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Exploring the determinants of regional differences in alcohol consumption patterns in European countries: A special focus on the role of policies and social norms

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Much attention has been paid to the relative impact of various factors influencing drinking behaviour. In Europe, this debate has also been translated into analysing potential differences in drinking behaviours between countries in Northern and Southern regions. This special focus chapter describes the drinking patterns and outcomes and the severity of the alcohol policies in different regions of Europe. It also sheds new light on other factors, such as social norms, that may explain changes in drinking patterns and outcomes.

Key messages

- There is no simple north-south divide to characterise the regional differences in drinking patterns and outcomes in Europe. Southern region countries show low drinking levels, low prevalence of risky drinking patterns and low alcohol-attributable burden on health. The Nordic countries also report relative low drinking levels and low alcohol-attributable burden on health, but they have relatively high prevalence of alcohol dependence. In contrast, the Baltic countries have the highest drinking levels, having experienced the sharpest increase in alcohol consumption over recent decades. Baltic countries also have relatively high prevalence of alcohol dependence and high alcohol-attributable burden on health. Generally, countries in the Eastern and West-Central regions are in an intermediate position on these dimensions.
- European countries have implemented a battery of policy actions to prevent harmful alcohol use, but with different degrees of severity. The alcohol control policies are notably more stringent in Nordic countries and in Lithuania. Data for 15 countries show that the increase in the severity of policies observed from 1990 to 2016 is correlated to the reduction in alcohol consumption.
- Beyond policy actions, other factors including genetics, personal characteristics, socio-economic status and environmental factors such as societal drinking norms also influence drinking patterns and outcomes over the life course. These may further contribute to the reduction in alcohol consumption in Southern countries.

3.1. Regional differences exist in alcohol consumption patterns in Europe

Traditional drinking cultures are different between Southern and Northern Europe. Historically, in Southern wine-producing countries, alcohol was commonly consumed with meals, whereas in Northern countries, which often implement alcohol monopolies, alcohol was traditionally consumed less frequently but at higher levels. However, evidence shows some signs of harmonisation over the past 40 years in Europe (Anderson and Baumberg, 2006^[11]). In particular, these traditional drinking patterns tend to vanish among the younger generations. In fact, as discussed in Chapter 2 (Section 2.3), youth drinking rates have generally decreased over time for numerous reasons, including technology and social norms.

This chapter aims to investigate regional differences in patterns of alcohol drinking across Europe and explore the potential reasons behind these differences. It collects evidence from the literature and examines data on drinking patterns and alcohol control policies in European countries. The first section presents drinking patterns and alcohol-attributable burden by contrasting regions in Europe. The second section deals with the severity of alcohol control policies and examines its relationship with alcohol consumption levels. Finally, the last section discusses factors other than the formal policies that influence drinking patterns and outcomes.

For the purposes of this research, European countries are grouped into five main regions, which broadly follow the categorisation proposed in the AMPHORA (Alcohol Measures for Public Health Research Alliance) study (Anderson et al., 2012^[21]). The Nordic region includes: Finland, Iceland, Norway and Sweden; the Baltic region: Estonia, Latvia and Lithuania; the Eastern region: Bulgaria, Croatia, Hungary, the Czech Republic, Poland, Romania, the Slovak Republic and Slovenia; the West-Central region: Austria, Belgium, Denmark, Germany, Ireland, Luxembourg, the Netherlands, Switzerland and the United Kingdom; and the Southern region: Cyprus, France, Greece, Italy, Malta, Portugal and Spain.

3.2. The alcohol problem varies across the regions of Europe

This section presents the level and change in alcohol consumption in the five regions of Europe, and examines other drinking outcomes such as heavy episodic drinking, alcohol dependence and the burden of alcohol on morbidity. The analyses presented in this chapter differ from those in Chapter 2, since the focus here is primarily on European regions as opposed to individual countries. However, the data presented in this chapter match those in Chapter 2, as the same data source is used.

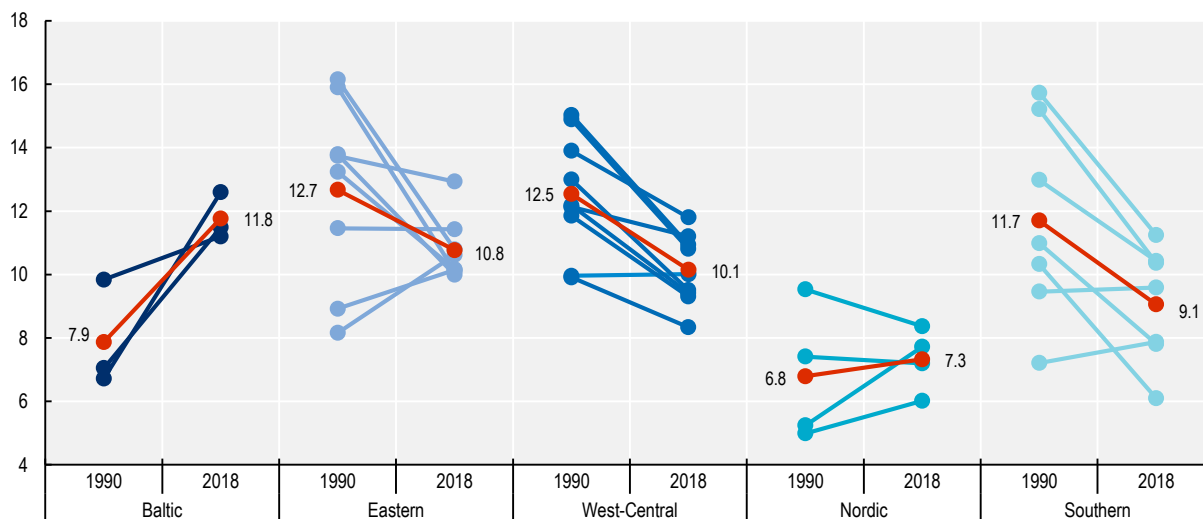
3.2.1. How high is the drinking level?

