



HARMONISATION OF EXCISE DUTIES ON ALCOHOL WITHIN THE EUROPEAN UNION

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Abstract

The article discusses about the excise duties on alcohol. The main aim is to analyse the situation of EU excise duties harmonisation on alcohol using the research methods like - analysis, synthesis and comparison of scientific literature; statistical and comparative analysis as well as systematisation of quantitative data; graphical visualisation. There was identified, that in 2022, European Union (EU) member states generated approximately €30 billion from alcohol excise duties, constituting a significant component of indirect tax revenue for numerous countries. Excise duties are indirect taxes levied on the sale or use of specific products, such as alcohol, tobacco, energy products, and electricity. Harmonizing excise duties on alcohol within the EU is crucial for reducing harmful alcohol consumption, reduce health issues and social harm, such as addiction and alcohol-related violence. A unified approach ensures fair competition in the internal market, prevents tax evasion, and secures stable fiscal revenues for member states. Furthermore, coordinating excise regulations can improve public health measures and help the EU achieve its overarching goal of decreasing alcohol-related expenses on healthcare systems. Despite ongoing efforts to harmonize excise duties, EU member states continue to demonstrate a significant range of approaches to alcohol taxation, often reflecting their distinct economic, social, and cultural contexts.

Keywords: alcohol, excise duty, harmonization, revenue.

Introduction

According to the European Commission (n.d.), excise duties are described as indirect taxes on the sale or use of certain products such as alcohol, tobacco, energy products and electricity. There are common EU rules to ensure that excise duties are applied in the same way and to the same products across the EU. However, the revenue from excise duties is collected separately in each country. The separate excise duties collection allows individual countries to generate revenue for their budgets and to consider national cultural and economic factors. Also the collection of excise duties helps to avoid trade distortions in the internal market, ensures fair competition between businesses and reduces the administrative burden on businesses. Extensive analysis of a variety of sources has shown that alcohol consumption is associated with an increased risk of many family, work and social problems, including violence, economic difficulties, absenteeism, reduced productivity, unintentional injuries, traffic accidents, criminal acts, homicide and suicide. Since higher excise duties lead to higher alcohol prices, they play a crucial role in reducing alcohol consumption, which is essential for mitigating these significant social and economic harms on a global scale.

The harmonization of excise duties on alcohol within the EU is a critical aspect of the EU's internal market strategy. The EU has the intention to standardize excise duties to ensure a level playing field and promote the free movement of goods. However, achieving harmonization is complex due to the different economic, social, and public health priorities of individual countries.

This paper investigates the current situation of excise duty harmonization on alcohol across the EU, focusing on the main differences between the EU countries on tariffs and revenue using graphical visualisation. Also in this article, we will analyse the concept of excise duties on alcohol, focusing on their purpose, economic implications, and the rationale behind the need for harmonization. Lastly, we will evaluate the potential benefits and drawbacks of a harmonized excise duty structure on alcohol. By following these three aims, the article will provide a thorough investigation of excise duty harmonization and its implications for the EU.

Research object - excise duties harmonisation on alcohol.

Research aim: to analyse the situation of EU excise duties harmonisation on alcohol.

The following **objectives** have been set to achieve the aim:

- 1. Identify the situation of excise duty application on alcohol in the EU.
- 2. Analyse the concept of excise duties on alcohol and needs of harmonization.
- 3. Evaluate the potential benefits and drawbacks of a harmonized excise duty on alcohol structure.

Research methods - analysis, synthesis and comparison of scientific literature; Statistical and comparative analysis as well as systematisation of quantitative data; graphical visualisation.

Situation of excise duty application on alcohol in the EU

Excise duties on alcohol contribute substantially to the budgets of EU member states. According to recent data (European Commission, 2023), the EU as a whole collects billions of euros annually from excise duties on alcoholic

beverages. In 2022, EU countries collected approximately €30 billion from alcohol excise duties (European Commission, 2023), representing a significant portion of indirect tax revenue for many member states.

