



Health Inequalities in Europe:

Setting the Stage for Progressive Policy Action

Timon Forster, Alexander Kentikelenis and Clare Bambra



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Published by:

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Dublin 2

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Country Codes

AT	Austria	FI	Finland	NL	Netherlands
BE	Belgium	FR	France	PL	Poland
BG	Bulgaria	HR	Croatia	PT	Portugal
CY	Cyprus	HU	Hungary	RO	Romania
CZ	Czech Republic	IE	Ireland	SE	Sweden
DE	Germany	IT	Italy	SI	Slovenia
DK	Denmark	LU	Luxembourg	SK	Slovakia
EE	Estonia	LT	Lithuania	UK	United Kingdom
EL	Greece	LV	Latvia		
ES	Spain	MT	Malta		

Abbreviations

EQLS	European Quality of Life Survey
ESS	European Social Survey
EU	European Union
EU-SILC	European Union Statistics on Income and Living Conditions
GDP	Gross domestic product
GP	General practitioner
ISCED	International Standard Classification of Education
PPP	Purchasing power parity
OECD	Organization for Economic Co-Operation and Development
SDGs	Sustainable Development Goals
UHC	Universal health coverage
WHO	World Health Organization

Acknowledgements

We thank Robert Anderson, Shana Cohen, Kirsty Doyle, Hans Dubois, Marina Karanikolos, Helena Legido-Quigley, and Johan Mackenbach for their helpful comments; all errors are ours.

Foreword

Foreword

By Claus Wendt

Professor of Sociology of Health and Healthcare Systems, Siegen University

It was the sociologist T.H. Marshall who observed the development from civil rights to political rights and further to social rights. Equal citizenship rights are not compatible with material conditions that prevent individuals from making full use of their political and civil rights. This injustice is most evident when focusing on the right to health. Without health and social measures that compensate for poor health, individuals are not able to fully participate in political and social life. The great importance of health is related to its value to all other life spheres. Not only do individuals have a right to health and well-being, but they also have manifold individual rights that are constrained in the case of poor health. From this perspective, health inequalities represent a particularly serious social injustice in modern societies.

This report points to the fact that the life expectancy of people with low income and education is about a decade shorter than that of people from higher social classes. When evaluating this vast social problem, it is also necessary to take into account the fact that during their life course, people with low income and education experience a lower level of health than do other population groups, and they also experience related disadvantages in their jobs, leisure activities, and social and political commitments. When we change the focus from the individual to the societal level, we lose vast economic, social, and innovative potential for our societies as a result of poor health and health inequalities.

Another injustice is that health inequalities arise during infancy. Moreover, poor health increases cumulatively, often through negative reciprocal effects for other living conditions. However, health strains in early childhood can be reduced in later phases of life. Improving the health of disadvantaged children is the responsibility not only of their families – who are often under multiple social and financial strains – but also of the overall society. Usually, however, we experience the opposite. Negative health effects are also apparent in working life, and the health of lower social groups is particularly negatively affected through high work stress and other harmful circumstances.

Social policy institutions have been constructed in Europe to protect individuals and their families against major social risks such as poverty, unemployment, and old age. This report explains the welfare state's role in moderating the effects of behavior and social determinants to health and health inequalities. As part of these developments, healthcare systems in Europe have evolved to guarantee universal coverage and access to good-quality healthcare in cases of accidents and illnesses. The positive effects for health and health inequalities can be observed when studying mortality amenable to healthcare. All these developments are based on values that are shared by the majority of citizens in European countries. Citizens in European welfare states widely agree that access to healthcare should be based on need and not on the size of an individual's bank account.

Despite well-developed welfare states and healthcare systems, problems of large health inequalities remain. In addition to social and health policies, it is essential to improve the social and economic conditions that make people ill in the first place. This notion demonstrates the fact that the reduction of health inequalities is a responsibility of society at large and that a wide set of actors and institutions are necessary to achieve the goal of a more equal and healthy society.

The requirement of bringing together various actors and institutions can be seen simultaneously as a problem and an opportunity. The challenge is to bring together various actors and institutions with their particular interests and client groups and to overcome the often-conflicting interests of different institutions. If this endeavor is successful, there is not only an added value in terms of the fight against health inequalities, but other inequalities and injustices are reduced, as well.

This report explains the causes of the vast health inequalities that continue to exist, even in the most affluent societies. It points toward the pronounced sensitivity of health and health inequalities to the social environment. This social environment is alterable. Public and private actors and institutions at all policy levels, companies, and the community have the responsibility to take proper account of the evidence provided in this report and to help create healthy societies. These healthy societies and the reduction of health inequalities begin with healthy childcare institutions, schools, and workplaces. They require policies that fight egoism and social exclusion and foster civic-mindedness, tolerance, and concern for others.

Preface

Preface

By Ernst Stetter

Secretary General, Foundation for European Progressive Studies

In 2008, the World Health Organization published a report by the Commission on the Social Determinants of Health which stated that 'social justice is killing people on a grand scale.'³⁰ This was a reference to the dramatically different life chances that people have depending on the conditions in which they are born, grow, live, work, and age. While the commission outlined the differences in life chances between countries, it also highlighted the importance of the differences in life chances within countries.

Increasing health inequalities both within and between countries continue to remain a challenge for the European Union. For example, a review of health inequalities for the WHO European region found that life expectancy differs significantly across the region and even in affluent countries inequities have increased.¹³ The European Commission have outlined their commitment to reducing health inequalities in the Third Health Programme 2014-2020. Specifically, the Programme aims to foster healthy lifestyles, through supportive environments and disease prevention, and to facilitate access to safe healthcare. While the European Commission supports member-states in implementing the shared objectives of the EU through the Health Programme, policy at state level is also paramount to reducing health inequalities.

This FEPS TASC report highlights the important role that policy needs to have in combating health inequalities both within and between countries. Specifically, it outlines how combating health inequalities is not just the responsibility of health policy. Economic policy, including labour market policy and fiscal policy, can also have an impact on health inequalities and therefore, has an important role in devising policy strategies that address uneven and unequal access to quality care.

This report demonstrates the urgency of overcoming disparities in health, and thus life experience, based on income, occupation, education and other differences. Equality in healthcare is an issue fundamental to human rights and social justice, as Martin Luther King famously argued, and to the economic, social, and political future of the European Union.

Executive Summary

Executive Summary

By some measures, such as life expectancy at birth, the health of the European population is better today than ever before. However, substantial inequalities in health continue to exist:

- *Between* European countries, life expectancy and mortality continue to be better in Western European countries than in Eastern European countries.
- *Within* European countries, there are stark social gradients in morbidity, mortality, and life expectancy: the higher the social position (approximated by level of education, occupation, or position in the income distribution), the better the health. Such health inequalities are present in all countries, by gender, and across different age groups.

This report examines health inequalities in Europe—the extent of inequalities, their costs to society, their determinants, and what can be done by policymakers to reduce them. In Part A, we investigate these health inequalities both *between* and *within* different European countries—highlighting recent trends and key issues not only in health outcomes, but also in associated risk factors.

These health inequalities have multiple causes, outlined in Part B. We primarily focus on three major determinants: health systems; economic policy; and the wider social determinants of health. Firstly, we find that the cross-national variation in financing, resources, and coverage of healthcare may narrow or widen health inequalities. *National health systems* that provide universal healthcare can reduce health inequalities—particularly in terms of mortality amenable to healthcare.

Secondly, we emphasise two aspects of *economic policy*:

- *Labour market policy* seeks to address imperfections in labour markets and achieve full employment. Yet, insecure and temporary employment—on the rise in the EU since the global financial crisis—are associated with negative health consequences. Such forms of employment are concentrated amongst people of lower socioeconomic status. Thus, we find that in the absence of any protective measures, labour market deregulation may contribute to health inequalities.
- *Fiscal policy* pertains to government resources and spending on social protection, public health policy, or sustainability. We show that cuts in government spending on social protection due to austerity have been linked to higher health inequalities in Europe (e.g., through rising unemployment or loss of public services). Yet, we also illustrate that fiscal policy and public health regulation can reduce health inequalities, as some European countries have shown through combatting unhealthy diets or providing sustainable energy.

Thirdly, we examine the wider *social determinants of health*—the conditions in which people are born, grow, live, work, and age. Specifically, we note:

- The health benefits of higher levels of education are clear, as individuals with tertiary education are exposed to fewer risk factors, enjoy better opportunities in the labour market, and have increased health literacy.
- Good work and employment conditions support health through multiple mechanisms—ranging from financial stability to social status, and from providing social networks to the protection

from psychosocial hazards. Bad work and employment conditions—often concentrated among populations in vulnerable situations—can have the opposite effect, thereby widening inequalities in health.

- Income inequality is one of the most pressing issues of our time. Indeed, countries with higher income inequality levels tend to have lower life expectancy, higher infant mortality rates, as well as higher prevalence of mental illness and obesity. Put differently, more equitable societies tend to be healthier societies.

In Part C, we draw attention to the sizeable economic costs of health inequalities. In the European Union, they are estimated to cost €980 billion per year, or 9.4 percent of European GDP, as a result of lower productivity and higher healthcare and welfare costs. Increasing the health of the lowest 50 percent of the European population to the average health of the top half would improve labour productivity by 1.4 percent of GDP each year—meaning that within five years of these health improvements, the GDP of the European Union would be more than 7 percent higher.

Based on a comprehensive mapping of the multiple causes of health inequalities in Europe, we conclude by proposing a progressive agenda to act on their determinants:

1. Reforms in health policy should include provisions to ensure *universal health coverage*, along with reforms that reduce barriers to accessing and utilising health services—such as lack of health literacy.
2. In terms of economic policy, the *regulation of labour markets and working conditions* should provide individuals with healthy work. Further, fiscal policy measures should *improve job and income stability* of people in vulnerable situations.
3. Public health policy interventions should address risk factors pertaining to health-related behaviour, such as *regulating the consumption of tobacco and alcohol*, as well as *targeting advertising and the sale of unhealthy foods*.
4. Improving the social determinants of health is a key element for reducing health inequalities in Europe. Thus, governments should *reduce barriers to accessing education* and put *redistributive measures* in place to make societies more equitable.
5. Along all policy dimensions, proposed reforms should be evaluated in advance of implementation to assess their health consequences. Thus, we advocate the *use of health impact assessments*, an established framework through which the potential health impact of policies can be systematically assessed.

In realising this agenda, policy interventions should be universal, but implemented at a level and intensity of action proportionate to need—an approach known as ‘proportionate universalism.’ In doing so, tackling health inequalities promises not only economic benefits at a national level, but—much more importantly—delivers on a basic human right: the right to the highest attainable standard of health, irrespective of place of birth, gender, ability, or socioeconomic background.

Introduction

Introduction

Healthier but Still Unequal

The past decade has taken its toll on the economic and social outlook of the European Union (EU), as the global financial crisis of 2007/8 engulfed the continent.¹⁻⁴ The subsequent policy responses in some countries—like Greece, Spain, or Ireland—did little to ensure a speedy or equitable recovery and living standards declined. By contrast, other countries—like Germany or Sweden—implemented policy measures that limited the macroeconomic impact of the shock. Nonetheless, the crisis and its policy aftermath had devastating social consequences across the entire continent—some of which are only now beginning to become apparent—and its political reverberations continue to be felt.⁵⁻⁶

At first glance, the impact of the crisis on population health across Europe is far from obvious. In the EU, total life expectancy at birth—the average number of years an individual can expect to live at birth—increased from 79.4 in 2008 to 81.0 in 2016. In fact, life expectancy improved across all 28 EU member-states, although the trajectory since 2008 varies. For instance, Estonia records the biggest absolute improvement, increasing life expectancy at birth from 74.4 years in 2008 to 78.0 in 2016. By contrast, the respective gain in Hungary—starting from 74.2—over the period is 2.0 years (see also Figure A1.1).⁷

In fact, mortality rates in Europe have declined significantly amongst people from all levels of education since 1990. Yet, such headline 'success story' figures obscure a more disconcerting reality: Gains in life expectancy were smaller amongst men and women with a lower level of education such that relative inequalities in mortality by education widened.⁸ For example, in Denmark, the difference in life expectancy at age 30 between men with low education and those who have completed tertiary education rose from 4.8 years to 6.4 years between 1987 and 2011. The respective gap for women increased from 3.7 years to 4.7 years over the same period.⁹ In England, a report by the British Department of Health shows that health inequalities have increased more recently, too: In 2010, life expectancy for men in England's most deprived areas was 9.1 years less than for those in the richest areas; by 2015, the figure had risen to 9.2 years. The equivalent gap for poor women also grew over that time, from 6.8 years to 7.1 years.¹⁰

Since the impact of policy reforms on life expectancy may take years to materialise, these changes cannot be attributed to the past ten years alone. Thus, consider mental health—which is more responsive to the immediate circumstances—as another example for the unequal progress in terms of health inequalities. Different waves of the European Social Survey (ESS) enable analyses of depressive feelings in selected European populations over the course of the financial crisis. Perhaps surprisingly, in all but 2 out of 19 countries—Cyprus and Spain—the general population reported fewer depressive feelings in 2014 than in 2006.¹ When disaggregating these trends by subsets of the general population, however, complex trajectories of inequalities surface. On the one hand, inequalities between individuals who primarily rely on public benefits for income and people with wage and financial income have decreased. On the other hand, the development of depressive feelings was less favourable among the precariously employed and the inactive relative to people working on unlimited contracts.¹¹

¹ No data are available on the following EU member-states: Czech Republic; Greece; Croatia; Italy; Luxembourg; Lithuania; Latvia; Malta; and Romania.

Although we caution to interpret these figures in isolation, both the data on life expectancy and mental health point towards health inequalities. In this report, we understand health inequalities as 'systematic, avoidable, and important differences [in health],'¹² which are—as we will show—substantially shaped by a country's policy environment.

Growing Awareness of Health Inequalities and the European Context

Across Europe there is growing awareness of health inequalities. In 2013, the World Health Organization (WHO) published its *Review of Social Determinants and the Health Divide in the WHO European Region*. This report of health inequalities across the 53 member-states of the Region was commissioned to support the development of a new European policy framework for health and well-being, *Health 2020*.¹³ In the same year, the European Commission published a policy statement, *Health Inequalities in the EU*, based on research on health inequalities in the EU prepared by a consortium chaired by Michael Marmot.¹⁴ Building on the global evidence of health inequalities, these reports highlight the complex social and economic interventions required to reduce health inequalities, and the need for action at national and European level.