In 2018, the level of alcohol consumption in the Baltic and Eastern countries was the highest in Europe (see Chapter 2). Figure 3.1 shows that in 2018 adults consumed on average 11.8 litres of pure alcohol in the Baltic countries, 10.8 litres in Eastern countries and at the lower end 7.3 litres in Nordic countries. The level of alcohol consumption in the Nordic countries is lower than in most Southern countries.

The evolution of alcohol consumption varies by region of Europe. The level of drinking significantly increased in the three Baltic countries, from 7.9 litres in 1990 to 11.8 litres in 2018. It stagnated overall in the Nordic countries, although it clearly increased in Iceland. Alcohol consumption dropped in the period 1990-2018 in the other regions: from 11.7 litres to 9.1 litres in Southern countries, from 12.5 litres to 10.1 litres in West-Central countries and from 12.7 litres to 10.8 litres in Eastern countries with the exception of Poland and Romania, where alcohol consumption increased.

Figure 3.1. Change in the level of alcohol consumption, 1990-2018

Per capita recorded alcohol consumption, litres of pure alcohol per year



Note: Blue lines show country-specific trends while red lines show regional averages.

Source: World Health Organization (WHO) (2020^[3]), Global Information System on Alcohol and Health (GISAH), <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

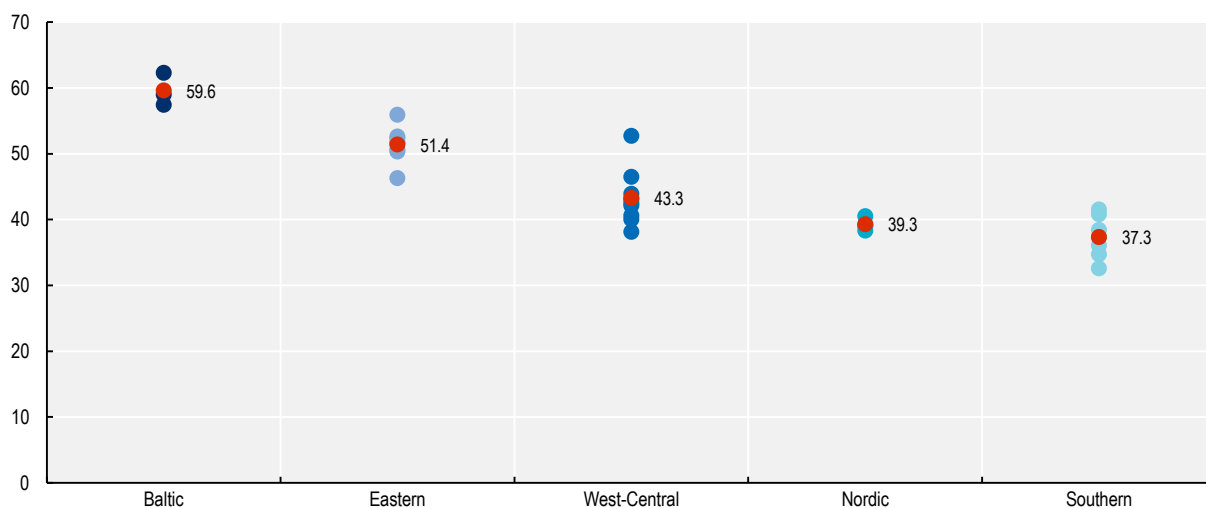
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3.2.2. How risky is the drinking pattern?

The proportion of heavy episodic drinking in the Southern and Nordic regions is relatively low compared to other European countries. Heavy episodic drinking, also called “binge drinking”, corresponds to drinking large quantities of alcohol on a single occasion in the past 30 days. In 2016, 37% of drinkers reported binge drinking in Southern countries, 39% in Nordic countries, 43% in West-Central countries, 51% in Eastern countries and up to 60% in Baltic countries (Figure 3.2). While traditional drinking cultures tended to be historically different between Southern and Northern Europe, the data show that nowadays heavy episodic drinking in the Southern region is as frequent as in the Nordic countries.

