classification of alcoholic beverages, with which the excise tax categories are internally linked. The CN includes six main categories of alcoholic beverages: a beer made from malt (code 22.03); wine made

**Table 1** | The application of reduced tax rates in selected OECD countries

<b>Undenatured ethyl alcohol Tax per hectolitre of absolute alcohol</b>					
	<b>Currency</b>	<b>Excise</b>		<b>VAT rate</b>	<b>Small producer rate</b>
		<b>National currency</b>	<b>USD</b>	<b>%</b>	
Australia	AUD	8891.00	6684.96	10.00	No
Austria	EUR	1200.00	1411.76	20.00	Yes
Belgium	EUR	2992.79	3520.93	21.00	No
Czech Republic	CZK	32250.00	1487.55	21.00	No
Denmark	DKK	15000.00	2384.74	25.00	Yes
Estonia	EUR	1881.00	2212.94	20.00	No
Finland	EUR	5035.00	5923.53	24.00	No
France	EUR	1806.28	2125.04	20.00	No
Germany	EUR	1303.00	1532.94	19.00	Yes
Greece	EUR	2450.00	2882.35	24.00	Yes
Hungary	HUF	333385.00	1099.77	27.00	Yes
Ireland	EUR	4257.00	5008.24	23.00	No
Italy	EUR	1035.52	1218.26	22.00	No
Latvia	EUR	1724.00	2028.24	21.00	Yes
Lithuania	EUR	2163.00	2544.71	21.00	No
Luxembourg	EUR	1041.15	1224.88	17.00	No
Netherlands	EUR	1686.00	1983.53	9.0/21.0	No
Poland	PLN	6903.00	1788.34	23.00	No
Portugal	EUR	1386.93	1631.68	23.00	Yes
Slovak Republic	EUR	1080.00	1270.59	20.00	No
Slovenia	EUR	1320.00	1552.94	22.00	Yes
Spain	EUR	958.94	1128.16	21.00	Yes
Sweden	SEK	51569.00	6017.39	25.00	No
United States	USD	905.00	905.00	-	No

Source: modified by OECD Tax Database (2023)

from fresh grapes, including fortified wine (code 22.04); vermouth and other wines of fresh grapes flavored with plants or aromatic substances (code 22.05); other fermented beverages (for example, cider, perry, mead), mixtures of fermented beverages and mixtures of fermented beverages and non-alcoholic beverages (code 22.06); undenatured ethyl alcohol with an alcoholic strength by volume of 80 % pure alcohol by volume (abv) or higher (code 22.07) and undenatured ethyl alcohol with an alcohol content of less than 80% abv (code 22.08). There are inevitably further subdivisions within these broad categories, but using internationally accepted nomenclature increases consistency and helps avoid conflicting definitions when applying rates (OECD Tax Database, 2023).

Due to the long history of alcohol taxation, several methods and measures have been developed over time to assess the alcohol content of a product. Alcohol by volume (abv) is now the standard measure of the level of alcohol contained in an alcoholic beverage. It is defined as the number of liters of pure ethanol present in 100 liters of solution at 20 °C, expressed as a percentage of the total volume. In some countries, the alcohol content is calculated in degrees Plato (measurement of the density of the beer wort as a percentage of the weight of the extract) for the beer excise tax. There is no exact method for converting from degrees of Plato and alcohol to volume, but for tax purposes, 1% abv is assumed to be equivalent to 2.5 degrees of Plato. Therefore, the tax amounts per Plato degree were multiplied by