More specifically in an EU policy context, promoting good health is an integral part of *Europe 2020*—the EU's 10-year economic-growth strategy. Of the seven flagship initiatives that support this project, *The European Platform against Poverty* is particularly relevant to health inequalities.¹⁵ Following from the European Commission's Communication *Solidarity in Health: Reducing Health Inequalities in the EU*,¹⁶⁻¹⁷ it encompasses measures to help EU countries and stakeholders identify and implement 'best practices'; to regularly survey the state of inequalities in the EU and successful strategies to reduce them; to improve assessments on the impact of reforms on health inequalities; and to help countries use EU funds to improve the health of the worst off and reduce regional health inequalities.¹⁵

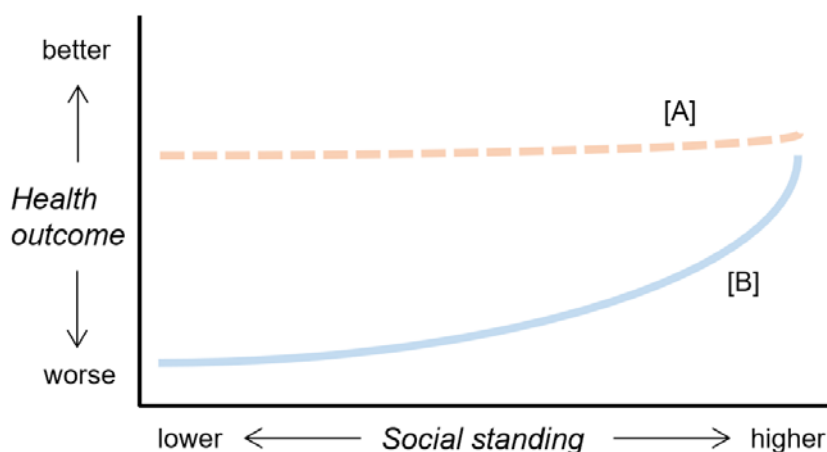
The Social Gradient in Health Inequalities

Health inequalities originate from the differing exposure and vulnerability to health risks by social groups—between and within countries.¹⁸ Across different measures of social standing—such as level of education, occupation, or income—the socially-advantaged tend to fare better than individuals from lower socioeconomic backgrounds. This relationship is commonly referred to as the 'social gradient in health.'¹⁹ Figure 1.1 depicts stylised health gradients in two societies, denoted by [A] and [B]. In both cases, higher social standing is associated with better health—although the slope of the gradients differs (see Section A1 for empirical evidence). Four characteristics of health gradients merit further discussion:²⁰

- Social gradients are continuous—in Figure 1.1, health outcomes improve successively as social standing increases. Thus, a discussion that focuses solely on the health gap between those with the highest and lowest social status is incomplete.¹⁹

- The impact of socioeconomic status on health is cumulative over the life course. The relative importance of determinants such as education, occupation, or income varies. However, taken together, these indicators of social status may account for the differences in health inequalities between and within societies A and B.
- Social gradients vary in terms of their slope and level.²⁰ The health gradient in society B is steeper than that of society A, reflecting wider health inequality since social standing is comparatively more beneficial to health. Further, cross-national patterns suggest that average health tends to be better in societies with relatively flat rather than steep gradients—as indicated by the level of the gradient.
- Differences in the gradient depend on institutional arrangements.²¹ As a primary focus of this report, we consider the set of formal and informal rules that structure the allocation of resources in health and social policy, the labour market, and fiscal policy. For instance, social relations and interactions may provide support for securing employment and managing illness, as well as providing guidance on how to cope with health challenges—thereby mediating the impact of social status.

Figure 1.1: Social Gradients of Health

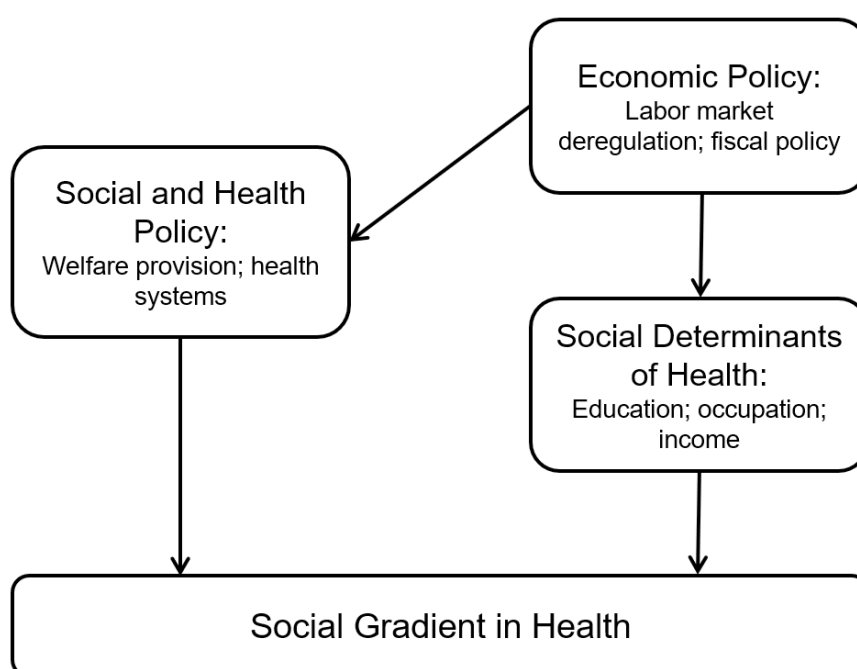


Source: Authors

The Complex Web of Determinants of Health Inequalities

Observed patterns of health inequalities depend on a complex web of factors, spanning the entire life-course of individuals and dependent on a host of economic, social, and political factors. Countries can organise and manage resources (including healthcare) in a way that either improves or inhibits inequalities as well as health outcomes. These 'institutional environments' encompass different degrees of state action in policy areas, including social security, labour issues, and pensions. As illustrated in Figure 1.2, the role of public policies in shaping the health gradient extends well beyond the most obvious set of welfare-state measures to cover economic policies, too. Indeed, this wider array of policies sets the parameters within which welfare states operate, and—equally importantly—impact the social determinants of health:

Figure 1.2: Public Policies and Health Inequalities: Overview of Mechanisms



Source: Authors

The role of health systems and other social policies: National health systems are integral parts of the broader apparatus of European welfare states. In delivering universal access and high quality services (pertaining to prevention, treatment, and rehabilitation), effective and equitable health systems can improve population health and reduce health inequalities—readily observed in mortality amenable to healthcare.²² Across Europe, national health systems have developed within different contexts and historical circumstances, and consequently vary considerably—e.g., in terms of the role of the state in the provision of healthcare, financing mechanisms, eligibility for health services, population coverage, and the resources allocated to improving public health.²³⁻²⁴ Beyond national health systems, social and health policy regulate social security (e.g., social assistance, pensions, sickness benefits, and unemployment support) and family policies.

Economic policy: Variation in health outcomes further stems from the economic systems by which societies allocate and distribute resources, and regulate economic activity. That is, economic policy envisages different roles of the state, the market, individuals, and nongovernmental organisations (NGOs) in the provision of goods and services. Due to the interdependence of institutional arrangements, economic policy impacts upon the design and effectiveness of social and health policy. In fact, while it is useful to distinguish between the two analytically—as discussed separately in this report—economic and social policy are so closely intertwined that it is often difficult to disentangle them in practice.

For instance, economic production models shape employment and work conditions, thereby affecting health and health inequality.²⁵ At the same time, they determine the funds available for health and social welfare sectors.²⁶ These interconnections became most apparent in some of the hardest-hit countries in crisis: With unemployment rates soaring, some countries—like Greece—implemented measures of labour deregulation at the same time as rapid and radical reductions in social expenditure. Subsequently, health and social policies became patently unable to protect populations in the most vulnerable situations from the adverse consequences of unemployment, and even exacerbated the impact of joblessness due to heightened insecurity and financial strain. Thus, the interplay of social policies with the macroeconomic context has the potential to alleviate, or worsen, the health-inequality impact of individual policies.

Social determinants of health: Economic policy also has profound implications on the social determinants of health—the conditions ‘in which people are born, grow, live, work, and age.’²⁷ While these conditions cover the life course, we focus on education, the workplace, and income. The level of education is widely used as a social marker. To understand the magnitude of such educational health inequalities, we consider the educational attainment of individuals as well as policies that lead to upskilling. The latter often occurs at the workplace, which is why employment and work conditions—in addition to their independent effect on health inequalities—merit further discussion. Finally, wages are the main source of income for a vast majority of workers. However, income is distributed unequally, and such inequalities may further exacerbate health inequalities.

A Call for Action

Why do health inequalities matter? Governments around the world have long acknowledged the right to health—for example, through the Universal Declaration of Human Rights in 1948 or the Constitution of the World Health Organization (WHO). In the EU, individuals are entitled to access healthcare and to the highest attainable standard of health as one of their fundamental human rights,²⁸⁻²⁹ and such right should not be conditional on one’s socioeconomic background. Better health empowers individuals to lead flourishing lives, to fulfil their potential, and improves their well-being.³⁰ In addition, the economic costs of inequalities in health are sizeable. For example, welfare losses due to health inequalities are estimated to amount to €980 billion per year, or 9.4 percent of GDP in the EU.³¹ Further, action on the underlying causes of health inequalities—such as improving education, providing sustainable employment, and narrowing income inequality—promises to enhance productivity and increase innovation, thereby stimulating economic growth.

The multiple causes and consequences of health inequalities indicate that national health systems in Europe need to become more responsive to the needs of their populations. As discussed above,

the EU has already acknowledged the highest attainable standard of health as a human right, and—as Nobel-prize winning economist Amartya Sen has argued—'[t]he acceptance of health as a right of all is a demand to take action to promote that goal.'³² Such comprehensive action needs to address the specific challenges to health equity in childhood, education, working age, and in retirement, while taking into account their interdependencies over the life course. Further, due to the socially patterned health outcomes, policy interventions need to cover the entire population, while being proportional to needs—known as 'proportionate universalism'—such that the reforms target the health of the relatively disadvantaged groups the most.^{13,27} In doing so, addressing the multiple causes of health inequalities in Europe also contributes to the achievement of the Sustainable Development Goals on health (no. 3), education (no. 4), gender equality (no. 5), decent work (no. 8), and income inequality (no. 10). Towards this objective, progressive action from policymakers—who are in a unique position to draw on an extended evidence base, while taking into account the voices of civil society—is necessary.

Structure of the Report

The report is structured as follows: In Part A, we introduce information on health inequalities both within and between European countries, different welfare state arrangements (so-called 'welfare state regimes'), and national health systems. Towards this purpose, we present evidence on health inequality in a comparative European perspective in Section A1. In Section A2, we describe clusters of welfare provision in Europe. We link such discussion to the national health systems of selected European countries in terms of organisation and governance, financing, and resources of health services. In Part B, we investigate the determinants of health inequalities in Europe in more detail. Initially, we elaborate on how health systems contribute towards reducing health inequalities in Section B1, providing comparative evidence on their effectiveness, impact on access and utilisation of health services, and their resilience in the face of crisis. Subsequently, we focus on two realms of economic policy in Section B2—labour market regulation and fiscal policy. Both interact with social policy and impact upon their effectiveness. We discuss indirect effects of economic policy through the social determinants of health inequality in Section B3. While these conditions cover the entire life course of individuals, we emphasise the role of (1) education; (2) employment and working conditions; and (3) income and poverty—three areas of great importance to policymakers. Moving away from discussing the causes of health inequality, we turn to their consequences in Part C. In Section C1, we explore how better health for all can contribute to society and the economy. This section includes information on the economic cost of health inequalities, while also illustrating the benefits of comprehensive action on risk factors and the social determinants of health. In the final section, we conclude by bringing together the different threads of evidence covered in this report, identify areas for future research, and offer tentative recommendations for progressive policy action on health inequalities in Europe.

Part A: Health Inequalities in a European Context

Part A: Health Inequalities in a European Context

As a result of the recent attention to social gradients in health and their determinants, a growing body of literature has documented health inequalities in the European context.^{8,11,33-35} In Part A, we discuss such information on health inequalities both within and across European countries, welfare state regimes, and national health systems.

- Section A1 presents evidence on health inequality trends in comparative perspective. Health inequality is a multidimensional concept and the conclusions drawn depend on the application of a particular indicator—e.g., considering changes in absolute vis-à-vis relative health inequality,⁸ or using income or education to approximate for socioeconomic status.¹⁹ Although the statistics presented in this section are primarily driven by data availability, taken together, they offer a comprehensive picture on health inequalities in the EU.
- Section A2 investigates welfare systems in selected European countries in more detail. We link these 'welfare regimes' to health inequalities, and then develop classifications of one key element of the welfare state—national health systems—which are subsequently applied to analyses in Part B.

A1. Health Inequality Trends in Comparative Perspective

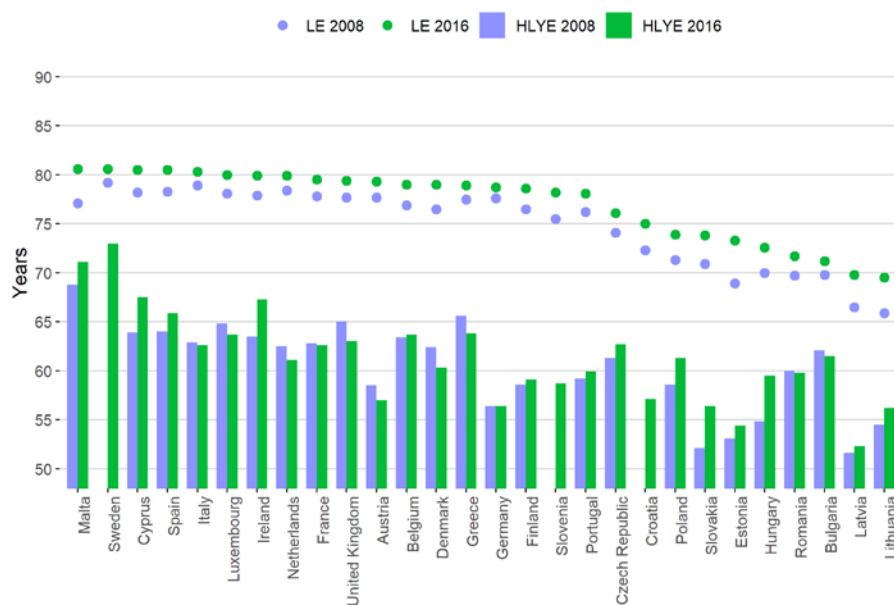
Life Expectancy and Healthy Years of Living Between Countries

Life expectancy—the average number of years an individual can expect to live at a given age—by education reveals substantial differences between countries and gender. For example, across 23 selected OECD countries, the gap in life expectancy at age 25 between individuals with high level of education (tertiary education) and low level of education (primary and lower secondary education or less) around 2011 is—on average—7.7 years for men and 4.6 years for women.³⁶

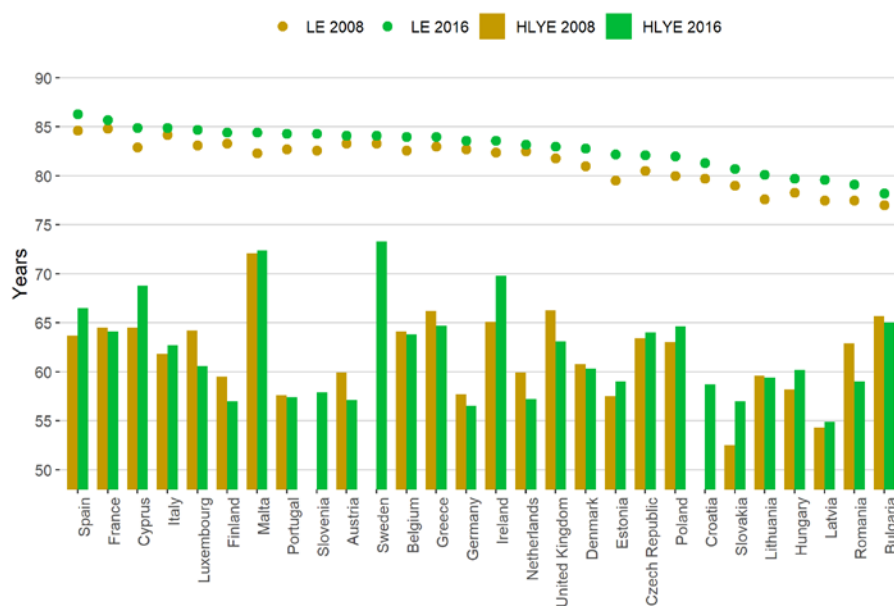
However, reliable cross-national time-series data on life expectancy by level of education are not available. Thus, we examine the temporal variation in aggregate life expectancy. Figure A1.1 plots both life expectancy (LE) and healthy life years expectancy (HLYE) for men (Panel A) and women (Panel B) at birth in the EU.⁷ The latter is a variant of life expectancy, corresponding to the average number of years lived in *good health*, which is adjusted for prevalence of self-reported limitations in daily activities and age-specific mortality. Across all countries and both genders, life expectancy has improved between 2008 and 2016. In Ireland, for example, such increase has also translated into more healthy years of living—by 3.8 and 4.7 years for men and women, respectively. However, this is not the case for all European countries. Among others, the corresponding statistics in Denmark *decreased* from 62.4 to 60.3 and from 60.8 to 60.3 for men and women—potentially a reflection of increasing challenges in terms of excessive alcohol consumption and rising obesity, as well as in care for chronic conditions.³⁷