Figure 3.2. Prevalence of heavy episodic drinking

Heavy episodic drinking (age 15+), drinkers only, past 30 days (%), 2016



Note: Individual blue dots show country-specific estimates while red dots show regional averages.

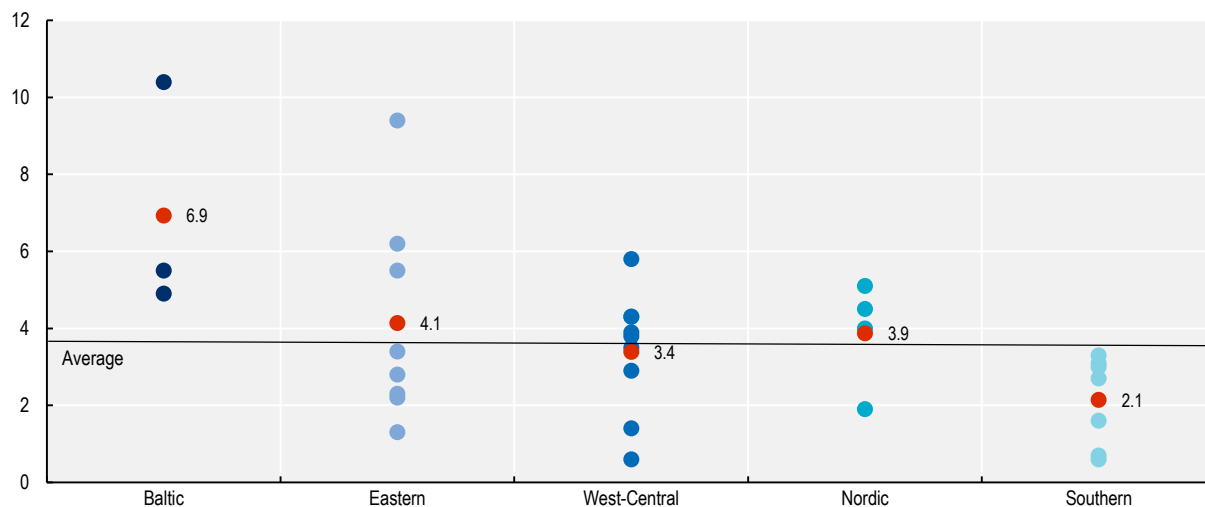
Source: WHO (2020_[3]), GISAH, <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

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Nearly 7% of adults were alcohol dependent in the Baltic countries in 2016 (Figure 3.3). This proportion is close to 4% in Eastern and Nordic countries, 3% in West-Central countries and 2% in Southern countries. Alcohol dependence is most prevalent in the Baltic countries; this is mainly driven by the prevalence in Latvia (10.4% of adults). Among Eastern countries, the prevalence of alcohol dependence varies greatly from 1.3% in Romania to 9.4% in Hungary. Among Nordic countries, alcohol dependence in Norway, Sweden and Finland affects more than 4% of the population, which is relatively more prevalent than in Southern and most West-Central countries.


Figure 3.3. Prevalence of alcohol dependence

Alcohol dependence (age 15+), 12-month prevalence (%), 2016



Note: Individual blue dots show country-specific estimates while red dots show regional averages.

Source: WHO (2020_[3]), GISAH, <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

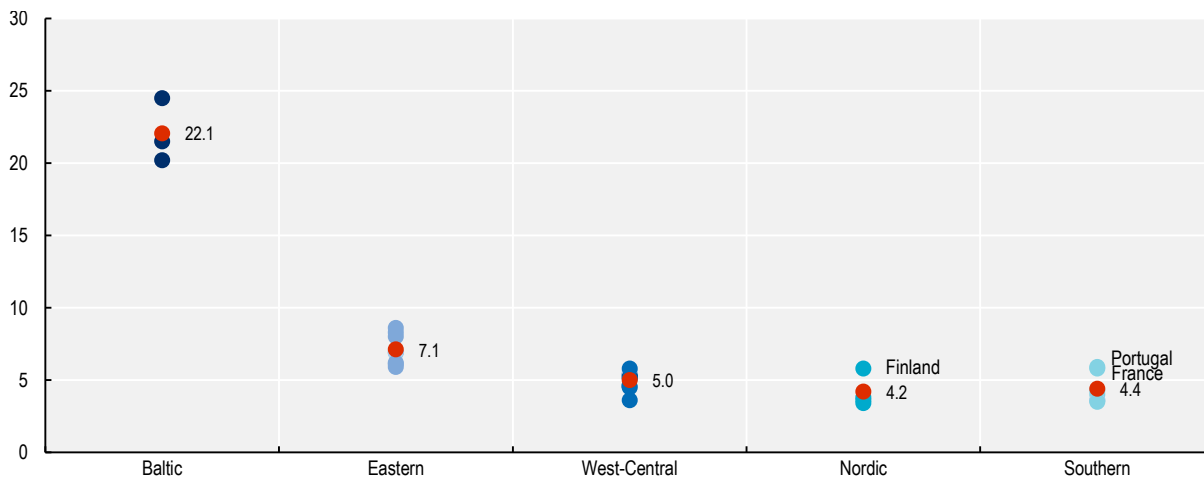
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3.2.3. How big is the burden of alcohol on health?