**Table 2** | Average annual alcohol consumption in selected OECD countries for the age category over 15 years

Variable	Alcohol consumption					
	Litres per capita (+15)					
Measure						
Year	2010	2012	2014	2016	2018	2020
Country						
Australia	10.4	10.0	9.7	9.5	..	..
Austria	12.1	12.1	12.2	11.4	11.3	11.3
Belgium	10.3	10.1	10.6	9.4	9.2	..
Czech Republic	11.4	11.6	11.9	11.7	11.8	11.6
Denmark	10.8	9.8	10.1	10.0	9.7	9.7
Estonia	11.4	12.1	11.1	10.2	10.0	10.5
Finland	9.7	9.3	8.8	8.4	8.4	8.2
France	12.3	12.2	12.0	11.7	11.6	10.4
Germany	11.6	11.3	11.1	11.0	10.9	..
Greece	8.3	7.6	7.1	6.7	6.5	..
Hungary	10.8	11.1	10.9	11.1	11.4	10.4
Ireland	11.6	11.5	10.8	11.2	11.0	10.1
Italy	7.0	7.5	7.6	7.1	7.8	..
Latvia	9.8	10.2	10.6	11.3	11.0	12.1
Lithuania	13.5	14.7	14.2	13.2	11.2	11.4
Luxembourg	11.9	11.8	11.6	11.4	11.1	..
Netherlands	9.1	9.1	8.4	8.2	8.3	7.2
Poland	10.0	10.2	10.5	10.5	10.7	..
Portugal	11.3	9.8	10.2	10.4	10.4	..
Slovak Republic	10.1	10.1	10.1	9.9	10.1	9.9
Slovenia	10.3	11.0	10.9	10.5	10.0	9.8
Spain	9.8	9.4	9.5	10.8	10.4	7.8
Sweden	7.4	7.2	7.2	7.2	7.2	7.5
United States	8.6	8.9	8.8	8.9	8.9	9.3