Figure A1.1: Life Expectancy and Healthy Years of Living at Birth

Panel A: Men



Panel B: Women



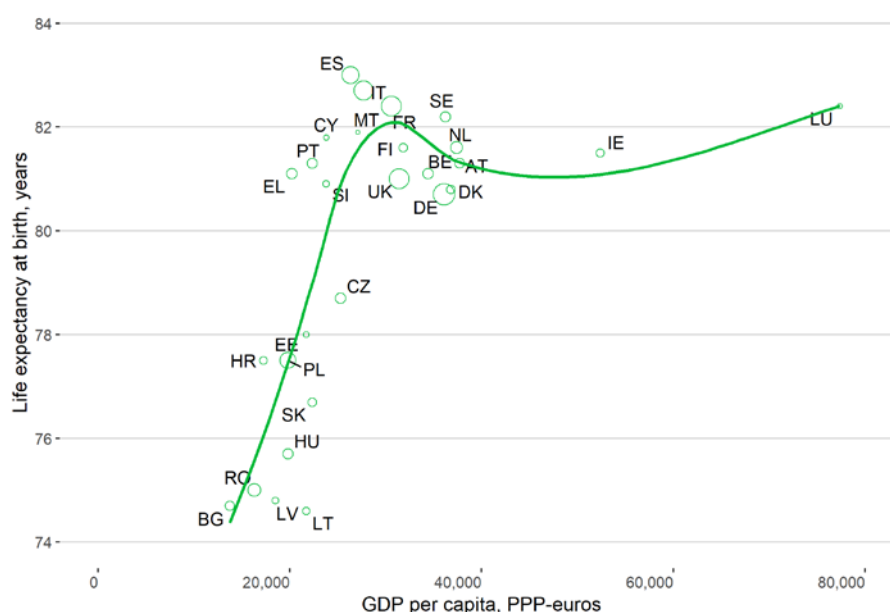
Note: Changes to the data collection invalidate time series comparisons for Croatia, Slovenia, and Sweden, for which no data on healthy years of living in 2008 are depicted. In addition, the 2016 values for Germany refer to 2014, and those for Bulgaria, Italy, Luxembourg, and the Netherlands refer to 2015, respectively.

Source: Authors, based on data by Eurostat (2018) (indicator code: hlth_hlye)⁷

National Income Levels as a Determinant of Between-Country Life Expectancy

Income—reflecting a country's development—can partly proxy for the different stages of the epidemiological transition, i.e., national-level trends and changes in life expectancy and diseases. All else being equal, richer states can afford to allocate more resources to healthcare. Consequently, between-country health inequalities may originate in differences in income. Indeed, as Figure A1.2 shows, there is a positive cross-national relationship between life expectancy and real per capita income⁷—known as the Preston Curve. On average, life expectancy is better in countries with higher GDP per capita. This general relationship appears to hold irrespective of population size (indicated by the relative size of the circles). However, at higher levels of development the association between income and life expectancy weakens: Although Luxembourg is wealthier than the remaining EU member-states (in per capita terms and adjusted for purchasing power parity), life expectancy is higher in other countries. Thus, the Preston Curve suggests income is one determinant of between-country health inequalities, but higher GDP per capita is by no means a sufficient (or even necessary) condition to improve population health.

Figure A1.2: The Preston Curve: Life Expectancy and Real Per Capita Income



Note: Data refer to 2015. Observations are weighted by the relative population size, as indicated by the size of the circles.

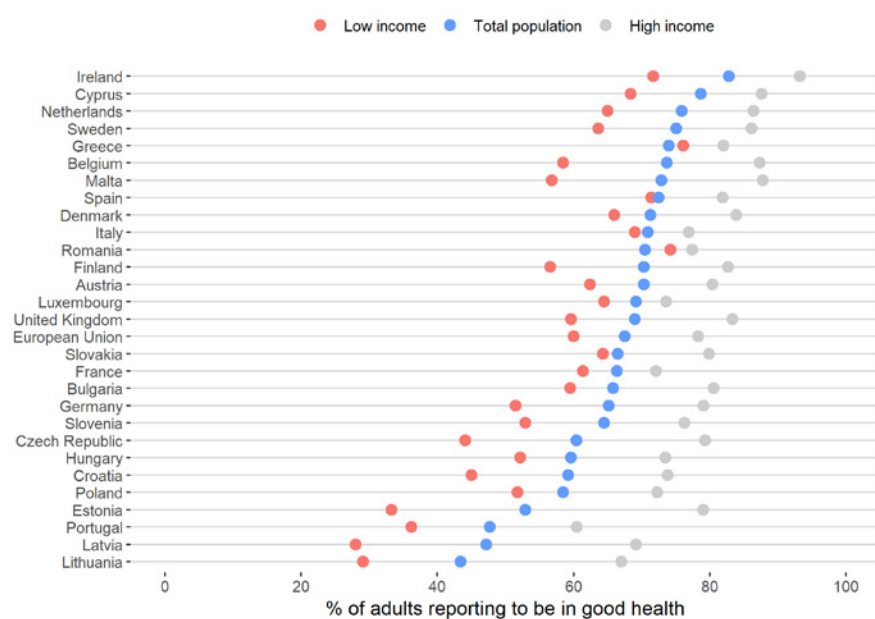
Source: Authors, based on data by Eurostat (2018) (indicator codes: demo_mlexpec; prc_ppp_ind; demo_gind)⁷

In most European nations, communicable diseases have declined some decades ago. Instead, today's primary health concerns in the region are non-communicable diseases, including cardiovascular diseases and cancer.³⁸ In these cases, interventions through health systems remain important, but better health also depends largely on changes in population level behaviour (e.g., smoking, alcohol consumption, or diet)—which are only imperfectly captured by national income levels.

Inequalities in Self-Reported Health by Income

Epidemiological data on life expectancy present important evidence on key aspects of the unequal health of Europeans, but other available information helps generating a fuller picture. For instance, indicators based on self-reported measures of health enables collecting information on health conditions that escape objective measurement, such as well-being. Further, self-assessed health measures are reasonable predictors of objective health status (particularly when individuals are aggregated at the local level) and therefore provide valuable information for analyses of health inequalities.³⁹⁻⁴⁰ Much like the data on life expectancy, self-reported health follows a social gradient. For example, Figure A1.3 documents that the proportion of individuals reporting good health—based on data from EU Statistics on Income and Living Conditions (EU-SILC)—increases with income.⁷ In this case, the main measure of interest is within-country health inequality—the difference in the proportion of people who report good health by income groups. The mean value for the total population is plotted as a benchmark. Once again, the EU statistic—where 60.0 percent in the lowest income quintile and 78.3 percent of high-income individuals report to be in good health, respectively—masks considerable variation. Within-country health inequalities are 21.5 percent in Ireland and 37.9 percent in Lithuania, the countries with the highest and lowest proportion of adults in self-reported good health, respectively. As another example, consider Portugal, where less than two out of five individuals with low income assess their health to be good (36.2 percent), but 60.5 percent of high-income individuals do so.⁷

Figure A1.3: Disparities in Self-Reported Health by Income



Note: Data refer to 2016.

Source: Authors, based on data by Eurostat (2018) (indicator code: hlth_silc_10)⁷

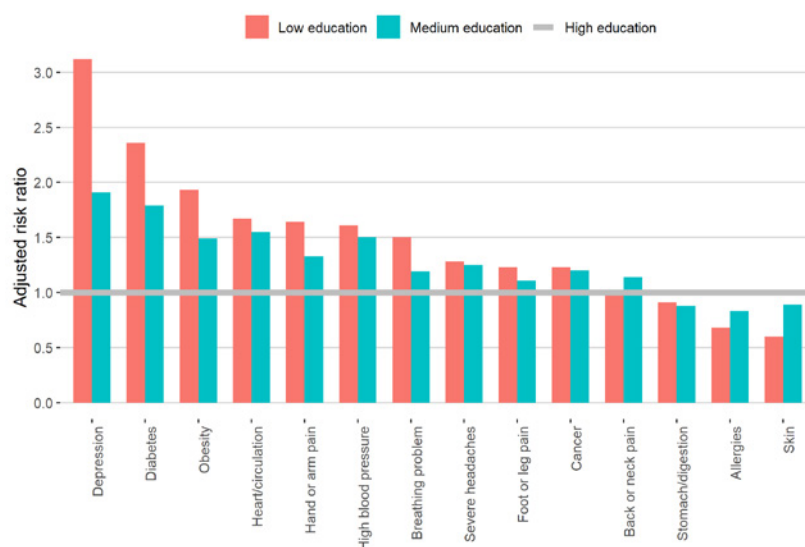
Cross-national variation of individuals in the same income group should be interpreted cautiously since they may reflect differences in reporting, culture, or trust.⁴¹ That is, many factors not attributable to health may explain why average self-reported health in Ireland is higher than that of Lithuania. For the purposes of this report, however, it is revealing that across Europe, inequalities in self-reported health by income group exist within countries, and their extent differs.

The data in Figure A1.3 presents a static picture of self-reported health and is not without its limitations due to differences in national surveys among countries. A recent report by Eurofound draws on data from the European Quality of Life Survey (EQLS)—which is more homogeneously collected than EU-SILC at the expense of a smaller sample size—and reveals health dynamics over time: The proportion of people reporting bad health in the bottom income quartile rose from 14 percent in 2007 to 17 percent in 2011, but has since decreased to 13 percent in 2016. By contrast, little has changed for individuals in the top income quartile, with about 1 in 20 people reporting bad health over the period under consideration.⁴²

Education as a Social Determinant of Non-Communicable Diseases in Europe

Beyond direct measures of health—such as life expectancy or self-reported health—socioeconomic background is linked to inequalities in diseases and illnesses. Drawing on data from the 2014 wave of the European Social Survey (ESS), Figure A1.4 plots the relative likelihood of 14 self-reported non-communicable diseases (NCDs) by education for persons aged 25 to 75 in Europe.⁴³ Accordingly, the gap in relative risk between people with low and high levels of education is highest for depression, diabetes, and obesity. For instance, someone with low education is 3.12 times more likely than an individual who has completed tertiary education to report depression. By contrast, individuals with the highest educational attainment are more likely to report skin problems, allergies, and issues with digestion. These latter three NCDs are examples of inverse social gradients, where higher socioeconomic status is associated with worse health. However, such inverse relationships are only observed in selected countries, and results from earlier analyses on a smaller set of European countries vary.⁴⁴

Figure A1.4: The Social Gradient of Non-Communicable Diseases



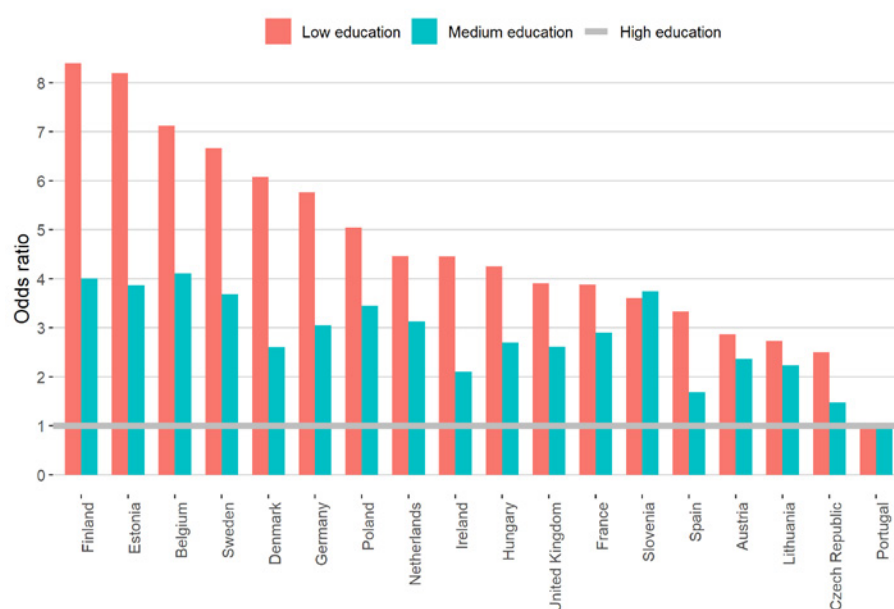
Notes: Adjusted risk ratios estimate the probability of self-reporting a particular NCD for individuals with low and medium education vis-à-vis highly educated people, net of the effect of age. Regressions for a pooled European sample also control for country-fixed effects.

Source: Authors, based on data by McNamara et al. (2017) from the European Social Survey 2014⁴³

Social Inequalities in Health Behaviour

Inequalities in health result not only from differences in income levels or education but also from variation in individual-level behaviour that impacts upon health. For example, smoking—undisputedly linked to lung cancer⁴⁵—follows a social gradient, too. Figure A1.5 reports on statistical analyses that predict the probability of smoking daily by education—controlling for gender, age, and age squared (to allow for a non-linear relationship). In all European countries except Portugal, the likelihood of smoking daily is higher for individuals with primary or secondary education than for their highly-educated peers.⁴⁶ Further, individuals from a low- or medium-educational background are considerably more likely to smoke 20 or more cigarettes per day (results not shown in Figure A1.5).⁴⁶

Figure A1.5: Risk of Being a Daily Smoker by Education



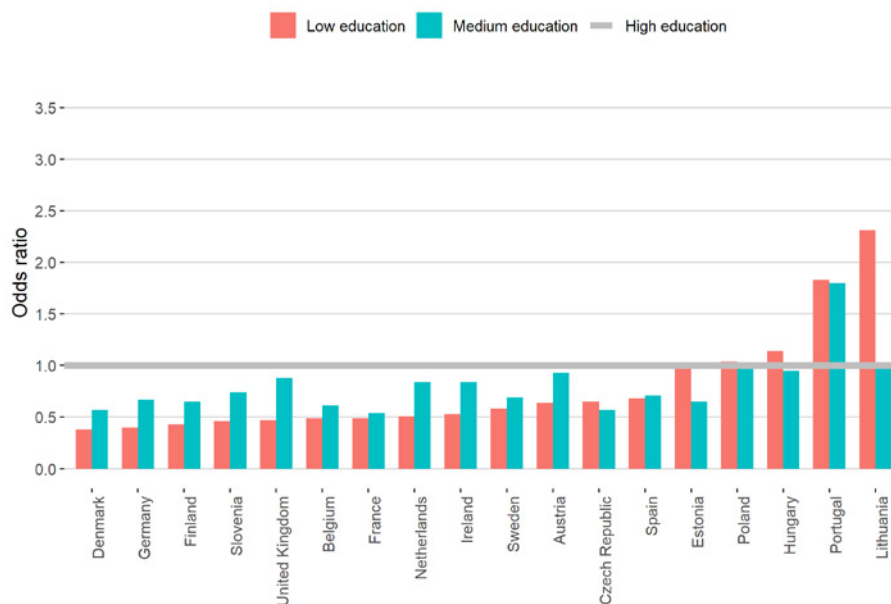
Notes: Odds ratios represent the probability of being a daily smoker given low or medium education, respectively, relative to individuals with high education. All results are adjusted for gender, age and age squared.