The burden of alcohol on mortality is heaviest in the three Baltic countries, where more than 20% of all-cause deaths are attributable to alcohol. It is lowest in Southern and Nordic countries, where less than 5% of deaths are attributable to alcohol. Figure 3.4 shows that the alcohol-attributable fraction of all-cause deaths is about 22% on average in the Baltic countries, while it is about 7% on average in the Eastern region and at or below 5% on average in the Nordic, West-Central and Southern regions. The burden in the Nordic countries is of the same magnitude as the burden in Southern countries, and it is relatively smaller when compared to other European regions (except for Finland, where the proportion of deaths attributable to alcohol is 70% higher than in Norway).

Figure 3.4. Proportion of all-cause deaths caused by alcohol

Alcohol-attributable fraction, all-cause deaths (%), 2016



Note: Individual blue dots show country-specific estimates while red dots show regional averages.

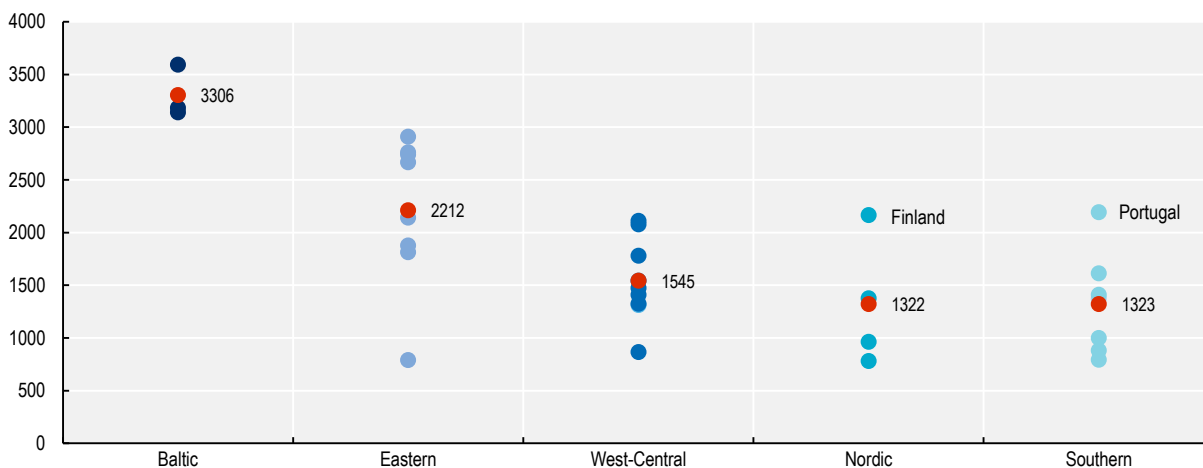
Source: WHO (2020^[3]), GISAH, <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

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Results from the OECD analyses on the health burden of alcohol confirm this picture of the alcohol-related burden on morbidity (see Chapter 4, Section 4.2). While the burden is greater in the Baltic countries than in other countries, it is smaller and of the same order of magnitude in both the Southern and Nordic regions. According to the simulation, the Baltic countries lose 3 306 life years in good health per 100 000 population on average each year as a result of harmful alcohol use (Figure 3.5). This is 2.5 times higher than the rates in the Nordic and Southern regions. Among the Nordic countries, Finland has the greatest alcohol-related burden, with more than 2 100 life years in good health per 100 000 population lost every year.

Figure 3.5. Life years in good health lost due to harmful alcohol use

Number of disability-adjusted life years per 100 000 population, per year



Note: Individual blue dots show country-specific estimates while red dots show regional averages.

Source: OECD Strategic Public Health Planning for non-communicable diseases (SPHeP-NCDs) model, 2020. See Chapter 4.

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3.3. The level of implementation of alcohol policies differs across European countries

This section deals with the level of implementation of the alcohol control policies in Europe, and examines the evolution over time of the alcohol control policies and drinking levels.