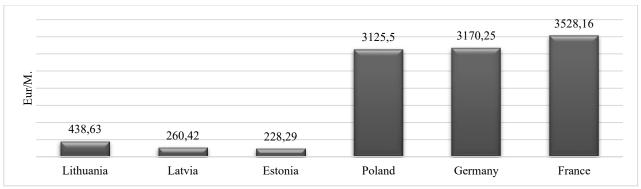
The contribution of excise duties to national revenues varies widely across the EU, depending on the level of alcohol consumption, the structure of the alcohol market, and the excise duty rates applied. Countries with higher excise duties on alcohol, such as Finland, Sweden, and Ireland, generate proportionally more revenue from this source compared to countries with lower tax rates, such as Slovenia, Luxembourg and Cyprus (European Commission, 2023)

For example (European Commission, 2023):

- In Finland, excise duties on alcohol generated over 1,500 million euros in 2022, making up around 1.4% of the country's total tax revenue.
- In contrast, Slovenia where excise duties on wine are minimal or non-existent, collected less than €125 million from alcohol excise duties in the same year.

Fig. 1 illustrates the revenues from excise duties on alcoholic beverages in six selected EU countries—Lithuania, its three neighbouring countries, and the two largest economies of the EU—in millions of euros in 2022. It highlights a significant gap between Poland, Germany and France, which have much higher revenues compared to Lithuania, Latvia and Estonia. Certainly, this could be due to differences in population size (for example, in 2020 alcohol consumption per capita was higher in the Baltic states than in Poland, Germany or France), alcohol consumption rates and taxation policies.

The country with the highest revenue, generating 3528,16 million euros is France. The second highest country is Germany, with revenue of 3170,25 million euros and close behind Germany is Poland, with 3125,50 million euros. Looking at the Baltic States – Lithuania has 438,63 million euros revenue. Lower is Latvia, generating 260,42 million euros, and smallest revenue has Estonia – 228,29 million euros. As we can see, Lithuania generates more revenue from alcohol excise duties than Latvia and Estonia together.



Source: European Commission (2023)

Fig. 1. Revenues from taxes on consumption (excise duties and similar charges) other than VAT - Alcoholic beverages in 2022

Despite the harmonization efforts that have been in place since the adoption of Council Directive 92/84/EEC, excise duty rates on alcohol still vary considerably across the EU. These rates depend on the type of alcoholic beverage (beer, wine, spirits) and the percentage of pure alcohol it contains. Below is a general overview of the excise duty structures applied to different categories of alcohol (European Commission, 2022):

- **Spirits:** Among all alcoholic beverages, spirits are subject to the highest excise duties in most EU member states. Northern European countries tend to impose the highest excise duty rates on spirits. For example:
 - o Finland: Excise duty on spirits is approximately €34.50 per liter of pure alcohol.
 - o Sweden: Charges around €31.70 per liter of pure alcohol.
 - ⊙ Germany: Excise duty on spirits is much lower at around €13.03 per liter of pure alcohol.
- **Beer:** Excise duty on beer is usually calculated based on the percentage of pure alcohol it contains or the original gravity of the beer. Again, there are significant differences between member states:
 - o Ireland: One of the highest excise duties on beer at €22.55 per hectolitre per degree of alcohol by Plato scale (°P).
 - o Germany: Has much lower excise duties, charging only €0.787 per hectolitre per degree °P.
- Wine: Excise duty on wine shows the greatest disparity between EU member states, with some countries levying no tax at all. Southern European wine-producing countries, where wine is considered part of the cultural heritage, tend to apply little or no excise duty:
 - o France and Italy: Both have zero excise duty on wine.
 - o Ireland: Imposes €3.19 per bottle of wine, reflecting its stricter public health policy (Department of Finance, Ireland, 2024).

These variations highlight the dual role of excise duties as both a revenue-generating tool and a public health instrument. Countries with higher alcohol taxes often use excise duties to discourage excessive alcohol consumption and lighten the associated social and health costs (WHO, n.d.).

The concept of excise duties on alcohol and needs of harmonization

The literature analysis showed that several scientists (Cnossen, 2010; Babor et al., 2022; Diewert and Lawrence, 1999) were focused on excise duties on alcohol. Excise duties on alcohol play an important role in government revenue (Babor et al., 2022) as well, help to prevent health and social issues (Österberg and Karlsson, 2002; Roughan, 2021). Many studies highlight the severe damage caused by alcohol, which can even lead to death in some cases (Österberg and Karlsson, 2002).

An excise tax in different countries is set by legislation and is usually levied on certain goods or services at the time of purchase. Typically, these taxes are paid by merchants who then transfer the cost to consumers through increased prices. There is an important difference between the moment a product becomes subject to excise duty and the moment when this duty has to be paid. Most excise goods become subject to excise duty as soon as they are produced, or imported into the EU. This duty can be suspended, meaning it doesn't have to be paid until the product is released for consumption (Kagan, 2024).