Source: Authors, based on data by Huijts et al. (2017) from the European Social Survey 2014⁴⁶

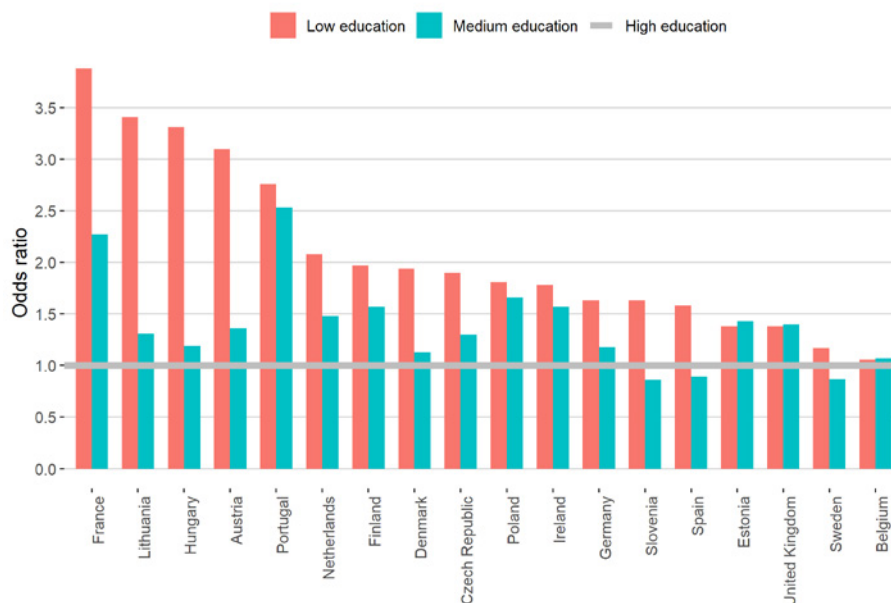
Smoking is not the only risk factor to exhibit a social gradient. Alcohol consumption is also important, as excessive drinking can lead to a host of health problems. As indicated in Figure A1.6, available data show that highly-educated individuals are more likely to consume alcohol more than once per week compared to those with primary or secondary education (Panel A).⁴⁶ This gives rise to the alcohol harm paradox: On average, low-educated people consume alcohol less frequently than their highly-educated peers, but experience more adverse social and health effects of alcohol. Looking at the amount of alcohol consumed offers one way of resolving this puzzle:⁴⁷ Individuals with a low or middle level of education are more likely to engage in binge drinking at least weekly (Panel B).⁴⁶ No systematic geographical patterns emerge, but there is considerable variation across European countries such that the overall pattern is less robust. For instance, educational inequalities are particularly large in France and Lithuania, whereas education has less discriminatory power in explaining binge drinking in Sweden and Belgium.

Figure A1.6: Probability of Alcohol Consumption by Education

Panel A: Alcohol more than once a week



Panel B: Binge drinking



Notes: Odds ratios represent the probability of consuming alcohol more than once per week and engaging in binge drinking, respectively, relative to individuals with high education. All results are adjusted for gender, age and age squared.

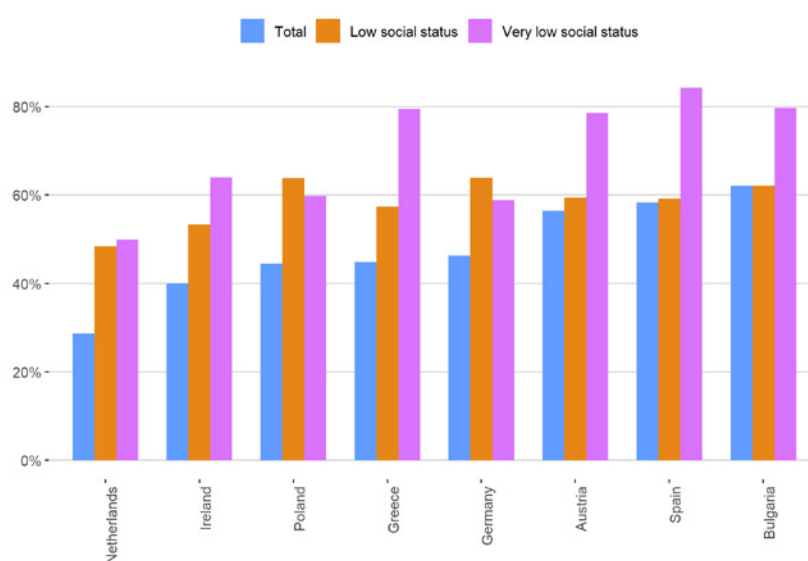
Source: Authors, based on data by Huijts et al. (2017) from the European Social Survey 2014⁴⁶

Other important behavioural risk factors that follow a social—educational—gradient include physical activity as well as the consumption of fruit and vegetables. Across all 21 countries in the sample of the European Social Survey 2014 special module on health inequalities,³⁴⁻³⁵ highly educated individuals are most likely to be physically active at least three times a week, followed by individuals with medium and low levels of education, respectively. Again, this relationship varies by country. For instance, in Austria, highly-educated people are more than four times as likely as individuals with a low level of education to be physically active. By contrast, in Slovenia, education does not significantly predict differences in physical activity. Finally, the probability of consuming fruit or vegetable at least once a day increases with education.⁴⁶ In short, evidence suggests that health inequalities may emanate from risky health behaviour—which follow a social gradient themselves.

Health Literacy in Selected European Countries

Further, determinants of inequalities in health go beyond risk factors. For instance, health literacy—the ability of individuals to make sound decisions concerning health—may improve individuals' health.⁴⁸ Consequently, the concept of health literacy features increasingly on the political agenda, including the *Health 2020* strategy mentioned earlier.⁴⁹ Crucially, a first comparative European survey on health literacy—the European Health Literacy Project (HLS-EU), covering eight European countries—suggests that health literacy follows a social gradient, too.⁵⁰ Figure A1.7 depicts the proportion of individuals with insufficient or problematic health literacy by three groups: the national average, low, and very low social status. Accordingly, health literacy is highest in the Netherlands, with only 28.7 percent of the total population reporting problematic/insufficient health literacy, and its social gradient is relatively flat. By contrast, the disparities in health literacy among individuals in Greece are stark: Health literacy is inadequate for 44.8 percent of the total population, but problematic for 79.5 percent of Greeks with very low social status. Thus, while health literacy gives rise to challenges for health policies, it does so to varying degrees across European populations.

Figure A1.7: Problematic Health Literacy by Self-Assessed Social Status



Notes: Social status is self-assessed on a scale of 1 to 10, with '1' indicating 'the lowest level in the society' and '10' marking 'the highest level in the society'. Values 1 to 3 are recoded to 'very low', and 4 equals 'low' societal status.

Source: Authors, based on data by Sørensen et al. (2015)⁵⁰

In sum, health inequalities in Europe persist, but they vary largely between and within countries. This suggests that different causal mechanisms and policies are at play. Certain outcomes, like life expectancy, may be more readily explained by cross-national differences in health systems and income. However, risk factors and health literacy are subject to broader macroeconomic and institutional policies, pertaining to education, the workplace, or income. Thus, it is important to consider both clusters—the role of national health systems and the social determinants of health—and their interaction in explaining health inequalities. Before doing so, Section A2 presents evidence on the relationship between welfare regimes and national health systems of selected European countries.

A2. Welfare States, Health Systems, and Health Inequalities

Welfare States and Health Systems Matter for Health Inequalities

The 'welfare state' refers to the collection of various social security entitlements (including social assistance, pensions, sickness benefits, and unemployment support), family policies, and health systems provided by the state.²⁶ Such policies have an important role in moderating the effects of the social and behavioural determinants of health and health inequalities.⁵¹⁻⁵² Yet, welfare states vary across time and space. Thus, scholars have classified them into different types—commonly referred to as welfare state regimes—which have underlying commonalities in how they try to achieve their goals (e.g. in terms of financing, principles, or generosity).^{26,53-54} In comparative health research, five clusters of welfare regimes are commonly identified:^{52,55-57}

- Liberal or Anglo-Saxon: State provision of welfare is limited, social protection benefits are modest and often subject to strict entitlement criteria, and recipients are usually means-tested.
- Conservative or Bismarckian: Welfare programs are tied closely to earnings such that they preserve existing disparities by social status. The role of the family is also emphasised and the redistributive impact is minimal. However, the role of the market is limited.
- Social Democratic or Scandinavian: These regimes are characterised by comparatively generous public benefits and a commitment to full employment and income protection. A strongly interventionist state promotes equality through a redistributive social security system.
- Southern or 'familial': The system of welfare provision is fragmented in that it consists of diverse income maintenance schemes with different levels of generosity. Due to limited and partial coverage of public services, reliance on the family and voluntary sector is a prominent feature.
- Eastern: Eastern European countries have experienced the demise of the universalism of the Communist welfare state and a shift towards policies associated with marketisation and decentralisation. Compared to other EU member-states, they have limited welfare services.

Table A2.1 provides an overview of all EU member-states by welfare regime cluster.

Table A2.1: Welfare Regime Clusters in the EU

Liberal	Conservative	Social Democratic	Southern	Eastern
Ireland	Austria	Denmark	Greece	Bulgaria
United Kingdom	Belgium	Finland	Italy	Croatia
	France	Sweden	Portugal	Cyprus
	Germany		Spain	Czech Republic
	Luxembourg			Estonia
	Netherlands			Hungary
				Latvia
				Lithuania
				Poland
				Romania
				Slovakia
				Slovenia

Notes: Malta is excluded in cross-national analyses of welfare regimes and has a hybrid welfare model.⁵⁸ Thus, we refrain from classifying it in Table A2.1.

Source: Bambra & Eikemo (2008)⁵⁷

Accordingly, only Ireland and UK are classified as having a liberal or Anglo-Saxon welfare state. By contrast, Eastern and Central European countries are the largest cluster. Yet, this also reflects the fact that research focuses predominantly on West European countries due to data availability. Thus, the importance of the classification should not be overestimated. Further, some countries escape easy definition. For instance, Italy possesses features reminiscent of both the Conservative and the Southern European cluster, and Malta has a hybrid welfare model (therefore omitted from Table A2.1).⁵⁸

Welfare Regimes and Health Inequalities

Although health inequalities exist across all welfare regimes, they do so to different extents and vary by health outcomes. For instance, in 2006, cross-national inequalities in average life expectancy were lowest for men in Nordic welfare regimes, followed by the Conservative and Southern European regimes. Yet, amongst women, inequalities in mortality were smaller in both Southern European and Conservative clusters relative to Nordic populations. For both genders, however, Eastern European countries exhibited the highest inequalities in health.⁵⁹

The fact that Nordic countries—with the most generous welfare regimes and a high overall population health—do not have the smallest health inequalities has given rise to the so-called Nordic public health puzzle, described in Box A2.1.

Box A2.1: A Nordic Public Health Puzzle? Scandinavian countries are among the most egalitarian nations in Europe in economic terms. Contrary to conventional expectations, these countries—with social democratic welfare states—do not necessarily have smaller health inequalities than less egalitarian economies.^{55-56,59} While a host of theories have been put forward to explain and study health inequalities, none can provide a fully convincing account of this paradox as most predict smaller health inequalities in Scandinavian populations. Yet, three reasons suggest that health inequalities in Nordic countries are no puzzle at all:⁵⁵ First, only a limited number of studies investigate the full social gradient in health inequality in cross-national context. Second, while the welfare states of Scandinavian countries are certainly similar, they also differ in important ways—e.g., the flexicurity in Denmark compared with the protectionism in Sweden—which analyses at the level of the welfare regime remain oblivious to. Third, most research focuses on relative—*not* absolute—inequalities. As a result of the high levels of health for the middle class in Nordic countries, relative inequalities remain. Nonetheless, the lowest socioeconomic groups in the Scandinavian countries are better off in absolute terms than the lowest socioeconomic groups in the other welfare state regimes.⁵⁵

Analyses of data on employment status from the European Social Survey yield slightly different results.⁵⁷ Relative inequalities were largest in the Liberal, Conservative, and Scandinavian regimes, particularly so amongst women.⁵⁷ Low replacement ratios or means-tested benefits in some of these countries suggest that levels of social protection have a moderating influence on health inequalities (for further information, see Section B2). These studies consider health inequalities to be constant across age groups. Yet, more fine-grained analyses find that health inequalities in self-reported health and limiting longstanding illness tend to increase with age. A life-course approach would therefore allow for the welfare state experience to differ by age.⁵¹

Finally, consider analyses on self-reported health by education in 26 European countries from 2005 through 2014. Taken together, health inequalities—adjusted for age and sex—persisted in absolute terms, but widened slightly in relative measurements. Changes over time vary by welfare regime, though. Liberal countries experienced the largest increase in absolute inequalities, followed by populations of Conservative welfare regimes, whereas they decreased in Eastern European countries (trends elsewhere were not statistically significant). Relatively speaking, however, health inequalities widened in Eastern European countries, remaining stable in other welfare regimes.⁶⁰

Characteristics of Health Systems

Health systems are nested within welfare states, and are an indispensable component of countries' social policy apparatuses. Nonetheless, the welfare regime and national health systems may differ, and classifications of the latter have been developed separately.^{23,61-64} Considering both the expenditure side (or cash component) of welfare regimes and the provision of health services, we observe variations of the following three ideal-type national health systems in Europe.²³

- In countries with *National Health Services*, healthcare is provided and financed by the government through tax payments. While most hospitals and clinics are owned and operated by the government, some are in private hands. Examples of national health services include

the UK, Ireland, or the Nordic states. Other countries—such as Spain or Italy—follow a similar, but more decentralised model. That is, the governance, responsibility, and financing of health services may be organised at sub-national level.

- In countries with *Social Health Insurance*-based models, healthcare is financed largely through employment contributions. Such model is, amongst others, present in Germany, the Netherlands, France, or Croatia.
- *Market-based* national health systems place the greatest emphasis on the role of the private sector, with high shares of out-of-pocket (OOP) health expenditure and private health insurance. That is, the scope of state-financed health services is limited. While no European country fits the description of this model, Greece comes closest—even though the Greek health system also combines elements of the other two ideal types and is in the process of extensive reforms.

Note that the characteristics of health systems sometimes diverge from the wider welfare state regime: For example, with the National Health Service (NHS), the UK has a publicly funded health system although its welfare state regime is liberal (with relatively modest state-provision of welfare services, as discussed above).²⁴

Selected Country Experiences

To offer some further nuance on country experiences, we focus on three key elements of national health systems—the organisation and governance of health systems; financing; and health coverage—in selected European countries. To what extent these features may contribute to health inequalities is discussed in detail in Section B1.