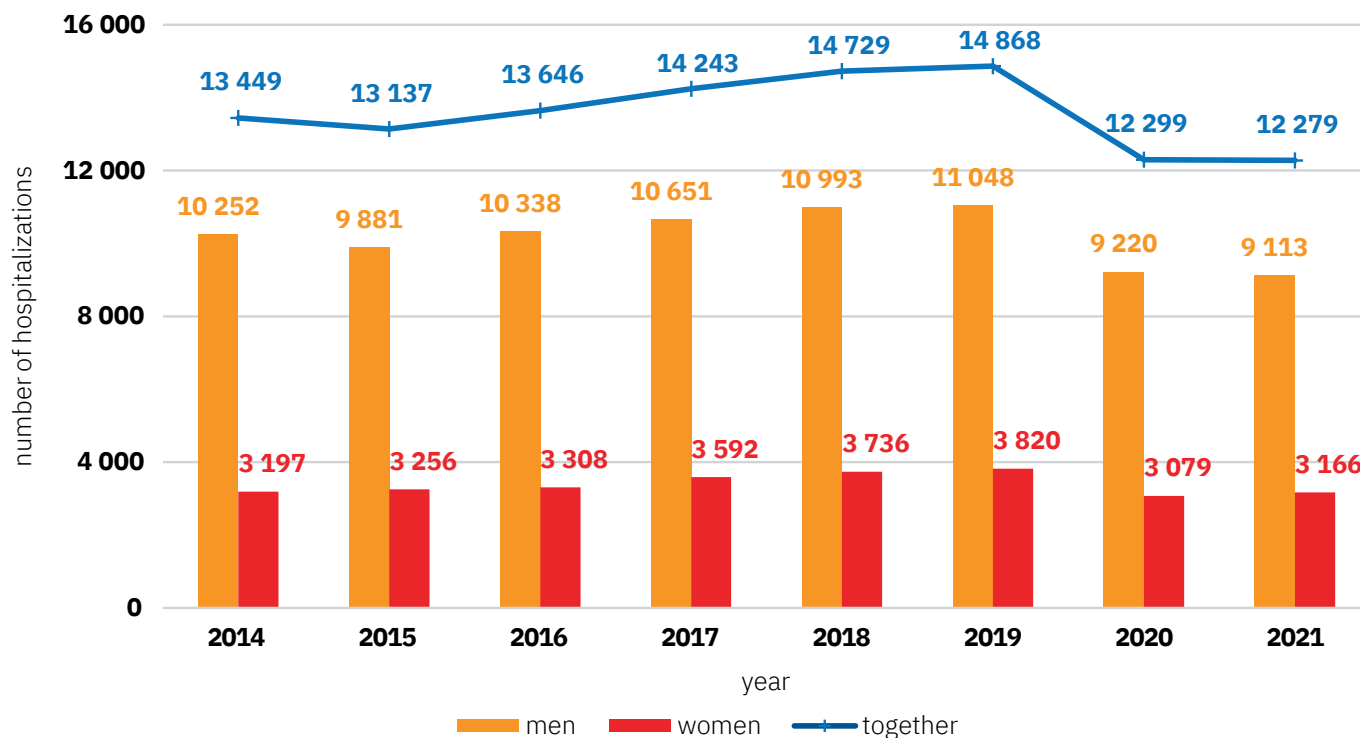
Source: modified by OECD

2.5 to obtain the ABV rates for the respective countries (OECD Tax Database, 2023).

Excise duty can be applied to alcoholic beverages in two main ways. The duty can be either ad quantum concerning the alcohol content of the product or ad valorem calculated according to the product's value. The two methods are generally combined in OECD countries, where volumes based on alcohol content and product value are considered when determining the total tax amount. The member states of the European Union apply a harmonized structure of excise duties on alcohol and alcoholic beverages (Council Directive 92/83/EEC on the harmonization of structures of excise duties on alcohol and alcoholic beverages and 92/84/EEC on the approximation of excise duty rates on alcohol and alcoholic beverages, supplemented by EU Directive 2020/262, which establishes general excise tax adjustments and their movement between member states; OECD Tax Database, 2023). In addition, each country can affect the tax burden of specific goods subject to excise duty by apply-

ing reduced rates, e.g., the standard alcohol excise rates can be softened by applying reduced rates to small distilleries, which can make the tax rate vary significantly. The application of reduced tax rates in selected OECD countries is shown in *Table 1*.

In Austria, Denmark, Germany, Greece, Hungary, Latvia, Portugal, Slovenia, and Spain, a reduction in the tax rate for small distilleries is applied. For example, in Austria, for small distilleries that do not produce more than 4 HL of pure alcohol per year, the rate is €648 (54% of the standard rate) or Denmark, which has a reduced tax rate of 50% for small producers ( $\leq 10$  HL per year). Hungary also considers domestic spirits producers, where a reduced excise duty rate of 0% applies to ethyl alcohol produced by fruit growers' distilleries from fruit supplied by private fruit growers. The application of the reduced rate is limited to 43 liters of pure alcohol for private consumption per household fruit grower per year. A product with a reduced rate should not be placed on the market, and the household should use it for its own consumption.

**Figure 2** | Completed hospitalizations for diseases in which the main cause of their occurrence is alcohol, by gender of the patient for years 2014–2021


Source: modified by NCZI

### 3.1 The negative impact of alcohol consumption on people's health

The World Health Organization recommends increasing taxes on alcoholic beverages as one of the most cost-effective policies to reduce drinking levels to combat alcohol-related diseases, including cardiovascular disease, cancer and other non-communicable diseases (World Health Organization, 2010). From a public health perspective, it has been argued that the best duty structure links the level of taxation to alcohol content, keeps pace with inflation, and avoids substantial differences between different types of drink (Colin Angus, 2019). However, it is recognized that the alcohol market creates jobs in agriculture, industry and distribution, as well as generating tax revenue for governments. Public health measures to reduce the harmful use of alcohol are therefore often balanced with other goals and considerations, such as preserving ancestral industries, ensuring a free market and choice for consumers, and securing government revenue (OECD Tax Database, 2023).

According to the Organization for Economic Cooperation and Development, which lists countries according to the average annual consumption of pure alcohol per person over 15, Lithuania and France have long had the highest alcohol consumption in selected analyzed OECD countries. While in Lithuania, the alcohol consumption was 14.7 liters per person, in 2020, their consumption decreased to 11.4. In France, the highest alcohol consumption was in 2010 (12.3), and in 2020 it