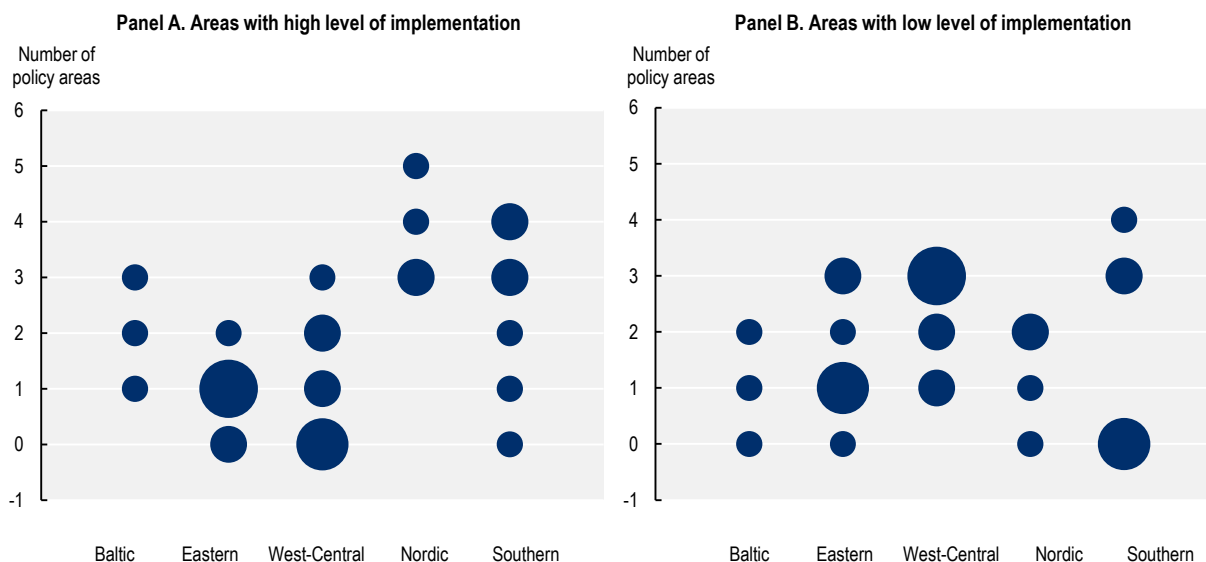
All European countries have in place a series of policy actions to reduce harmful alcohol use. The most popular policy interventions include alcohol taxes, age restrictions, blood alcohol concentration limits for drivers and penalties for drink-driving, although these measures are implemented at differing levels of strength (see Chapter 6).

The level of implementation of a country's alcohol control policy can be assessed with reference to various dimensions of alcohol policy. Recently, the WHO published a set of ten composite indicators – one for each action area of the *Global Strategy to Reduce the Harmful Use of Alcohol* (WHO, 2010^[4]) – that aim to measure not only the presence of alcohol policies but also their strictness and comprehensiveness (PAHO, 2018^[5]; WHO Regional Office for Europe, 2017^[6]). Table 6.3 in Chapter 6 presents the level of implementation of the alcohol policy across the ten areas in 51 countries, grouping the countries into quartiles from the lowest to highest level of policy implementation. Annex Table 3.A.1 summarises these results and shows how often a country belongs to the top or the bottom quartile.

Figure 3.6 shows the cross-country variation in the level of implementation of alcohol control policies by region, and suggests that no clear geographical pattern emerges. The countries with the highest levels of implementation are Finland, Sweden, Italy and France. In Finland, five of the ten areas of the alcohol control policy are implemented relatively more strongly than in other countries: leadership, awareness and commitment; health services' response; availability of alcohol; marketing of alcohol beverages; and monitoring and surveillance. In France, Italy and Sweden, four of the ten areas are implemented more strongly than in other countries. Conversely, Austria, Belgium, Croatia, Cyprus, Denmark, Greece, Hungary, Luxembourg, Malta and the United Kingdom show the lowest levels of implementation for at least three policy areas.


The four Nordic countries have the highest level of policy implementation concerning the availability of alcohol area. This is in line with previous findings showing that the four Nordic countries and Lithuania have by far the strictest alcohol control policies in Europe (Anderson et al., 2012^[2]). Norway, Sweden, Finland and Iceland have a state monopoly to sell alcoholic beverages above a certain alcohol content, and have a long history of strict restrictions on physical availability of alcohol beverages and high prices. Lithuania has recently strengthened its national alcohol policy (Rehm et al., 2020^[7]).

The evolution of the alcohol control policies in European countries may explain, to some degree, the different trends in alcohol consumption. For instance, the data show that Southern European countries generally decreased their level of alcohol consumption in the period 1990-2016 and, in many cases, also increased the severity of their alcohol control policies in the same period (see Annex Box 3.A.1). While this illustrates the relationship between the changes in alcohol consumption and in alcohol control policies, no causal impact of alcohol control policies on alcohol consumption can be deduced, in the absence of advanced analyses investigating the causal relationship after adjusting for potential confounders.

Figure 3.6. Level of implementation

Note: The vertical axis indicates the number of policy areas with high (low) level of implementation on Panel A (B). The size of the bubble indicates the number of countries. For example, on Panel A, among the four Nordic countries studied, one country has five policy areas with the highest level of implementation, another has four areas with the highest level of implementation and the two others have three areas with the highest level of implementation. On Panel B, among the Nordic countries, two countries have two policy areas with the lowest level of implementation, another has one area with the lowest level of implementation and the remaining one has no policy area with the lowest level of implementation.

Source: OECD calculations based on data from WHO (2020^[3]), GISAH, <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

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These findings suggest that the strength of the alcohol control policy is associated with drinking levels, and this is broadly aligned with evidence from the literature. For instance, from the mid-1990s onwards, the Russian Federation introduced significant policy reforms to reduce alcohol consumption and its related harms. Following the introduction of these reforms, the country experienced significant declines in both alcohol consumption and related harms (WHO Regional Office for Europe, 2019^[8]) (see details in Box 6.23 in Chapter 6). Conversely, when a control policy is relaxed, the effect on alcohol consumption and related harms is visible. Finland experienced an increase in alcohol consumption and related deaths following the change of alcohol control policy in 2004, which reduced excise duties on alcohol and abolished the quotas on tax-free imports of alcoholic beverages by travellers arriving in Finland from other European Union countries (Mäkelä and Österberg, 2009^[9]).