To begin with, it is essential to comprehend the nature of excise duties, their primary objectives, and their significance within the EU. According to the official website of the European Commission (n. d.), excise duties are an indirect tax, typically levied upon sale or use of specific products, such as alcohol, tobacco, energy products, and electricity. EU rules explain which products are subject to excise duties and how the duties must be applied to them. Additionally, EU legislation specifies the lowest excise duty rates that must be implemented, but individual EU nations have the option to impose higher tax rates if they wish. The total revenue generated from excise duties is directed entirely to the respective country where the taxes are collected. Furthermore, as highlighted previously, excise duties constitute a substantial portion of the indirect tax framework in numerous member states. This underscores one of the key reasons for the importance of effective excise duty collection.

The main objective of the existing EU common rules is to ensure that excise duties are applied in the same way and on the same products throughout the EU. This uniformity helps to prevent trade distortions within the Single Market, guarantees fair competition among businesses, and alleviates administrative burdens for companies. It is Council Directive 92/83/EEC (European Commission, 1992) that outlines the regulations governing the structures of excise duties on alcohol and alcoholic beverages, including beer, wine, other fermented beverages, intermediate products, ethyl alcohol, and miscellaneous. In particular, it defines and classifies the different types of alcohol and alcoholic beverages, and provides a legal framework for reduced rates in some sectors, exemptions and certain derogations (European Commission, 2016).

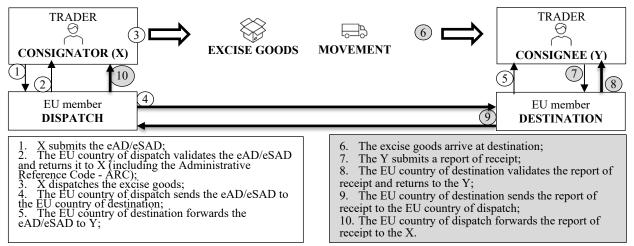
Certain problems have been identified and persistent inefficiencies may lead to distortions of the internal market. The results of the evaluation were included in a report presented by the European Commission to the EU Council in 2016, which subsequently agreed to review the Directive 92/83/EEC. In 2018, the European Commission proposed a draft law intended to enhance the regulatory framework accordingly. The Council of the EU held a number of discussions on this matter and eventually reached an agreement by which Council Directive 92/83/EEC was supplemented in 2020 (European Sources Online, 2020). The reform includes the main changes (European Council of the European Union, 2020):

- increasing the threshold for lower strength beer that can benefit from reduced rates from 2,8% volume to 3,5% volume. This change provides incentives for consumer to choose low-strength alcoholic drinks over stronger ones, thereby reducing alcohol intake.
- extending the special regime of reduced excise duty rates for small beer and ethyl alcohol producers to producers of other fermented beverages, such as cider.
- putting in place a common certification system in the EU for confirming the status of independent small producers, recognisable in all EU countries.
- clarifying the conditions for application of the exemption from excise duty rules for denatured alcohol, used for example in cleaning products.

The most recent excise update was the Excise Movement and Control System (EMCS). EMCS is a computerised system used to record and monitor the movement of excise goods, such as alcohol, tobacco and energy products, within the EU. The objectives of the EMCS are (Excise Movement and Control System, n.d.):

- combating fiscal fraud through the provision of real-time information and checks on goods transported under duty-suspension:
 - ensuring the secure commercial movement of excise goods;
 - simplifying procedures for traders by implementing a standardized electronic system across the EU;
 - accelerating the release of guarantees upon the arrival of goods at their final destination;
 - promoting a paperless administration system.

Under the EMCS, the movement of excise goods is meticulously documented at each stage via an electronic Administrative Document (e-AD) for duty-suspended goods. For duty-paid movements, the process is documented using an electronic Simplified Administrative Document (e-SAD) (Excise Movement and Control System, n. d.). A detailed explanation of this process can be found in the fig. 2 below.



Source: Excise Movement and Control System, n. d.

Fig. 2. EMCS working scheme

As illustrated in Figure 2, the movement of excise goods under the EMCS is comprehensively documented at each stage using an electronic Administrative Document (e-AD) for duty suspension goods, or an electronic Simplified Administrative Document (e-SAD) for duty paid movements.