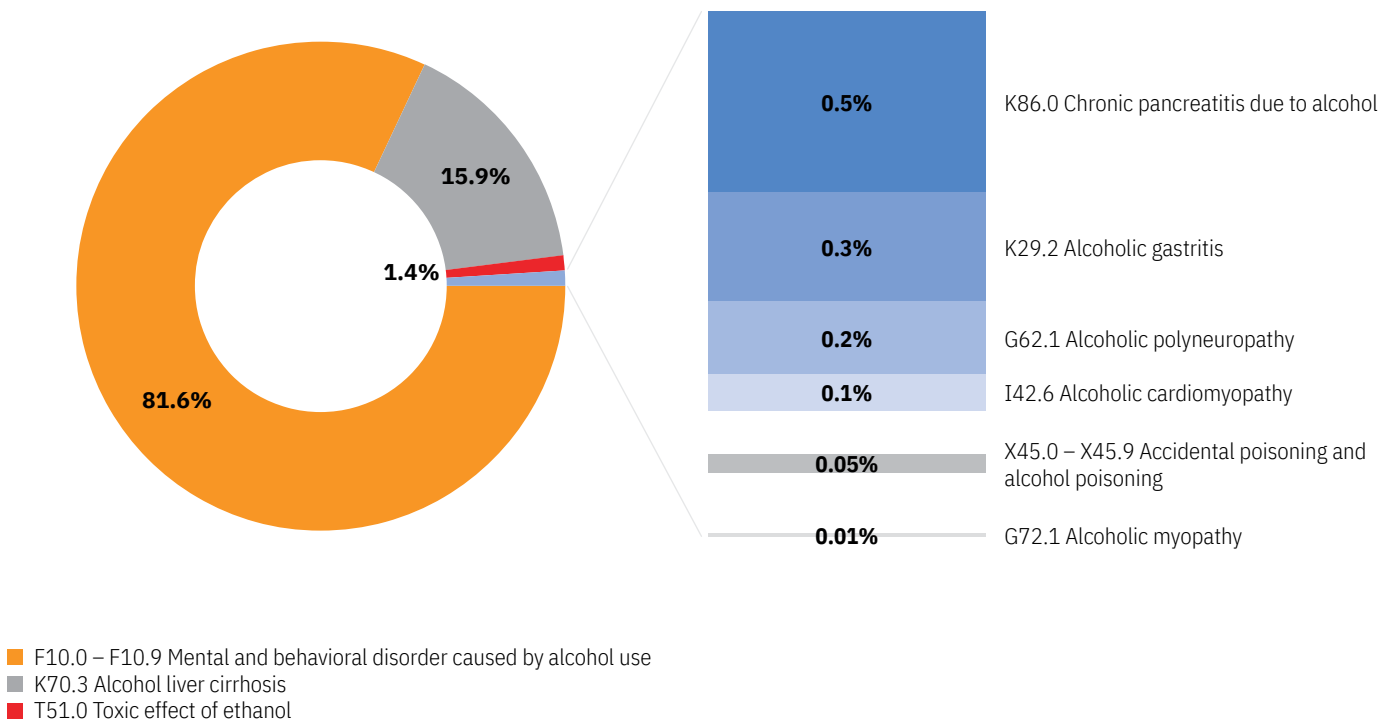
was 10.4 liters per person. Based on the obtained data (Table 2), we can conclude that in almost all analyzed countries, there has been a decrease in alcohol consumption per person over the last ten years, except for five states in which, on the contrary, there has been an increase – the Czech Republic (from 11.4 to 11.6), Lithuania (from 9.8 to 12.1), Poland (from 10 to 10.7), Sweden (from 7.4 to 7.5) and the USA (from 8.6 to 9.3).

At the same time, all the mentioned countries with increased alcohol consumption increased their excise tax during the period under review. After a gradual increase in consumption tax, Poland currently has the fourth highest consumption tax and Sweden the second highest consumption tax of the analyzed OECD countries.