The liberalising NHS of the UK: Since devolving responsibility for organising health financing and services in 1997 to its four constituent countries, all health systems in the UK have maintained national health services—with market forces playing the greatest role in the English health system. Throughout the UK (except in Northern Ireland) there is a division between healthcare (provided by the NHS) and social care, which is funded through local government and mostly provided privately. The health system is primarily funded through general taxation, with the remainder coming from private medical insurance and OOP payments. In principle, the NHS provides universal access to a comprehensive package of services that are mostly free at the point of use. However, coverage for specific services varies across the UK. For instance, some services involve cost-sharing—e.g., in dental care or prescription charges for pharmaceuticals.⁶⁵⁻⁶⁶ Over the last 25 years, the role of the market and private service providers has particularly increased in the English NHS.⁶⁷

Germany's Bismarckian heritage: The German health system follows a traditional Bismarckian model where all insured persons contribute a percentage of their income. In turn, this entitles them to access health services—irrespective of their socioeconomic position. Since 2009, all citizens and permanent residents have health insurance. Employees and other groups (e.g., pensioners or students) earning less than €57,600 (2017), and their non-earning dependents have mandatory statutory health insurance (SHI). Individuals with a gross income above the threshold or self-employed can purchase substitutive private health insurance. One key element in the German health system is the sharing of decision-making powers between the federal government, the federal states, and civil society organisations. The former two traditionally delegate powers to membership-based (with mandatory participation), self-regulated organisations of payers and providers. As of 2017, 113 competing, not-for-profit, self-governing sickness funds provide statutory health insurance. Health expenditure per capita is relatively high but expenditure growth since the early 2000s has been modest despite a growing number of

services provided both in hospital and ambulatory care, an indication of technical efficiency. In sum, the German health system has a comparatively generous benefit basket, one of the highest levels of resources internationally as well as relatively low levels of cost-sharing.⁶⁸⁻⁷⁰

Denmark and the Nordic model: The Danish health system can be characterised as fairly decentralised, with responsibility for primary and secondary care set at local levels—regions and municipalities. Denmark's health system is financed through general taxation. Both in per capita terms and as a share of GDP, Denmark spent a higher amount on healthcare than the EU average in 2015. Further, public expenditure comprised 84 percent of total health expenditure—among the highest share in the EU. True to the Nordic welfare family, the Danish health system provides universal access to services. All Danish residents are entitled to publicly funded healthcare, which is predominantly free of charge at the point of use. For irregular migrants and visitors, a voluntary, privately funded initiative also provides access. Nonetheless, the country exhibits considerable social gradients in healthcare access and utilisation of some services. These inequalities are particularly pronounced in the case of smoking and obesity, which in part can be attributed to the unequal utilisation of preventive services. Further, the rise of voluntary health insurance has increased inequalities in terms of access for health services and potentially even procedures, such as surgery for hip and knee operations.³⁷⁷¹

Spain's familial welfare regime: The Spanish National Health System (known as the *Sistema Nacional de Salud*, NHS) is funded from taxes and predominantly operates through its public network of providers. Health competences were devolved to the regional level as from the end of 2002, resulting in 17 regional health ministries with primary jurisdiction over the organisation and delivery of health services within their territory. Health expenditure in Spain lags the EU average. Further, due to co-payments for prescribed medicines, dental care, and optical care, OOP expenditure has increased from 20 percent in 2009 to 24 percent in 2015—substantially greater than the 15 percent EU average. Thus, even though the statutory health system is universal in terms of coverage and provision is free of charge at the point of delivery—numerous exceptions endanger health equity.⁷²⁻⁷³

Eastern-European healthcare in Poland: In 2003-2004, Poland—the largest country in Central and Eastern Europe—created the National Health Fund (*Narodowy Fundusz Zdrowia*), which is the sole payer in the system and in charge of healthcare financing and contracts with public and non-public healthcare providers. Local governments at the regional, county, and municipal levels are involved in health to a varying degree—e.g., ensuring the availability of health services or engaging in health promotion and prevention. The share of GDP devoted to health in Poland increased from 5.3 percent in 2000 to 6.3 percent in 2015, but remains well below the EU average of 9.9 percent. In addition, only 70 percent of total health expenditure in 2015 was from public sources. Conversely, OOP expenditure was high—in part due to financial shortages, lack of standards, and informal payments from households—thereby resulting in private regressive financing. A further challenge to health equity is the unequal coverage of the health insurance. Compulsory health insurance covers 91 percent of the population, although automatic entitlement is extended to several other population groups (e.g., children, people with HIV and tuberculosis, people with mental health disorders). The 9 percent of the population not covered is mainly the result of casual or atypical work contracts.⁷⁴⁻⁷⁵

The information on welfare regimes and health systems presented suggests that there are many common features across the healthcare landscape of Europe. Thus, welfare regimes are a useful starting point to examine inequalities in health. At the same time, substantial differences exist both within and across identified clusters or types of health systems.

Part B: The Determinants of Health Inequalities

Part B: The Determinants of Health Inequalities

In Part B, we investigate the determinants of health inequalities in Europe in more detail. According to the conceptual framework discussed in the Introduction (Figure 1.2), we examine the following elements:

- Section B1 reviews the performance of national health systems—a key part of *social and health policy*. Specifically, we present comparative evidence on their financing and coverage, access and utilisation of health services, and the resilience of health systems to crisis.
- Section B2 takes a broader perspective, and focuses on two realms of *economic policy* in the context of health inequalities: labour market deregulation and fiscal policy.
- Section B3 investigates the *social determinants of health*, whose effect on health inequalities is mediated by economic policy. While these conditions cover the entire life course of individuals, this report emphasises the role of education, employment and work conditions, and income—three areas of greatest importance to policymakers.

In practice, it is often difficult to attribute health inequalities to any determinant in particular since these policies and conditions are simultaneously at play. Yet, for analytical purposes, we discuss health systems, economic policy, and the social determinants of health inequalities separately.

B1. The Role of Health Systems

Financing and Coverage of Health Systems

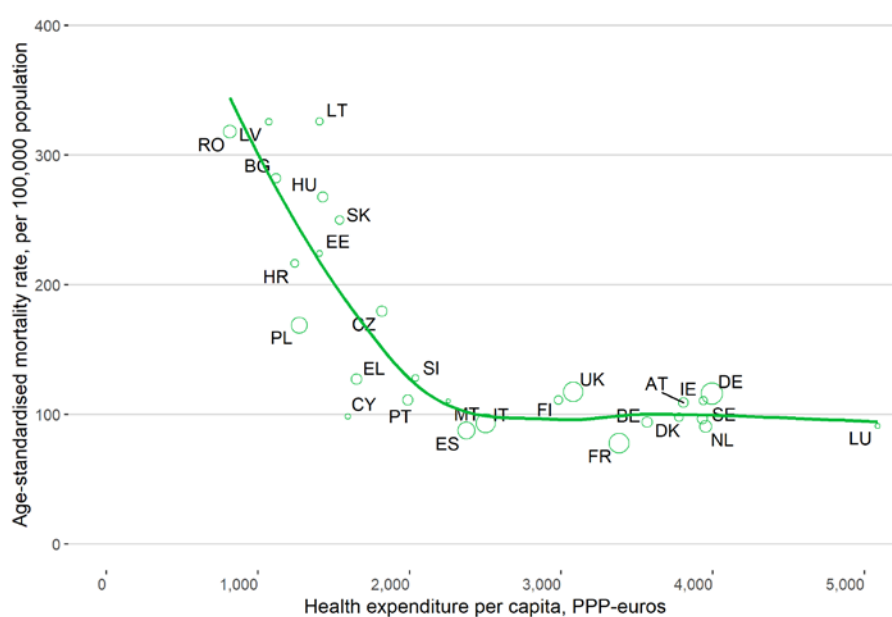
First, consider the financing of national health systems for healthcare provision—approximated by total health expenditure per capita—and its relation to amenable mortality—the number of premature deaths that could have been avoided through timely and effective healthcare. The former indicates the actual resources invested in healthcare, and the latter is a widely used indicator to measure the effectiveness of health systems both within and between countries.^{22,63} Panel A in Figure B1.1 depicts total health expenditure per capita (adjusted for purchasing power) against total all-cause amenable mortality.⁷⁷⁶ Reminiscent of the Preston Curve discussed earlier (Section A1), countries with higher total health expenditure per capita tend to have lower levels of amenable mortality. In Eastern European countries, amenable mortality in 2015 is above the EU average, and in these countries, an increase in per capita health expenditure is associated with improved health outcomes. For Western European countries with higher levels of spending, such relationship does not hold.

In this context, disaggregating amenable mortality by gender is a measure of within-country health inequality. Across all countries, amenable all-cause mortality per 100,000 inhabitants is substantially higher among men than women—as shown in Panel B in Figure B1.1. Yet, the extent of this gender gap varies considerably. For instance, age-standardised mortality of men exceeds that of women by 18 percent in the Netherlands (98.0 vs. 83.4), the smallest gap in the EU, whereas the respective statistic is 141 percent in Lithuania (497.1 vs. 206.1), the largest inequality. That is, even if there had been optimal quality healthcare in place, the number of deaths amongst men in Lithuania per 100,000 inhabitants

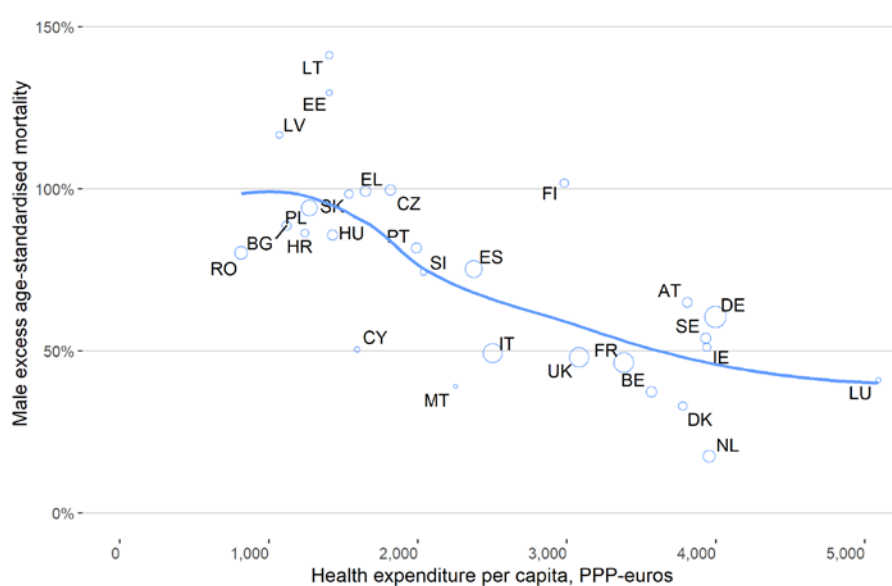
would have exceeded that of women by 291 (or 141 percent). Second, the relationship between health expenditure per capita and this measure of health inequality resembles that of the level of amenable mortality with a negative slope of the gradient, although it is less steep.

Figure B1.1: Health Expenditure per Capita and Amenable Mortality

Panel A: Total amenable mortality



Panel B: Gender inequality in amenable mortality



Note: Data refer to 2015. Observations are weighted by the relative population size, as indicated by the size of the circles.

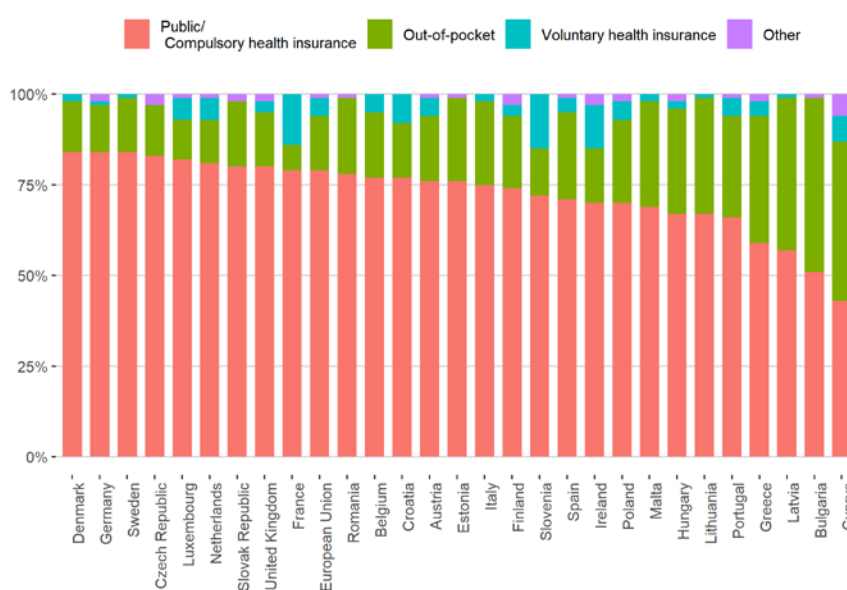
Source: Authors, based on data by Eurostat (2018)⁷ (indicator code: hlth_cd_apr); OECD/European Observatory on Health Systems and Policies (2017, p.6), based on data OECD Health Statistics; Eurostat; WHO Global Health Expenditure Database⁷⁶

While a good first approximation of the effectiveness of health expenditure, the bivariate relationship depicted omits many important variables. That is, countries with higher health expenditure per capita may have lower amenable mortality and inequalities due to other factors, such as utilisation of health services or the exposure to risk factors. In addition, total health expenditure per capita masks who is actually paying for the services, which is commonly decomposed as follows:

- The share of *public healthcare financing* indicates the role of the state in national health systems.
- *Out-of-pocket (OOP) expenditures* are charges or fees—co-payments, co-insurance, and or deductibles—that patients are required to pay. These direct payments may include costs for the consultation with health professionals, medical procedures, medicines, or laboratory tests. OOP charges are regressive, allowing the rich to pay the same amount as the poor for any particular service. As a result, they are the least equitable form of health funding. Indeed, the larger the proportion of healthcare that is paid out of pocket, the more households face catastrophic health expenditures.¹⁰⁸ Thus, some countries exempt people from user charges based on income or need.
- *Voluntary health insurance* may facilitate faster access to healthcare or cover services not included in basic healthcare, and is therefore another potential source of health inequalities.

Figure B1.2 disaggregates total health expenditure by public/compulsory health insurance; OOP expenditure; voluntary health insurance; and other types of spending.⁷⁰ Public expenditure on health is most important in countries with national health services or social insurance-based models—e.g., consider Germany or France, with shares of 84 and 79 percent, respectively. Consequently, OOP expenditure is comparatively low in those countries. By contrast, Greece—which comes closest to a market-based health system—has had historically a high share of OOP, standing at 35 percent in 2015 and only behind Bulgaria and Cyprus. In Ireland, voluntary health insurance accounts for 12 percent of total health expenditure.

Figure B1.2: Composition of Health Expenditure



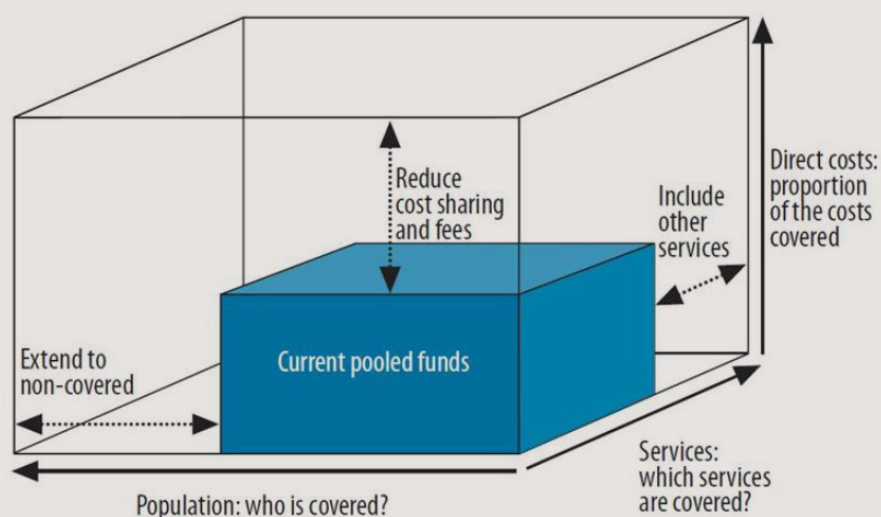
Note: Data refer to 2015.

Source: Authors, based on data by OECD/European Observatory on Health Systems and Policies (2017, p.12) from OECD Health Statistics and Eurostat⁷⁰

To better understand how the financing of health systems matters, we also need to consider the coverage of services. In EU member-states, universal healthcare coverage (UHC)—meaning that 'all people and communities can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship'—is a legal right of citizens.⁷⁸ However, the fulfilment of this right varies widely between member-states, as they commit different levels of resources towards its realisation, summarised in Box B1.1.