The main aim of the excise duties is that taxes should be applied to goods that are regarded as having a form of social harm, and as such are designed to decrease the consumption of that good, and/or fund the cost of that social harm (Roughan, 2021). The significance of social harm is evident, as demonstrated by Österberg and Karlsson (2002). This indicates that the problem in question has been longstanding. Within the European Region of the World Health Organization (WHO) alcohol consumption is estimated to be responsible for about 9 percent of the total disease burden increasing the risk of liver cirrhosis, certain cancers, raised blood pressure, stroke and congenital malformations (Österberg and Karlsson, 2002). Moreover, alcohol consumption is associated with an elevated risk of various family, workplace, and social challenges, including but not limited to violence, financial difficulties, absenteeism, decreased productivity, unintentional injuries, traffic accidents, criminal behaviour, homicide, and suicide (Österberg and Karlsson, 2002). This reinforces the necessity of implementing measures aimed at mitigating these issues and safeguarding individuals. Research has demonstrated the gravity of these challenges. For instance, in the European Region of the WHO between 40 and 60 per cent of all deaths from intentional and unintentional injuries are estimated to be attributable to alcohol consumption. It has also been estimated that in the European Region of the WHO, altogether 55,000 young people died in 1999 from causes related to alcohol consumption (Österberg and Karlsson, 2002). The other example is not about the EU, but it shows that the same situation we have all over the world. The similar opinion was expressed by Ironfield, Diewert and Lawrence (1999) in the article 'The Alcohol Excise: A Review'. The discussion focuses on the financial impact of alcohol-related costs, which encompass healthcare expenses, loss of life, and injuries resulting from motor vehicle accidents and assaults. It is posited that, in the context of these significant negative externalities, the implementation of a uniform excise tax could enhance overall societal welfare if the tax rate is calibrated based on the weighted average of the marginal net externalities experienced by different drinkers. Following an assessment of the value of this net externality, the paper indicates that the existing excise tax rate is insufficient and that current consumption levels exceed what is necessary to optimize societal welfare.

The concerns presented are undeniably significant and warrant serious consideration, as they hold relevance on a global scale. This underscores the necessity of implementing specific measures to mitigate alcohol consumption and highlights the importance of excise taxes in this context.

Benefits and drawbacks of harmonized excise duty on alcohol structure and its comparison in the EU

The harmonization of excise duties on alcohol within the EU has been a contentious and complex policy area, balancing the interests of public health, trade, and revenue generation. Harmonizing these taxes across EU member states aims to facilitate free trade, prevent tax-induced market distortions, and support public health objectives. However, differences in economic structures, social policies, and cultural attitudes toward alcohol consumption have led to both benefits and drawbacks in the implementation of harmonized excise duties. This part will examine the key benefits and drawbacks of a harmonized alcohol excise duty structure in the EU and compare approaches taken by different member states to shed light on the effectiveness and limitations of the policy.

The literature review allowed us to identify the benefits of a harmonised excise duty on alcohol.

• **Public Health Improvement.** Harmonized excise duties can be an effective tool for improving public health across the EU. While excise duties in general can make alcohol less affordable, harmonization ensures that all member states

adhere to a minimum taxation level, preventing price undercutting due to local political decisions or economic incentives. By setting minimum excise duty rates, harmonization helps maintain higher alcohol prices across the EU, which has been shown to reduce consumption—particularly among heavy drinkers and young people—ultimately mitigating alcohol-related health issues such as liver disease, mental health problems, and alcohol-induced accidents (WHO, 2014).

- Enhanced Fiscal Revenue. Alcohol excise duties contribute significantly to government revenues. A harmonized structure enables member states to optimize tax revenue collection by reducing cross-border shopping and smuggling, which can erode tax bases. With clearer tax guidelines, member states may benefit from a stable and predictable revenue stream, which can be allocated to public health programs, enforcement, and other societal needs. This harmonization, therefore, balances revenue collection with social responsibility, addressing the external costs of alcohol consumption (European Commission, 2023)
- Facilitating Trade and Reducing Market Distortion. A primary objective of the EU's harmonized excise duty policy is to prevent market distortions and facilitate the free movement of goods across member states. The EMCS plays a crucial role in this by allowing for real-time electronic tracking of excise goods, reducing paperwork, and preventing fraud. While harmonization also helps minimize price disparities that contribute to cross-border shopping, its broader impact lies in enhancing trade efficiency and simplifying compliance for businesses operating within the single market (Cnossen, 2010).