During the analyzed period, the Slovak Republic improved by 0.2 liters of alcohol per person, as its consumption decreased from 10.1 in 2010, 2012, 2014, and 2016 to 9.9 in 2020. Even so, this statistic is unflattering, as alcohol consumption brings many side effects in the form of serious medical conditions. After all, alcohol consumption brings many side effects in the form of serious health conditions. Even though the consumption of alcohol between 2010 and 2020 had a slightly fluctuating development, it had a more pronounced effect on the health of the inhabitants. Completed hospitalizations for diseases in which the main cause of their occurrence is alcohol, according to the gender of the patient for the years 2014–2021, are shown in Figure 2. From the research carried out by the National Center



**Figure 3** | Structure of hospitalization for diseases in which alcohol is the main cause of their occurrence



Source: modified by NCZI

for Health Information, we can conclude that despite the decrease in alcohol consumption, there was 2015 to 2019 a significant increase in hospitalizations, the main cause of which was the occurrence of alcohol. The decrease in hospitalizations occurred after 2019. Regarding the ratio of hospitalized men and women, men have a significant majority during the analyzed period, up to three times as much. Interestingly, in 2015 and 2021, there was an increase in the number of hospitalized women, even though there was a decrease in hospitalizations for men in these years.

Specifically, the structure of hospitalizations for diseases in which alcohol is the main cause of their occurrence in 2021 is shown in *Figure 3*. As we can see, according to NCZI statistics, the most common side effect is a mental and behavioral disorder caused by alcohol use. It represents up to 81.6% of the total number of hospitalizations. The second most common health problem is alcoholic liver cirrhosis, which accounts for 15.9% of hospitalizations, and the toxic effect of ethanol (1.4%) is the third most common reason for hospitalization. Chronic pancreatitis due to alcohol, Alcoholic gastritis, Alcoholic polyneuropathy, Alcoholic cardiomyopathy, Accidental poisoning and alcohol poisoning and Alcoholic myopathy are the other most common diseases and hospitalizations due to alcohol consumption. Still, their incidence is lower than 1%.

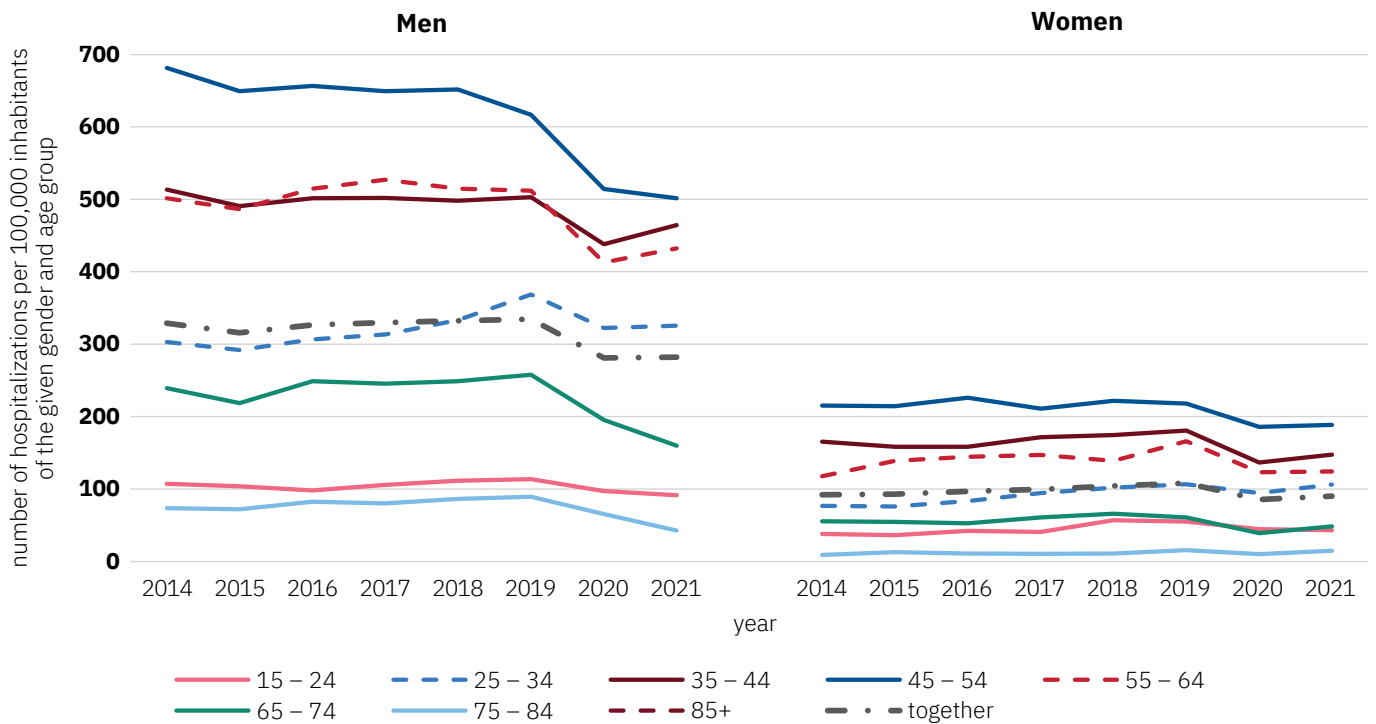
According to the research, which was carried out between 2014 and 2021 by the National Center for Health Information, completed hospitalizations by gender and age structure for the diagnosis F10.0–F10.9 Mental and behavioral disorder caused by alcohol use, which represents the largest group of health problems (up to 81.60%) as a negative impact on health due to alcohol use, can be seen in *Figure 4*. The available statistics clearly show that the male gender is represented significantly higher in this diagnosis, in some years up to three times compared to women. The highest numbers of hospitalized men in the entire analyzed period are in the age group of 45–54 years, i.e. the productive age, and the lowest numbers are in the category under 14 years. The highest number of hospitalized men was 681.6 in the age category 45–54.