Evidence on the effectiveness and cost-effectiveness of alcohol policies is widely documented, as presented in Chapters 6 and 7. Pricing policies, restrictions on the availability of alcohol, measures to counter drink-driving and bans on alcohol advertising have significant impacts on drinking patterns and outcomes. In particular, a policy package combining a mixture of these policies can be shown to reduce alcohol-related diseases and injuries, increase the numbers of life years in good health, be cost-effective – as it reduces health expenditure more than the cost of running the policies – and increase labour force participation and productivity (see Chapter 7). However, as discussed further in the section below, the decreases in the level of alcohol consumption over the last three decades observed in some Southern countries, such as Italy, may be also driven by other factors.

3.4. Factors beyond policy actions influence drinking patterns

Beyond policy interventions, other determinants can influence the alcohol consumption of an individual. These can be classified into personal characteristics and environmental determinants (WHO, 2018^[10]). Both the factors in themselves and how they interact with one another shape drinking patterns and outcomes over the life course of individuals.

The first group of determinants refers to personal characteristics including genetics, demographics, personality traits, expectancies, family and peers, and socio-economic status. Genetics is involved in alcohol metabolism, alcohol dependence and physiological responses to drinking. Evidence supports the concept that the genes a person carries can influence how much he or she drinks, which in turn influences the risk of developing alcoholism (NIAAA, 2007^[11]). Results from twins studies converge to show high levels of heritability of alcohol addiction, with estimates ranging from 50% to 70% of the total variance that can be attributed to genetic factors rather than environmental factors (Agrawal and Lynskey, 2008^[12]).

Gender and age of an individual are key determinants of drinking patterns. Men drink more than women, and drinking patterns change with age, with older age groups more likely to drink frequently and younger age groups more likely to engage in binge drinking (see Chapter 2). In addition, drinking in childhood is predictive of future drinking. There is evidence that early onset of drinking leads to 30% higher probability of alcohol dependence later in life (Hingson, Heeren and Winter, 2006^[13]).

Mental health status, stress and anxiety of an individual are also correlated to drinking problems. Having a “dual diagnosis” of alcohol use disorders and mental disorders is common (IAS, 2018^[14]). For instance, data suggest that in the United Kingdom (England), 44% of community mental health patients have reported problematic drug use or harmful alcohol use in the previous year (Public Health England, 2016^[15]). Equally, people with alcohol addiction are more at risk of suicide, depression and anxiety, and of personal disorders (Mental Health Foundation, 2006^[16]). Personality traits such as risk-taking or antisocial behaviours (Malone et al., 2004^[17]) can also influence drinking patterns.

Alcohol expectancies are the beliefs individuals have about what alcohol drinking can bring to them, and this strongly influences their drinking behaviours. These expectancies are correlated with reasons for drinking such as social gatherings, drinking to cheer up or relieve stress, and conformity to others; they also evolve with age (ICAP, 2009^[18]).

Family and peers are recognised to have an effect on drinking patterns, and their influence also evolves over the life course. Family influences on drinking – either positive or negative – are strong in young ages, tend to shape drinking expectancies and persist into adulthood. In particular, the context of drinking initiation is as important as the age of initiation. For instance, people who start drinking outside a context of family gatherings have a greater risk of developing alcohol problems than those who start within a family context (Warner and White, 2003^[19]). There is also a peer effect on drinking patterns. For instance, adolescents tend to mimic their peers’ drinking levels, and frequent drinkers make friends with those who drink similarly to them (McCann et al., 2019^[20]). Also, pupils with low parental control tend to befriend each other.

Socio-economic status (SES) influences an individual’s drinking patterns. Data set out in Chapter 2 support the theory that SES – measured either by education level or by income level – is linked to drinking patterns. In virtually all the OECD countries, people who have completed tertiary or university education are more likely to drink weekly than those with only primary education. This effect is especially strong for women. Similarly, men and women in higher income groups are more likely to drink weekly than those in lower income groups on average in OECD countries. At the country level, a U-shaped curve can be observed – where prevalence is highest for the lowest and highest income groups compared to the middle income group. This U-shaped relationship is even more common for binge drinking. However, when looking at alcohol-related harm, people with low SES have higher rates of alcohol-related problems and mortality than better-off people, even for the same level of drinking (Grittner et al., 2012^[21]; Mäkelä and Paljärvi,

2008^[22]). This mismatch between the social gradient in alcohol drinking and the gradient in alcohol-related harm can be explained by differences in reports of alcohol drinking between people with low and high SES, differences in vulnerabilities and comorbidities, and differences in access to health care (Sassi, 2015^[23]).