We have also found in the literature drawbacks to a harmonized excise duty on alcohol.

- Challenges to National Sovereignty and Policy Autonomy. A harmonized excise duty policy may conflict with member states' autonomy to tailor tax policies to their unique social and economic contexts. Alcohol consumption habits vary widely across the EU, influenced by cultural norms and traditions. For instance, southern European countries such as Italy and Spain have traditionally lower excise duties as wine is considered part of daily life and less associated with harmful drinking behaviours. Harmonization can limit the flexibility of these states to set tax policies that align with local values, potentially eroding public support for EU policies (WHO, 2014).
- Economic Disparities Among Member States. The economic diversity among EU countries creates challenges for implementing a one-size-fits-all approach to alcohol excise duty. Wealthier countries, such as Germany or France, can better absorb high excise duties compared to economically weaker states like Bulgaria or Romania, where even a slight tax increase can disproportionately impact consumers. For lower-income EU nations, higher excise duties can contribute to financial strain on households and exacerbate socioeconomic inequalities, as alcohol becomes relatively more expensive compared to other goods (Cnossen, 2010).
- Encouragement of Illegal Alcohol Trade. High and harmonized excise taxes can sometimes encourage the black market and illegal production of alcohol. In countries where residents may be less willing to pay elevated prices due to increased taxes, an underground market can thrive, leading to a rise in the unregulated sale of alcohol, often with dangerous consequences. Unregulated alcohol can pose significant health risks, as it is not subject to the quality and safety standards enforced on legally sold products (Babor et al., 2022).

Summarising the results of the literature review, we can conclude that the harmonisation of excise duties on alcohol in the EU has had both advantages and disadvantages. While it promotes free trade, enhances public health, and simplifies administrative processes, it also imposes significant challenges, particularly regarding national sovereignty, economic disparity, and illegal trade. By comparing various member states' approaches, it becomes clear that while harmonization may streamline certain processes, a fully harmonized structure may not be feasible given the diversity in economic and social contexts across the EU. A flexible harmonized policy, which accounts for local specificities while setting a foundational minimum, may be the optimal approach, allowing the EU to uphold the single market principles while respecting the distinct needs of its member states.

Conclusions

- 1. It was identified, that in 2022, EU member states generated approximately €30 billion from alcohol excise duties, constituting a significant component of indirect tax revenue for numerous countries. Nations that impose higher excise duties on alcohol tend to yield proportionally greater revenue from this source compared to those with lower tax rates. France ranks as the highest revenue generator, followed closely by Germany, with Poland trailing shortly behind. Despite ongoing harmonization efforts initiated by Council Directive 92/84/EEC, excise duty rates on alcohol continue to vary significantly across the EU.
- 2. From our analysis, we found that excise duty is an indirect tax levied on the sale or use of certain goods such as alcohol, tobacco, energy, electricity, etc. It is crucial to ensure that excise duties are applied uniformly to the same products across the Union. This consistency helps prevent trade distortions within the Single Market, ensures fair competition among businesses, and reduces administrative burdens for companies. The extent of these responsibilities is set out in Council Directive 92/83/EEC, which came into force in 1992 and was amended in 2020. Following this, the EU introduced a computerised system for recording and monitoring the movement of excise goods, namely alcohol, tobacco and energy, known as the Excise Movement and Control System (EMCS). Harmonizing excise duties on alcohol within the EU is crucial for reducing harmful alcohol consumption, reduce health issues and social harm, such as addiction and alcohol-related violence. A unified approach ensures fair competition in the internal market, prevents tax evasion, and

secures stable fiscal revenues for member states. Furthermore, coordinating excise regulations can improve public health measures and help the EU achieve its overarching goal of decreasing alcohol-related expenses on healthcare systems.

3. There was evaluated the key benefits and drawbacks of a harmonized alcohol excise duty structure in the EU and compare approaches taken by different member states to shed light on the effectiveness and limitations of the policy. The main benefits of a harmonized excise duty on alcohol: facilitating trade and reducing market distortion, public health improvement, enhanced fiscal revenue and administrative simplicity and transparency. The main drawbacks of a harmonized excise duty on alcohol: challenges to national sovereignty and policy autonomy, economic disparities among member states, encouragement of illegal alcohol trade and regional price variations and "border effects".