On the contrary, the female gender achieves the lowest number of hospitalizations due to alcohol use in the entire analyzed period in the 85 years and older category. This fact is very alarming, as women under the age of 14 reach a higher number of hospitalizations than men, and only in seven of the eight analyzed years. As for the age category that has the highest number of hospitalizations is the same as for men – 45 to 54 years.

Likewise, for both sexes, the development of the number of hospitalizations is the same until the age of 45. It has a rising tendency. It culminates in the years 45 to 54 and from the age of 55 it has a decreasing character.

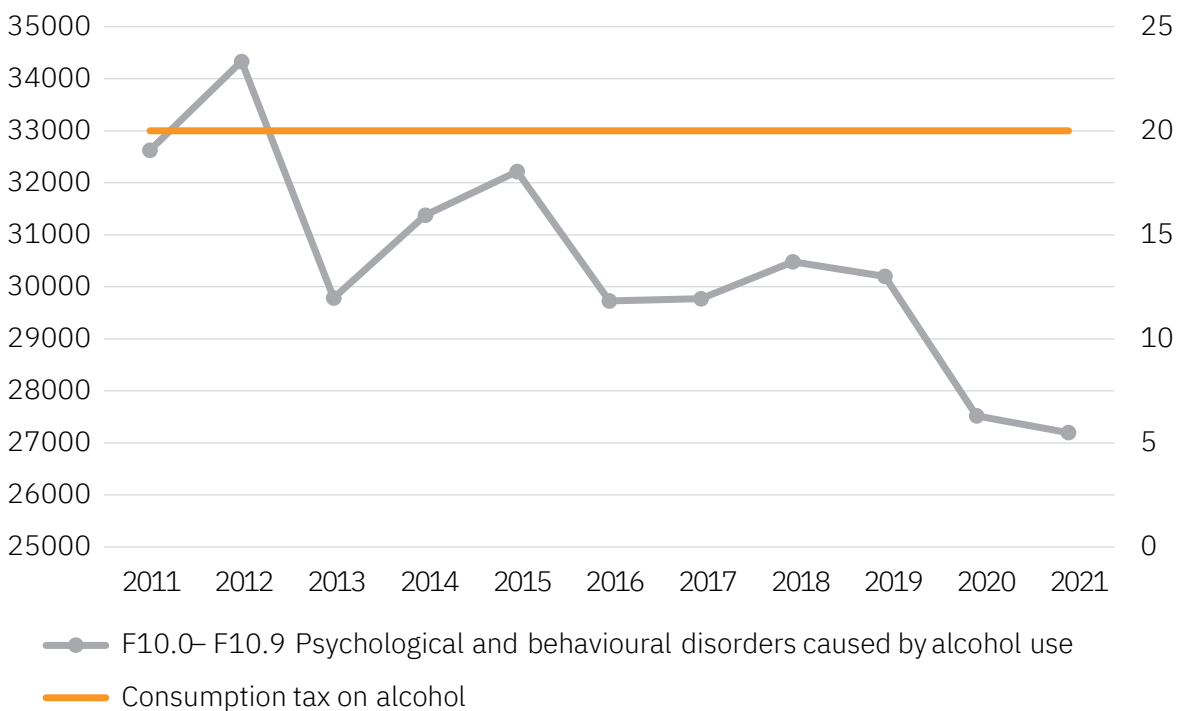


**Figure 4 |** Completed hospitalizations for mental and behavioral disorders caused by alcohol use by gender and age groups of the patient



Source: modified by NCZI

**Figure 5 |** The impact of excise tax on alcohol consumption and its associated addiction



Source: own processing

### 3.2 Tax impact on alcohol consumption

The development of excise taxes in the territory of the Slovak Republic has stayed the same since 2011. The change from 19% to 20% occurred in 2011. Since then, they have remained constant at 20% until today. In contrast to a constant consumption tax, the rate of alcohol consumption and the associated negative impact of alcohol on human health are constantly changing. Graphic processing of the impact of excise taxes on alcohol consumption and related addiction can be seen in *Figure 5*.

The development of alcohol consumption and related addictions has changed significantly since 2011. The highest number of psychological disorders and behavioral disorders caused by alcohol consumption was achieved in 2012 when the number of people hospitalized with this diagnosis was up to 34,335 people. Subsequently, in 2013 there was a significant decrease in hospitalizations to 29,788 persons, but in 2014 and 2015, had an upward trend again. Since 2019, however, we can note an annual decrease in hospitalized persons diagnosed with psychological and behavioral disorders caused by alcohol consumption. In 2021, the lowest number of hospitalized persons with this diagnosis was recorded (27,198 persons) for the entire analyzed period from 2011 to 2021.