The second group of determinants relates to environmental factors, such as the social norms that shape drinking behaviours, the economic development of a country, the availability and affordability of alcohol, and the policy in place. One example of social norms is how religion affects people's drinking (Luczak et al., 2014^[24]). Another example is the drinking culture that has been observed in the past: some countries were historically characterised by a greater tolerance of regularly drinking wine with meals and stigmatisation of heavy episodic drinking and drunkenness, while other cultures were less permissive of regular drinking and characterised by heavy episodic drinking and drunkenness. For instance, Italy experienced a significant decrease in alcohol consumption over recent decades, which was also attributed to changes in socio-demographic and economic factors (Allamani et al., 2014^[25]). Drivers of underlying changes in consumption may be also related to overall changes in lifestyle and globalisation (such as people having shorter mealtimes and drinking less wine with meals) (Beekmann, 2016^[26]).

The economic development of a country also influences drinking levels. As societies become more affluent, there is a strong tendency for the level of alcohol consumption to increase, except in Muslim-majority countries with a religion-based prohibition on drinking (WHO, 2018^[10]). The physical availability of alcohol is a key determinant of the level of drinking (Babor et al., 2010^[27]). For instance, easy and free access to alcoholic beverages in a store is linked to greater alcohol use. Alcohol affordability also plays a key role in determining the level of consumption and is influenced by three key factors: income, the price of alcohol (which is affected by the rate of taxation) and the price of other goods (Elder et al., 2010^[28]; Rabinovich et al., 2009^[29]) (see Section 2.5 in Chapter 2). Finally, this section focuses on the determinants of alcohol consumption other than policy interventions, while policies are discussed in Chapter 6.

3.5. Conclusion: Several dimensions affect the regional differences in alcohol consumption

This chapter shows that there is no clear north-south divide in drinking patterns and outcomes. There are several dimensions to consider (including drinking levels, patterns and health burden), and these vary across regions. Southern European countries have lower drinking levels, low prevalence of risky drinking patterns and low alcohol-attributable burden on health. The Nordic countries also present relative low drinking levels and low alcohol-attributable burden on health, but they have relatively high prevalence of alcohol dependence. In contrast, the three Baltic countries have the highest drinking levels, having experienced the sharpest increase in alcohol consumption over recent decades. They have relative high prevalence of alcohol dependence, and high alcohol-attributable burden on health. The Eastern and West-Central regions are generally in an intermediate position on these dimensions.

A large majority of countries have adopted a battery of policy interventions to reduce harmful alcohol use, with the most popular policies including alcohol taxes, age restrictions, blood alcohol concentration limits for drivers and penalties for drink-driving, as described in Chapter 6. The level of implementation of the alcohol policies varies across European regions. The Nordic countries and Lithuania have more stringent alcohol control policies than other European countries. Over the period 1990-2016, Southern countries increased the severity of their alcohol control policies, and also showed a reduction in their levels of drinking.

Change in alcohol consumption is also influenced by determinants of alcohol consumption that are beyond policy actions, as reviewed in this chapter. Personal characteristics include genetics, demographics, personality traits, expectancies, family and peers and SES. Environmental factors refer to social norms that shape drinking behaviours; the economic development of a country; and the availability and affordability of alcohol, which influence drinking patterns and outcomes over the life course.

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Annex 3.A. Additional data

Annex Table 3.A.1 presents the level of implementation of the alcohol control policy by country, focusing on the number of policy areas in the top and bottom quartiles.

Annex Box 3.A.1 presents an additional analysis of the changes in the level of alcohol consumption and in alcohol control policy in the period 1990-2016.

Annex Table 3.A.1. Level of implementation of the alcohol control policy, 2016

Number of policy areas in the top quartile (highest level of policy implementation) and bottom quartile (lowest level)

	Number of areas in the top quartile	Number of areas in the second quartile	Number of areas in the third quartile	Number of areas in the bottom quartile
Austria	2	2	3	3
Belgium	0	5	2	3
Bulgaria	1	5	3	1
Croatia	1	5	1	3
Cyprus	2	5	0	3
Czech Republic	1	5	2	2
Denmark	0	5	2	3
Estonia	2	4	2	2
Finland	5	3	0	2
France	4	6	0	0
Germany	0	7	1	2
Greece	1	5	1	3
Hungary	0	5	2	3
Iceland	3	4	1	2
Ireland	1	5	3	1
Italy	4	5	1	0
Latvia	1	8	1	0
Lithuania	3	5	1	1
Luxembourg	0	3	4	3
Netherlands	1	6	2	1
Norway	3	4	2	1
Poland	1	4	4	1
Portugal	3	7	0	0
Slovak Republic	2	5	2	1
Slovenia	1	8	1	0
Spain	3	6	1	0
Sweden	4	5	1	0
Switzerland	2	4	2	2
United Kingdom	3	1	3	3

Note: For example, for one of the ten areas listed in Table 6.18 in Chapter 6, the Czech Republic falls into the top quartile of countries with the highest level of policy implementation. For five other dimensions, the Czech Republic falls into the second quartile of countries ranked by the level of policy implementation.