References

- 1. Babor, T., et al. (2022). *Alcohol: No Ordinary Commodity*. 3rd Edition. Oxford University Press. Available at: https://onlinelibrary.wiley.com/doi/epdf/10.1111/add.16003
- 2. Cnossen, S. (2010). The Economics of Alcohol Taxation. Available at: https://icepp.gsu.edu/files/2015/03/ispwp1018.pdf
- 3. European Commission (2020). Council Directive (EU) 2020/1151 of 29 July 2020 amending Directive 92/83/EEC on the harmonization of the structures of excise duties on alcohol and alcoholic beverages. Available at: http://data.europa.eu/eli/dir/2020/1151/oj
- 4. European Commission (2022) Indirect taxes Alcoholic Beverages. Available at: https://ec.europa.eu/taxation_customs/tedb/#/home
- 5. European Commission. (1992). Council Directive 92/83/EEC on the harmonization of the structures of excise duties on alcohol and alcoholic beverages. Available at: http://data.europa.eu/eli/dir/1992/83/2022-01-01
- 6. European Commission. (2016). Report from the commission to the council on the evaluation of Council Directive 92/83/EEC on the structures of excise duties on alcohol and alcoholic beverages. Available at: https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2016:676:FIN
- 7. European Commission. (2023) Excise duty tables. Available at: https://taxation-customs.ec.europa.eu/document/download/85222bc8-95fe-4ff8-bc7c-37ad3b6e39eb en?filename=excise duties alcohol en.pdf
- 8. European Commission. (n.d.) Excise Duties. Available at: https://taxation-customs.ec.europa.eu/taxation/excise-duties en
- 9. European Council Council of the European Union. (2020). Excise duty: provisional agreement on modernised taxation rules for alcohol. Available at: https://www.consilium.europa.eu/en/press/press-releases/2020/06/24/excise-duty-provisional-agreement-on-modernised-taxation-rules-for-alcohol/
- 10. European Sources Online (2020). Council Directive (EU) 2020/1151 amending Directive 92/83/EEC on the harmonization of the structures of excise duties on alcohol and alcoholic beverages. Available at: https://www.europeansources.info/record/proposal-for-a-directive-amending-directive-92-83-eec-on-the-harmonization-of-the-structures-of-excise-duties-on-alcohol-and-alcoholic-beverages/
- 11. European Union. (n.d.) Paying excise duties. Available at: https://europa.eu/youreurope/business/taxation/excise-duties-eu/paying-excise-duties/index_en.htm
- 12. Excise Movement and Control System (n. d.). Available at: https://taxation-customs.ec.europa.eu/taxation/excise-duties/emcs en#purpose
- 13. Ironfield, D., Diewert, E. and Lawrence, D. (1999). The Alcohol Excise: A Review. Available at: https://www.researchgate.net/publication/254399314
- 14. Kagan, J. (2024). Excise Tax: What It Is and How It Works, With Examples. Available at: https://investopedia.com/terms/e/excisetax.asp
- 15. Österberg, E., Karlsson, T. (2002). Alcohol policies at the European Union level. *Alcohol Policies in EU Member States and Norway*, 43. Available at: https://ec.europa.eu/health/ph projects/1998/promotion/fp promotion 1998 a01 27 en.pdf#page=40
- 16. Roughan, G. (2021). What is excise duty? A guide for alcohol producers. Available at: https://www.unleashedsoftware.com/blog/what-is-excise-duty-a-guide-for-alcohol-producers/
- 17. World Health Organization. (2014). Global Status Report on Alcohol and Health. Available at: https://books.google.lt/books?hl=lt&lr=&id=qnOyDwAAQBAJ&oi=fnd&pg=PR7&dq=World+Health+Organization.+ (2014).+Global+Status+Report+on+Alcohol+and+Health&ots=a2nmOGsj8m&sig=4xhst42ZAQw62cpvASSljqv8_Ec &redir_esc=y#v=onepage&q=World%20Health%20Organization.%20(2014).%20Global%20Status%20Report%20on%20Alcohol%20and%20Health&f=false
- 18. Department of Finance, Ireland. (2024). General excise tax strategy group 24/08. Government of Ireland. Available at: file:///C:/Users/37061/Downloads/20f5e1cf-da8c-44a6-aebb-42fd8a8b5a2b.pdf
- 19. World Health Organization. (n.d.). Pricing policies. WHO. Available at: https://www.who.int/initiatives/SAFER/pricing-policies?