Box B1.1: Three Dimensions of Healthcare Coverage. While European countries share the goal of UHC, the paths chosen to attain such achievement vary and depend on national contexts. For any given amount of resources available, governments face competing interests along three dimensions when moving towards universal coverage. The 'Universal Health Coverage Cube'—depicted in Figure B1.3—captures these trade-offs: Governments should seek to increase healthcare coverage to individuals previously excluded from the system; to incorporate additional health services in health coverage; and to alter the proportion of direct costs individuals contribute.⁷⁹

Figure B1.3: Universal Health Coverage Cube



Source: WHO (2010)⁷⁹

Even though the specific configuration of the cube varies by country—shaped by the social, economic, and political context—the fundamental trade-offs are the same. However, no single country offers health coverage for the entire population, for all services available (with no waiting lists), and covers the full cost of these services.

For a defined set of services, normally including consultations with doctors and specialists, tests and examinations, and surgical and therapeutic procedures, most European nations have achieved (near) universal coverage of healthcare.⁸⁰ Yet, the financing and modalities of payment are structured differently. Table B1.1 lists the form of healthcare coverage of selected European countries.

- *Population coverage* refers to the percentage of the total population covered by mandatory health insurance. In all countries except Germany and Spain, the statistic refers to public coverage. In these two countries, some professional groups can opt for substitutive private health insurance. Despite this dual provision of health insurance, Germany and Spain still achieve (near-full) coverage of their populations. By contrast, as of 2015, the national health

systems in Greece and Poland leave comparatively large segments of the population without public coverage. In 2016, however, coverage in Greece has become universal following newly enacted legislation.⁸¹ In Poland, the relatively low coverage is primarily due to atypical work contracts (see also discussion in Section A2).⁷⁴

- The importance of *private health insurance* markets varies across Europe. In Poland—and more generally in countries with relatively low public coverage—the lack of such markets may give cause to concerns since it potentially leaves individuals in vulnerable situations where they cannot insure themselves against health hazards. Other European countries offer different types of private health insurance. One form of private health insurance complements public coverage by providing access to additional health services. For instance, in France, complementary private health insurance is very important, providing insurance for co-payments and better coverage for medical goods and services (e.g., eyeglasses or dental care).⁷⁶ In other countries, private health insurance duplicates public coverage but provides differential treatment. Such insurance is so common in Ireland that the health system is commonly referred to as ‘two-tiered’: people with voluntary health insurance enjoy favourable conditions, e.g., obtaining faster access to diagnostics and hospital treatments, even from public providers,⁸² thereby giving rise to health inequalities.

Table B1.1: Healthcare Coverage in Selected European Countries

Country	Health system	Population coverage	Private health insurance
France	State and social health insurance	99.9 %	95.5% (c)
Germany	Statutory health insurance and private health insurance	100.0 %	23.1% (c)
Greece	Social health insurance and national health system	86.0 %	11.5% (d)
Ireland	National health system	100.0 %	45.4% (d)
Poland	Social health insurance	91.0 %	n/a
Spain	National health system	99.9 %	14.9% (d)
Sweden	National health system	100.0 %	0.1% (d)
UK	National health system	100.0 %	10.6% (d)

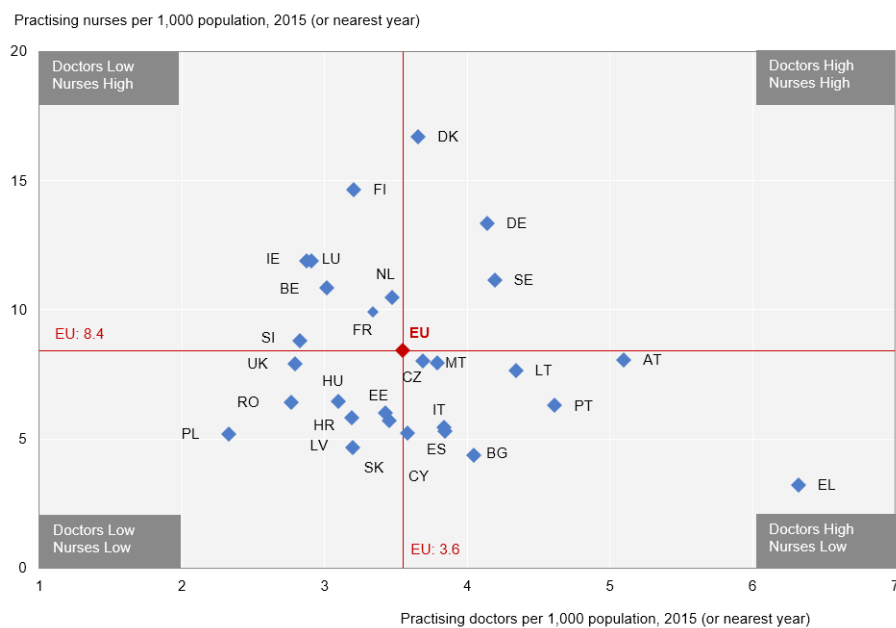
Notes: Population coverage and private health insurance refer to the percentage of the total population. In Germany, statutory health insurance covers 89.2 percent of the population. The remaining 10.8 percent are covered by primary private coverage. In Spain, public coverage is 99.1 percent, and 0.8 percent have primary private insurance. Private health insurance includes complementary (c) and duplicate (d) health insurance. All data refer to 2015, except Spain for 2014.

Source: OECD (2017, p. 89)⁷⁹

Human Resources

One key resource of any health system is its workforce. Figure B1.4 plots two indicators for which data are readily available—the number of practicing nurses (vertical axis) against the number of practicing doctors (horizontal axis), each per 1,000 population. The countries are split into four quadrants, defined relative to the EU average of 8.4 practicing nurses and 3.6 practicing doctors in 2015.⁷⁰ On balance, the number of practicing nurses is highest in Scandinavian countries (e.g., Denmark or Finland) and those with multi-payer health systems (e.g., Germany or Luxembourg). By contrast, in Eastern European countries (e.g., Bulgaria or Latvia) the number of such staff is relatively low. In terms of practicing doctors, there is larger variation across welfare regimes and ideal types of national health systems and no clear patterns emerge.

Figure B1.4: The Distribution of Nurses and Doctors



Note: Data refer to 2015.

Source: OECD/European Observatory on Health Systems and Policies (2017, p.8) from OECD Health Statistics and Eurostat⁷⁰

These resources matter for health inequalities. For instance, nurses—at the forefront of patient care—can play a key role in reducing health inequalities relating to obesity through health promotion and patient advocacy.⁸³⁻⁸⁴ In that the number of nurses and doctors also relate to access to health services (see next section), it may explain health inequalities between nations. Further, their geographical distribution within countries can also be cause for concern. For example, in mainland Spain, the number of doctors per 1,000 population ranges from 2.9 in Andalusia, to 5.5 in Cantabria.⁷ Alternatively, consider that the density of specialist doctors in France is two times greater in some regions than in others,⁷⁶ thereby potentially exacerbating regional health inequalities.

Health Services: Access and Utilisation

Next, we turn our attention to access and utilisation of health services by different populations. Lack of access to health services, e.g., due to costs, distance to travel, or waiting times, results in unmet needs. Where these are socially patterned, they reflect inequalities in healthcare utilisation. A number of reasons have been proposed how higher socioeconomic status may carry benefits in terms of accessing health services:⁸⁵

- Across Europe, individuals are more likely to perceive barriers to accessing healthcare in countries with higher shares of OOP expenditure,⁸⁶ thereby illustrating the importance of personal *income and wealth*.
- Since education is closely related to *health literacy* (see Section A1), people in higher socioeconomic positions are better able to navigate through the health system and access services when needed.
- *Power and prestige* may facilitate access to health services as health practitioners may perceive these individuals to deserve a better treatment.⁸⁷
- *Social support and personal networks* mean that individuals have family, acquaintances, co-workers, or even health personnel to seek help and advice from, which facilitates navigating through complex national health systems.^{85, 87}

These resources are socially patterned and, in many cases, people in vulnerable situations—e.g., being unemployed or lacking citizenship—are unable to access healthcare. Recent reforms in Spain illustrate both how policy interventions can exacerbate or alleviate the conditions of migrants. In 2012, Spanish legislation excluded non-registered migrants from full public coverage when eligibility criteria of the health service changed from universal entitlement based on residency to social insurance entitlement (although exceptions remained, e.g., for expecting mothers or emergency care).^{73,88} Subsequent analyses suggest that this measure severely impacted migrant populations. Thus, it is welcome news that the government which came to power in June 2016 announced it would rescind the Royal Decree, reversing previous policy reforms with deleterious health effects.⁸⁹ For a broader discussion on the health risks migrant populations face, see Box B1.2. In addition to migrant populations, we consider ethnic minorities. Yet, (cross-national) research of health inequalities and health system access by ethnicity is in its infancy in European countries. This points towards a more general problem regarding populations in vulnerable situations and minorities: They may be too small to be meaningfully captured by official statistics, thereby potentially escaping the attention of scholars and policymakers. One relatively well-documented exception are Roma populations—which we discuss in Box B1.3.

Box B1.2: Vulnerable Populations: Migrants' Health. Migrant populations in Europe appear disproportionately at risk of certain infectious diseases, and economic crises and subsequent responses have tended to exacerbate such risks.⁹⁰ A recent project on migrant health in Greece finds that most migrant groups were less likely to report non-communicable diseases than Greeks. By contrast, almost all migrant groups had been subjected to a greater extent to ergonomic and material hazards (60 to 90 percent) than Greeks (35 to 50 percent).⁹¹ These two observations—that migrants are initially healthier than the host country population and that they are at higher risk of health hazards—seem to hold across Europe, and these characteristics change with the number of years individuals live in the host country.⁹²

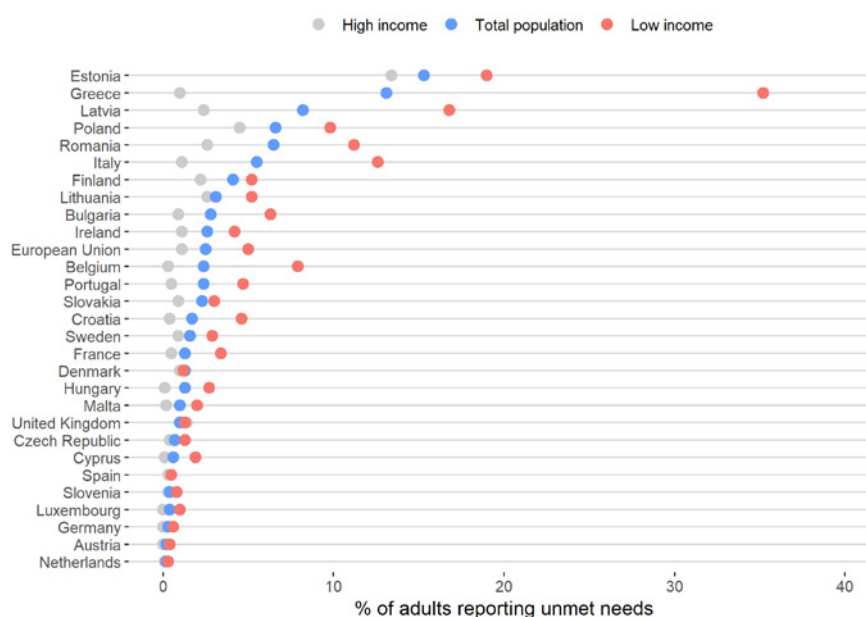
Yet, difficulties in collecting data on migrant health—e.g., due to different definitions of who constitutes a migrant, due to political sensibilities around ethnic origin, and for heterogeneity and small sample size of migrants—still mean that information on migrant health in Europe is incomplete.⁹³ One exception, a recent study on depression shows that first-generation migrants show higher levels of depression, with those born outside of Europe particularly so.⁹⁴ Further analyses indicate that this is not attributable to ethnic minority status but due to experienced barriers to socioeconomic integration and processes of discrimination—areas in which current national migration policies fail. Indeed, research suggests that even where national legislation guarantees the same rights for migrants as other residents, practice differs. Obstacles to accessing healthcare may include lack of health literacy, but also the fear of detection due to information sharing among authorities, or discretion by healthcare staff and organisations. Local level initiatives, often orchestrated by NGOs, may alleviate these situations.⁹⁵

Box B1.3: Vulnerable Populations: Health of the Roma Population. Roma people are one of the largest ethnic minorities in Europe, concentrated in Central Europe and the Balkans. The fact that the health of the Roma is poorer than that of the majority population has been thoroughly documented.⁹⁶⁻⁹⁷ More recent work still finds that the health of Roma is worse than that of non-Roma populations in Hungary,⁹⁸ Slovakia,⁹⁹⁻¹⁰⁰ and in Serbia.¹⁰¹ The worse self-reported health is in part explained by lower levels of education (i.e., limited health literacy) and by unhealthy behaviour (e.g., smoking and unhealthy diet). Barriers in access to health services are particularly relevant:¹⁰⁰ Survey data suggest that, in 2011, as much as 20 percent of Roma respondents were not covered by medical insurance or did not know if they were covered.¹⁰² Thus, in the 'EU Framework for National Roma Integration Strategies' up to 2020, the EU calls on its member-states to prepare and revise national integration strategies to effectively address the challenges of Roma inclusion.¹⁰² This is especially important since the Roma often share characteristics that put them in vulnerable situations along several dimensions, e.g., they may face discrimination not only because of their ethnic origin, but also due to gender, occupational status, or lack of language skills.¹⁰³

Since populations in vulnerable situations are not always covered by public health coverage, they need to pay for health services themselves—once they have overcome barriers such as discrimination or insufficient health literacy. Cross-national evidence suggests that this may exacerbate inequalities since the likelihood of reporting unmet needs and out-of-pocket payments as a share of total health expenditure are positively related.¹⁰⁴ In fact, unmet needs for medical care by income groups give rise to inequalities beyond minorities—as Figure B1.5 shows. For example, the Italian National Health Service covers all citizens and foreign residents, making the health system universal in terms of population

coverage—in principle.¹⁰⁵ Despite full coverage for basic medical services, 5.5 percent of Italians report unmet needs in 2016 (higher than the EU average of 5 percent). Further, as Figure B1.5 indicates, the proportion of people in the lowest income group reporting unmet needs for medical care is particularly high (12.6 percent in 2016), compared to 1.1 percent among people in the highest income group.⁷

Figure B1.5: Unmet Needs for Medical Care by Income



Notes: Data refer to unmet needs for a medical examination due to costs, distance to travel, or waiting times. Caution is required in comparing the data across countries as the survey instruments used vary. Data refer to 2016.