### 4 CONCLUSIONS

Unlike other goods that are subject to excise duty and have a positive effect on the consumer, alcohol, and alcohol consumption have only one positive effect: the increase in the state budget of individual states. However, the consumption of alcohol brings with it a large number of negative effects on our health. It is not only short-term intoxication with alcohol, but in the long term, alcohol consumption is largely involved in the development of serious diseases, such as psychological disorders and behavioral disorders caused by alcohol use, alcoholic cirrhosis of the liver, the toxic effect of ethanol, chronic pancreatitis caused by alcohol, alcoholic gastritis, alcoholic polyneuropathy, and many others. Some OECD countries have attempted to combat this alcohol addiction by increasing excise taxes on alcohol. The result was only an increase in the price of alcohol, although they expected a reduction in the amount of alcohol consumed simultaneously. However, according to the research and comparative analysis we have carried out, we have concluded that the demand for this article cannot be influenced by increasing or decreasing the consumption tax on alcohol. The largest number of alcohol users are in the age category of 45–54 years, in a 3:1 ratio of men to women, representing the productive age for both sexes. For this reason, it is necessary to focus on other forms of awareness, for example, measures in the field of health publicity, which will most effectively impress these alcohol consumers with their media influence. This could also be the subject of further research on the media campaign's impact and health publicity on different age groups regarding alcohol use and related serious diseases.

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**Authors' contributions:** AB: Structure of the paper's outline, establishing research question as well as data research within the WHO and OECD databases. Conceptualization of general conclusions and evaluation of obtained data and the formal side of the contribution. Structure of establishing results and discussion part, language corrections and processing data to figures with description. LB: Data research within the Eurostat databases, their processing, and drawing conclusions from the

information obtained. Formation of general conclusions and evaluation of obtained data and the formal side of the contribution. AS: Data processing and formal styling. Processing of literature review.

**Declaration of interest:** The authors of the article have not any conflict of interest.

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