Source: OECD calculations based on data from Source: WHO (2020^[3]), GISAH, <https://www.who.int/data/gho/data/themes/global-information-system-on-alcohol-and-health>.

Annex Box 3.A.1. Additional analysis

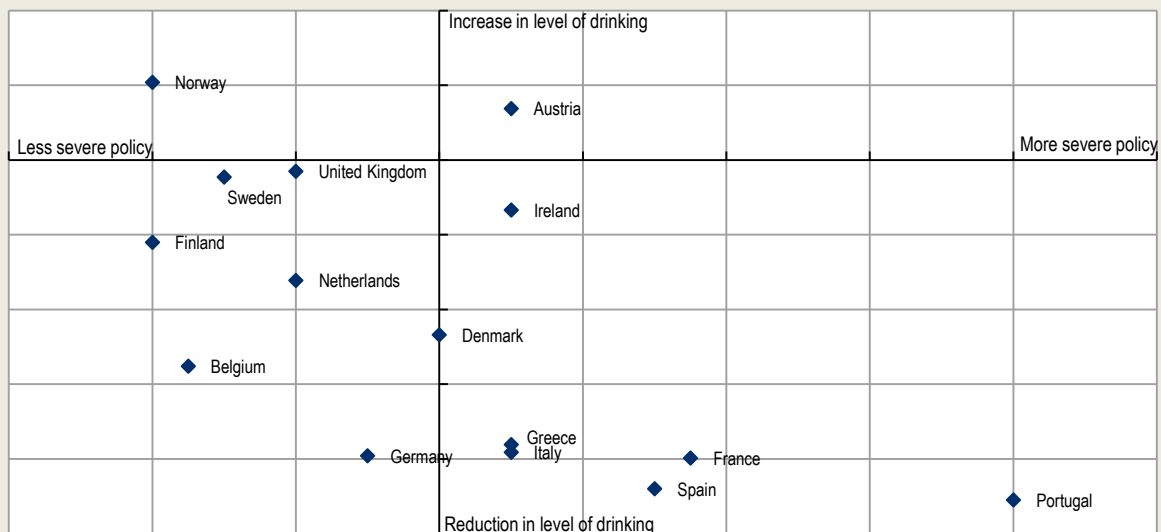
To measure the severity of the alcohol control policy, this study uses the Karlsson and Österberg (2001^[30]) index for the period 1990 to 2000, and updates results for 2016.

The Karlsson and Österberg index (2001^[30]) – which is a simplified version of the WHO index (WHO Regional Office for Europe, 2017^[6]) – summarises six different aspects of alcohol control policies that governments can implement: controls of production and wholesale, controls of distribution, personal controls, controls of marketing, social and environment controls and public policies. Each of these categories is weighted with points. The control of distribution category has the highest weight (7 points), whereas the controls of marketing and public policies categories have the lowest weights (2 points). The other categories have a weighted score of 3 points. All points are summed up by country to derive an index of the level of severity. The index ranges from 0 to 20 points, with higher values indicating a higher alcohol control policy.

The analysis presented here aims to compare the evolution in the severity of the alcohol control policy with the evolution in drinking between 1990 and 2016. The data for 1990 are retrieved from the study by Karlsson and Österberg (2001^[30]) which covered 15 countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Ireland, the Netherlands, Norway, Portugal, Spain, Sweden and the United Kingdom). The data for 2016 are derived from the methodology developed by Karlsson and Österberg (2001^[30]) using data from the GISAH database (WHO, 2020^[3]).


Annex Figure 3.A.1 illustrates the evolution of the alcohol consumption and of the severity of alcohol control policy between 1990 and 2016 in 15 countries. It shows that 13 countries decreased their levels of alcohol consumption between 1990 and 2016. The reduction was greater in Southern countries (Greece, France, Italy, Portugal and Spain) and in Germany. All Southern countries, Austria and Ireland increased the severity of their alcohol control policy in the period 1990-2016. This was not the case in Belgium, Finland, Germany, the Netherlands, Norway, Sweden or the United Kingdom, where the severity of the alcohol control policy decreased in the same period. Results also show that reductions in the level of alcohol consumption are associated with a higher stringency of the alcohol policy in the countries studied. However, no causal impact of alcohol control policies on alcohol consumption can be deduced from this analysis, in absence of advanced analyses investigating the causal-effect relationship after adjusting for potential confounders.

Annex Figure 3.A.1. Changes in the level of alcohol consumption and in alcohol control policies, 1990-2016



Note: The vertical axis represents the difference in the level alcohol consumption between 1990 and 2016. The horizontal axis represents the difference in alcohol control severity index between 1990 and 2016. In Finland, the level of alcohol consumption decreased from 1990 to 2016, and the severity of the alcohol control policy decreased in this time period. Dark blue dots refer to the Southern region, light blue to the Nordic region, and medium blue to the West-Central region.

Source: OECD estimates based on WHO GISAH data, adapted from Karlsson and Österberg (2001^[30]).

StatLink  <https://stat.link/jn4ua2>



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