Source: Authors, based on data by Eurostat (2018) (indicator code: hlth_silc_08)⁷

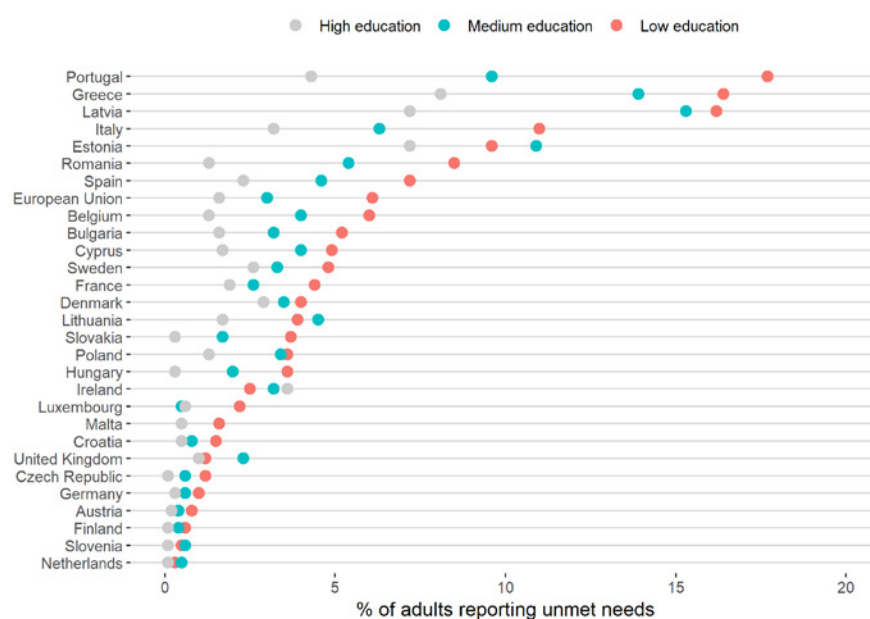
While low proportions of unmet needs portray effective and equitable health systems, this is by no means sufficient. For example, merely 0.5 percent of the population in Spain report unmet needs as described above. However, according to a national 2016 Health Barometer, 4.4 percent of Spanish people reported having stopped taking prescribed medications because these were too expensive.⁷³ Crucially, these figures pertain to reported or perceived unmet needs. Thus, some inequalities may be attributable to inequalities in perception of, rather than actual, unmet needs.

Complicating the picture further is the fact that utilisation of health services varies by form of care. For instance, low socioeconomic status tends to be linked with higher use of GPs, whereas higher socioeconomic position is associated with more frequent consultations of healthcare specialists in selected European countries.^{87,106-107} Interestingly, in most European countries higher socioeconomic status groups have a higher probability of specialist care use even when controlling for health need—and largely independent of the social markers used (i.e., education, occupational class, or social networks). In turn, this may explain inequalities in mortality for amenable causes of death in Europe.⁸⁷

Finally, consider dental care, which is important in itself, while also impacting general health. Figure B1.6 shows that inequalities in reporting unmet needs for dental care by education vary from being very substantial to non-existent. For instance, in Portugal, 17.7 percent of low-educated individuals

reported unmet needs for dental care due to cost—compared to 4.3 percent of Portuguese with tertiary education. A similar picture results from depicting unmet needs for dental care by income, illustrating how closely income and education are related. Box B1.4 provides a discussion of recent reforms in Portugal aimed at addressing these inequalities. By contrast, the respective figures stand at 0.3 and 0.1 percent in the Netherlands.⁷

Figure B1.6: Unmet Needs for Dental Care by Education



Notes: Self-reported unmet needs for dental examination due to cost. Data refer to 2016.

Source: Authors, based on data by Eurostat (2018) (indicator code: hlth_silc_16)⁷

Box B1.4: Dental Vouchers in Portugal. As Figure B1.6 depicts, unmet needs for dental care in Portugal are unusually high, and the difference between the lowest and highest groups of education are the largest in the entire EU. The publicly funded oral care system in Portugal is not comprehensive and there are very few NHS dental care professionals in the sector, ceding territory to the private sector. As a result, the government started issuing 'dental vouchers' in 2008—initially targeting pregnant women and pensioners. Under the program, eligible groups have access to a number of 'dental pay cheques', which give them the right to schedule a dentist appointment (three cheques for women per year, two for the elderly). Since its introduction, the scope has been expanded to include children with decayed, missing, or filled permanent teeth, when referred by their primary care physician. Further, there has been an increase in financing for dental care projects aimed at school populations, which has been associated with an increase in children without tooth decay: from 33 percent in 2000 to 54 percent in 2013.¹⁰⁸ Since 2014, the National Programme for Oral Health Promotion has also issued dental pay cheques to cover early interventions aimed to prevent oral cancer.¹⁰⁹ Thus, Portugal has taken seriously inequalities in access to dental care. Yet, on the basis of the data presented in Figure B1.6, the country has still a long way to go.

As the case of Portugal suggests, public coverage matters in view of dental care. For instance, analyses on individuals aged 50 years or older in 11 European countries suggest that—while controlling for age and chewing ability—educational inequalities in the use of dental care services were higher in countries where no public dental care cover was provided than in countries where there was some degree of public coverage,¹¹⁰ thereby indicating a potential role for health systems to address health inequalities. Further, income inequalities in foregone dental care widened significantly in 13 of 23 European countries over the period of 2008 to 2013, and decreased in only three countries. Adjusted for countries' macro-economic situation and severity of the economic crisis, higher dental care coverage was significantly associated with smaller income inequalities in foregone dental care and less widening of these inequalities.¹¹¹ At the same time, oral health inequalities exist in all welfare state regimes, and they are not smaller in the Scandinavian regime¹¹²—see also the discussion of the Nordic Public Health Puzzle in Box A2.1.

Resilience of Health Systems in the Face of Crisis

Following the global financial crisis of 2007/8, national health systems in Europe faced heightened financial strain. Yet, exposure to such pressure was not uniform and countries' policy responses and reforms to healthcare varied. Three main types of policy responses to increased pressure on national health systems are as follows: a) efficiency gains; b) spending cuts and coverage restrictions; or c) mobilising additional public revenue.¹¹³⁻¹¹⁴ We discuss an example of each case in more detail, looking at the impact on national health systems and the consequences for health inequalities. In doing so, we draw attention to both national and international determinants of the post-crisis policy reforms—see Box B1.5.

Box B1.5: Multilevel Determinants of Post-Crisis Policy Reforms. In the aftermath of the global financial crisis of 2007/08, national European health systems faced heightened challenges: As a response to the crisis, several countries reduced public health spending and enacted 'structural reforms' that altered eligibility, coverage, or cost of health services. Voluminous scholarship has examined how these policies affected health systems, and most empirical strategies have emphasised the immediate impact on service provision. Equally important, these policy reforms affect health and health systems in the medium and long run.¹¹³ In addition, the catalyst for reforms can be located at different levels. For instance, the EU set a precedent when the European Commission, the European Central Bank, and the IMF (collectively known as the Troika) mandated Greece to cap health expenditure in 2012¹¹⁵ and international actors have thus become a powerful agent of market-oriented reforms.¹¹⁶⁻¹¹⁷ In other countries, such as the UK, national politicians were the key actors to promote austerity in the face of the crisis.¹¹⁸

First, consider temporary *efficiency gains* in Ireland. Following the global financial crisis, the Irish health system simultaneously faced substantial budget cuts and higher demand for its services. In a country with no universal coverage for primary care, the use of Medical Cards—providing such basic health services for eligible individuals—illustrates these reforms. In 2009, eligibility criteria—based on means-tested income by age groups—were designed to limit access to Medical Cards. Nonetheless, the number of people holding such a Card has increased by over 40 percent from 2007 to 2016.⁸² Despite these expenditure cuts and higher demand, the Irish health system temporarily managed to

be 'doing more with less' from 2008 to 2012, primarily due to investments predating the crisis. Such trend reversed in 2013, however, when the breadth and depth of coverage had to be reduced in view of the limited resources.¹¹⁹ In fact, the automatic stabilisers tied to Medical Card eligibility worked for the economically most disadvantaged. However, individuals in the 'twilight zone'—being marginally above the threshold that entitles to social support measures—fared worse. Such concerns about equality continue to the day—e.g., the health system was less universal in 2015 than in 2011.¹²⁰

Second, Greece implemented a range of *austerity measures* under the auspices of the IMF, the European Central Bank, and the European Commission, thereby illustrating the force of international-level determinants.^{116,121} Unlike Ireland, health system reforms were imposed externally, leaving little policy space to the national government. While aimed at modernisation of the health system, the reforms had deleterious effects on Greek population health.^{117,122-123} By 2014, between 2 and 3 million people (18-27% of the population) reportedly had lost access to services, including the unemployed, their dependents, as well as self-employed who could not afford payments—thereby increasing unmet medical needs.¹²⁴⁻¹²⁶ As already discussed, these follow a social gradient. Further, Figure B1.7 illustrates how the relative gap in access to healthcare between people in the poorest and highest income quintile skyrocketed since the global financial crisis.¹²⁷

Figure B1.7: Greek Income Inequalities in Unmet Needs due to Cost



Note: Proportion of self-reported unmet needs for medical examination due to cost, individuals aged 16 or over. Shaded area depicts income gap.

Source: Authors, extending Karanikolos & Kentikelenis (2016), based on data by Eurostat (2018) (indicator: hlth_silc_o8)^{7,127}

Third, Iceland's response to the crisis provides a stark contrast to Greece—*bolstering social welfare and healthcare*. While the country is not a member-state of the EU, it resembles many Western countries in terms of development, demographics, and health system goals. When the global financial crisis

exposed the unsustainable debt levels of Iceland's largest banks, the government swiftly nationalised them. Yet, the Icelandic population rejected to repay such debt in two referenda. Taking the electorate's concern seriously, the government bolstered social welfare and the national health system. In turn, health indicators across the Icelandic population are significantly better than other crisis-struck European countries—e.g., in terms of depression.³ Further, during the period of crisis, Icelanders reduced their frequency of smoking, heavy drinking, and consumption of unhealthy fast food, partly driven by changing prices and lower incomes.¹²⁸⁻¹²⁹

The case of Iceland also illustrates how individuals may adopt different behaviour as a response to the crisis—independent of changes to health systems. Such adjustments are not always beneficial to health. For instance, while many governments cut spending on health services, individuals faced additional challenges due to unemployment and/or financial strain. In particular, access to private healthcare may have become unaffordable for people experiencing dwindling incomes, potentially leading to longer waiting times to receive treatment, or being unable to pay for examinations not covered by the public system.¹³⁰ Thus, the resilience of health systems in the face of crisis should also integrate individual-level responses.

In sum, this section has illustrated that institutional arrangements—welfare state regimes and national health systems—matter for health inequalities. Access and utilisation of health services varies by socioeconomic status and by subsets of the population. In addition, policy reforms to national health systems are consequential for inequalities in health.

B2. Economic Policy

Institutional Complementarities and Interdependent Health Effects

Nested in welfare regimes, health systems should not be regarded in isolation. As outlined in the Introduction, the varieties of European capitalism—what we understand as the economic systems through which societies allocate and distribute resources, and regulate economic activity—also impact health and social policies. The interdependence of different policy areas is known as institutional complementarity.¹³¹⁻¹³² Put differently, the performance of economic policy is conditional upon the design of social policy, and vice versa. Thus, the different policy elements ‘fit together’ to some degree. For instance, an ideal type of a social democratic model achieves flexibility in the labour market through retraining of a highly-skilled and adaptive workforce, rather than through layoffs. In turn, this focus on abilities and training of the working population requires a high level of social protection and active labour market policies.¹³¹

Institutional complementarities imply that efforts to reform one sphere of the political economy may yield negative economic results if unaccompanied by parallel reforms in other spheres.¹³² For instance, cuts in government expenditure—so-called austerity measures—in the recent financial crisis have put increased pressure on national health systems on two fronts. On the one hand, austerity itself is linked to adverse health consequences (see further below), thereby increasing need for healthcare by affected populations. On the other hand, lower public spending puts financial strain on health systems. This illustrates how economic and social policies interact, and why the impact of reforms on both of them should be considered.

We examine two economic policies. First, we discuss labour market policy with a particular focus on precarious employment—an increasingly common phenomenon in Europe. Further, we look at the role that unemployment benefits and active labour market policy can play in mitigating the adverse consequences of insecurity due to highly flexible labour markets. Of course, labour market policies encompass further elements such as sickness benefits or pension entitlements. By no means less important, these are beyond the remit of this report due to the limited scope. Second, we discuss fiscal policy, where we draw attention to the impact of austerity measures on health inequalities. At the same time, we highlight how fiscal policy that addresses health concerns can better population health.

Unemployment and Labour Market Deregulation as Risk Factors

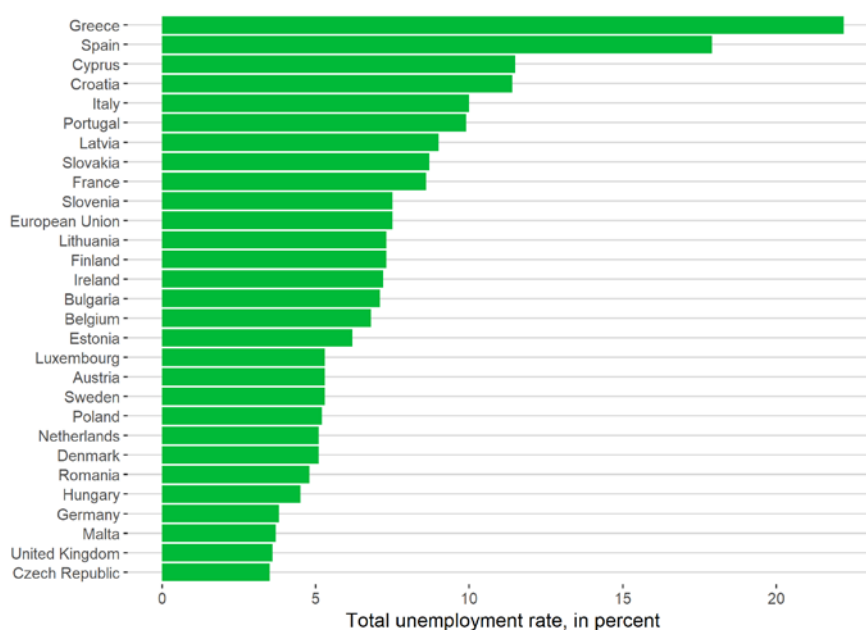
Labour markets are always and everywhere imperfect. For instance, people might need to work more hours than they would like, fail to find a job they are qualified for, or adapt to a new environment when jobs are outsourced. Labour market policy attempts to address these imperfections, and to alleviate any adverse consequences that may arise from them. In addition, labour market policy reflects normative and ideological forces, e.g., with regard to the role of the government.¹³³ For instance, the labour market is most important in countries with social health insurance-based health systems (e.g., Germany), since the financing, eligibility, and coverage of health services is closely linked to employment contributions. Where health systems are predominantly tax-based (e.g., Sweden), the employment relationship is less central to the health system. Nonetheless, labour market policies can have profound consequences on health inequalities in *all* countries—both positive and negative.

Since the 1980s and 1990s, most European states have deregulated labour markets, although focusing on different elements of labour market flexibility.¹³⁴ For example, wage flexibility includes legislation that allows employers (and employees) to set wages flexibility. This pertains to income inequality, which is discussed in Section B3. Alternatively, labour market policy structures the regulation to hire and dismiss employees with relative ease—the subject of this section. Such policies are designed to efficiently allocate the labour force, thereby lowering the total unemployment rate—the number of individuals currently not employed but actively seeking a job as a percentage of the working population. In order to reabsorb the amount of unemployment created by adverse economic shocks, such as the most recent financial crisis, governments have often sought to flexibilise contracts.

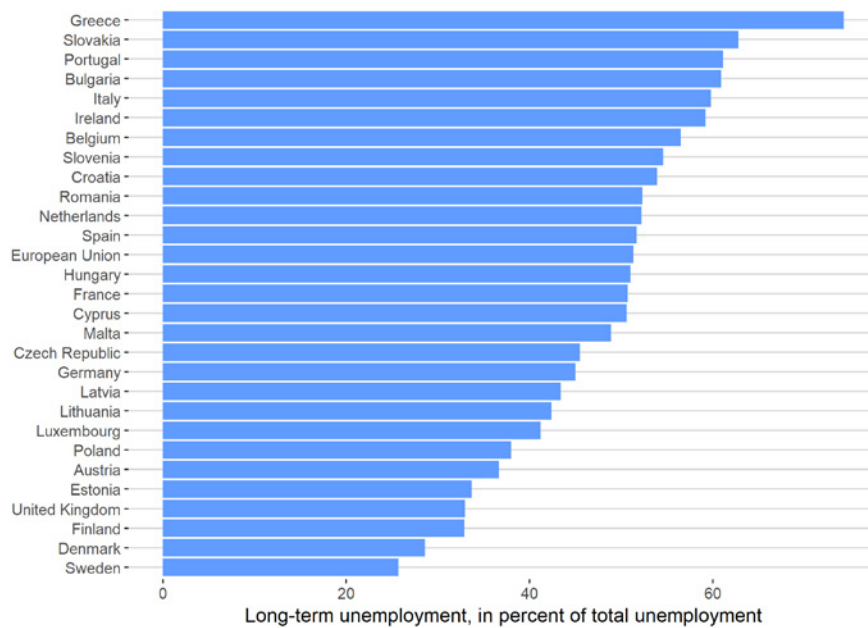
In the EU, total unemployment has decreased from 7.3 percent in 2000 to 6.7 percent in 2016.⁷ However, the total unemployment rate masks variation in short- and long-term unemployment, with the latter being of greater concern to both the state (in terms of economic costs) and the individual. Figure B2.1 depicts both the overall unemployment rate (Panel A) and the share of unemployed who have been looking for a job for more than 12 months (Panel B)—deemed to be long-term unemployed. In most European countries, the two measures are related, although cross-national variation in long-term unemployment is larger. For example, Greece has both the highest unemployment rate and the highest share of long-term unemployed in 2016, 74.3 percent. By contrast, the UK reports low on both measures, with 3.6 percent of the working population looking for a job, and 33.0 percent of those doing so for more than one year.⁷

Figure B2.1: Another Look at Employment in Europe

Panel A: Total unemployment rate



Panel B: Long-term unemployment



Note: The total unemployment rate is the annual average as a percentage of the active population, from 25 to 74 years. Long-term unemployment (12 months or more) for the same age group is expressed as a percentage of the total unemployment. Data refer to 2016.

Source: Authors, based on data by Eurostat (2018) (indicator codes: une_rt_a; lfsq_upgal)⁷

Unemployment is associated with a range of adverse health consequences, including worse self-reported health,⁵⁷ as well as increased physical and mental health problems.¹³⁵⁻¹³⁶ In some studies, unemployment is linked to a higher prevalence of risky health behaviours (particularly amongst young men), including smoking and problematic alcohol use.¹³⁷⁻¹³⁸ Further, the negative health experiences of unemployment are not limited to the unemployed themselves, but also extend to their families and the wider community.¹³⁹

Multiple pathways link unemployment to these health consequences. Some explanations focus on the *psychosocial effects*—e.g., isolation and loss of self-worth—drawing on the fact that employment provides social status, self-esteem, and opportunities to work. By contrast, the absence of these due to unemployment causes psychological distress which in turn may deteriorate physical health. Alternatively, *materialist explanations*—emphasising wage loss and resulting changes in access to essential goods and services—propose that the relative poverty experienced by job loss accounts for the deterioration in health.¹⁴⁰

Since unemployment is not equally distributed, its health effects exacerbate inequalities. In particular, individuals who are unemployed or not in the labour force disproportionately come from lower socioeconomic groups.¹⁴¹⁻¹⁴² For example, in 2017, 78.4 percent of Europeans with tertiary education participated in the labour market compared to just 42.4 percent amongst individuals with the lowest level of education.⁷ Ill health-related job loss also follows a social gradient, with adverse employment consequences more likely for those with lower social standing.¹⁴³

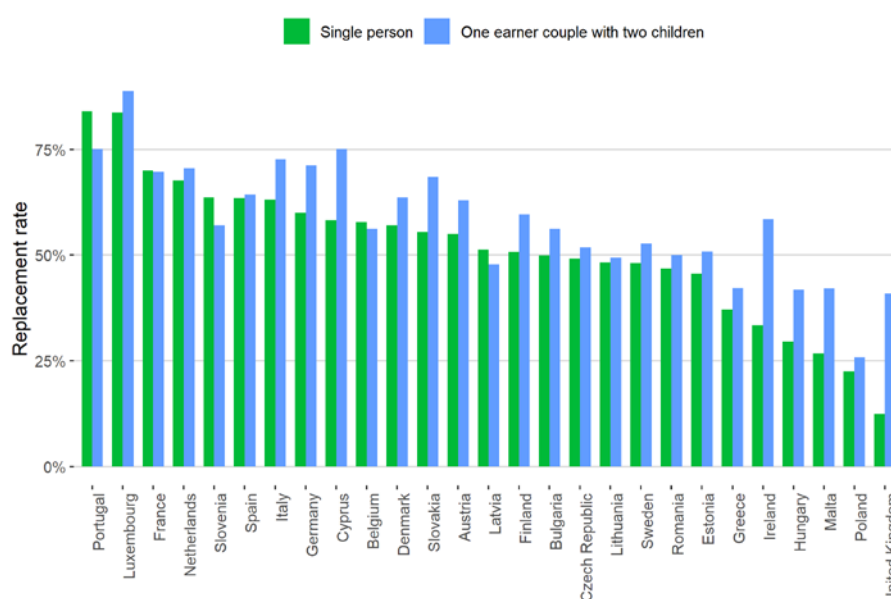
Thus, unemployment is a concern for health inequalities, and—as described above—one to which policymakers have responded by deregulating labour markets. With mixed success in terms of reducing the unemployment rate, this has also given rise to precarious employment—e.g., contract work, temporary work, part-time work, and daily work. We discuss these issues in Section B3 in the context of the health effects of employment and working conditions.

The Social Safety Net and Active Labour Market Policy

In addition to inclusive labour market regulation that generate fair employment conditions, the social safety net can mitigate the consequences of unemployment and/or precarious employment. The social safety net refers to a bundle of monetary entitlements in different circumstances—e.g., sickness benefits, unemployment compensation, or pension plans. We focus on unemployment compensation, one key element of the social safety net that influences wage formation and the flexibility of the labour market.¹⁴⁴ Its generosity partly determines whether an individual takes on temporary employment or can afford to hold out for a little bit longer to look for a permanent position. In addition, unemployment compensation decides the fall-back position—equivalent to a minimum wage.

Figure B2.2 depicts the unemployment replacement ratio—the share of net unemployment insurance benefits to net income earnings at average wage levels—for a single person aged 40 and for a one earner family with two children (including child benefits, if applicable) in selected European countries. Depending on the residence of an unemployed, one could expect to receive up to 84 percent of the average income (in Portugal), or merely 12 percent of average wages (in the UK).¹⁴⁴ The latter illustrates how liberal market economies—the UK and Ireland—provide few benefits to mitigate the income loss due to unemployment. Other welfare regimes exhibit greater variation. For instance, some Eastern European countries—like Slovenia—have relatively high replacement rates, whereas others—such as Poland and Hungary—offer relatively little financial support to the unemployed.

Figure B2.2: Net Unemployment Replacement Rates



Note: The net unemployment replacement rate corresponds to the share of net unemployment insurance benefits to net income earnings at average wage levels for an average worker. Data refer to 2009, except Cyprus refers to 2007. No data are available for Croatia or the EU.
Source: Authors, based on data by Van Vliet & Caminada (2012)¹⁴⁴

The fact that the UK has a very low unemployment rate underlines claims that unemployment benefits act as disincentives to job seeking. But from a health perspective, taking on work quickly might come at a cost where it is associated with low-skill or poorly paid jobs. For example, recent UK research suggests that whilst benefit conditionality and low generosity improves return to work amongst the unemployed, it has negative effects on people with disabilities or health problems.¹⁴⁵ Relatedly, available evidence documents that unemployment insurance generosity is associated with a longer duration of subsequent employment, particularly so in countries where unemployment benefits are relatively high (e.g., Denmark, France, Germany, and Spain).¹⁴⁶ Adequate unemployment benefits therefore allow individuals to hold out for a position that suits them better, rather than take a job requiring fewer qualifications and offering worse conditions or remuneration.^{140,146} In doing so, unemployment benefits have significantly reduced transitions into ill-health during the recent financial crisis, while also lowering health risks attached to educational attainment,¹⁴⁷ thereby directly narrowing health inequalities.¹⁴⁸

In crisis years, 'flexicurity'—labour market policies that reduce employment protection while maintaining economic security—became a buzzword in Europe.¹⁴⁹ For instance, the European Commission has now recognised 'an integrated strategy to enhance, at the same time, flexibility and security in the labour market.' Denmark has been one of the pioneering countries in implementing such policies, and is often deemed a 'success case'.¹⁴⁹ However, the low and stable unemployment rate in Denmark cannot be fully understood without considering its active labour market policies (ALMPs).¹⁵⁰ ALMPs refer to a broad set of policies that aim to help the unemployed return to work:¹⁵¹

- *Incentive reinforcement* components are designed to increase the efforts of job seekers, e.g., by curtailing passive benefits.
- *Employment assistance* removes obstacles to labour market participation, e.g., by providing counselling or child care.
- *Occupation* policies focus on the creation of employment opportunities such that skills are not depleted.
- *Upskilling* has the strongest focus on both training and labour market participation. For example, this includes vocational training to jobless people, and is most developed in Nordic countries.

A review of over 200 studies on ALMPs finds that their average impact is minimal in the short run, but becomes more positive between two to three years after the completion of the program. Over the long run, average gains are largest in programs that emphasise training and education of the labour force. In addition, there is systematic heterogeneity across participant groups, with larger impacts for women and participants who enter from long-term unemployment.¹⁵² Insofar as these programs seek to equip unemployed individuals with the tools for successfully re-entering the labour market, ALMPs can improve health and health inequalities. For instance, ALMPs may increase the resilience to health risks associated with unemployment.¹⁵³ In countries with more comprehensive ALMPs, the adverse consequences of unemployment—e.g., on suicide rates—are mitigated,¹⁵⁴ although evidence on the health effects of more specific evaluations, such as that of the effects on lone parents, is more mixed.¹⁵⁵

Spending Cuts Contribute to Growing Health Inequalities

Another key economic policy relates to fiscal affairs—the use of government revenue collection and expenditure. On average, countries with higher income (measured in terms of GDP per capita) tend to have higher government expenditure. The 'law of increasing state activity' as an economy develops is known as Wagner's law (named after the German economist Adolph Wagner). This is due to increased

need for regulatory and protective functions as well as higher demands for public goods such as education and cultural services in wealthier economies. Indeed, statistical analyses also find support for the relationship between public spending and per capita GDP—with a more than proportional increase of government expenditure with respect to economic activity.¹⁵⁶

While the size of states has increased over the long run across Europe, governments have deviated from this trend in the short term. In relation to health inequalities, declines in government expenditure are particularly relevant—especially abrupt ones in view of the global financial crisis, as extensive spending cuts can increase health inequalities. Such 'austerity' measures are associated with adverse effects on public health, especially mental health.³ Following the 2008 crisis, Greece, Italy, and Spain imposed cuts in health and social protection budgets. These countries experienced profound adverse health effects, in contrast to countries such as Germany, Iceland, and Sweden who opted to maintain and strengthen social safety nets.^{3,157} These reforms exacerbate health inequalities, as disadvantaged social groups tend to be affected more by the cuts.¹⁵⁸⁻¹⁶¹

Further, austerity measures often stipulate changes to the financing structure of healthcare, as governments reduce public health expenditure or shift towards a larger share of private financing.^{113,162-163} As discussed in Section B1, changes in public health spending patterns can affect the volume and quality of services provided (e.g., number of health facilities), thereby contributing to health inequalities.¹⁶⁴⁻¹⁶⁶

As an alternative mechanism, austerity links to health outcomes through its macroeconomic effects. For example, it is associated with higher unemployment rates and widening income inequality due to cuts in public wages.¹⁶⁷⁻¹⁷⁰ In many cases, populations in vulnerable situations are disproportionately exposed to these adverse outcomes.¹⁷¹ Finally, austerity potentially exacerbates health inequalities not only due to economic hardship of the populations, but also due to changes in trust and social relationships.¹⁷²

Fiscal Policies that Reduce Health Inequalities

Fiscal policy, if appropriately employed, can also help narrow health inequalities. For instance, recall that unhealthy diets are a key public health concern and a risk factor which is socially graded (see Section A1). In recent years, governments have introduced subsidies for healthy food and/or levied taxes on unhealthy food and beverages. Indeed, analyses show that these interventions influence dietary behaviour, with some studies suggesting that the food taxes and subsidies should amount to a minimum of 10 to 15 percent, and preferably applied in tandem.¹⁷³ These policies promise to address health inequalities since the poor often consume less healthy food, have higher incidences of most diet related diseases, and are more sensitive to price changes.¹⁷⁴ Yet, such reforms face challenges from multiple fronts. For example, in October 2011, the Danish fat tax—a tax on saturated fat in meat, dairy (excluding milk), animal fat, and oils, as well as composed foods containing these ingredients—came into effect. Yet, it was abolished already in January 2013—in part for lack of support by politicians during the crisis and loss of public popularity (e.g., as retail chains increased prices by more than the amount of the tax).¹⁷⁵ In addition, the food industry and trade associations lobbied extensively and initiated legal action at the EU level—another instance where European-level determinants came to the fore.

Alternatively, a recent—successful—example in the EU pertains to renewable energy. Since the early-2000s, several EU Directives have set targets for renewable energy.¹⁷⁶⁻¹⁷⁷ As a result, numerous member-

states have implemented policies to achieve those goals, such as subsidising renewable energy—which in turn has contributed to higher use of such energy.¹⁷⁸⁻¹⁷⁹ Econometric analyses focusing on the five largest economies of the EU in terms of GDP—France, Germany, Italy, the UK, and Spain—show that monetary incentives translate into higher production of renewable energy.¹⁷⁹ These benefits have materialised both in the short run—in the production of incentivised, renewable energy—and in the long run—in the form of installed capacity.¹⁷⁹ Since renewable technologies minimise environmental impacts and produce considerably less waste than traditional methods, these reforms mitigate greenhouse gas emissions and therefore carry important health benefits.¹⁸⁰

Indeed, the protection of the environment and combatting climate change have important implications for health inequalities. Once again, the adverse health consequences of climate change are distributed unevenly, with populations in vulnerable situations most exposed.¹⁸¹⁻¹⁸³ The potential impact of climate change in cities is either unique to urban areas or exacerbated in urban areas—e.g., high vulnerability to flood events due to the high density of the population.¹⁸⁴ Further health risks originate in the effects of heat waves and other extreme weather conditions, impaired functioning of ecosystems, or displacements—e.g., low lying island and coastal populations.¹⁸⁵ As discussed in Box B2.1, climate change has not only been addressed by states, but also by subnational actors in transnational networks.

Box B2.1: City Networks Take Climate Action. Despite several decades of state-led negotiations, cities have become key actors in global action on climate change. For instance, the C40 Cities Climate Leadership Group is a network of the world's megacities committed to addressing climate change. This transnational municipal network consists of more than 90 of the world's greatest cities, representing over 650 million people and one quarter of the global economy. These cities have a pivotal part in charting new geographies of climate governance.¹⁸⁶ In many cases, city dwellers are disproportionately exposed to health hazards by climate change. For instance, the concentration of concrete and asphalt surfaces and reduction of vegetation in urban environments exacerbates heat waves.¹⁸⁷ To effectively address such health concerns, cities are required to move beyond local geography and infrastructure and also consider social and economic conditions. Research points towards the importance of institutional determinants, such as social networks and community-based organisations, as well as knowledge and government practices.¹⁸⁸ The C40 network contributes towards these institutional conditions in that it supports cities to collaborate effectively, share knowledge, and drive meaningful, measurable, and sustainable action on climate change. Learning among C40 cities takes place when transaction costs are low,¹⁸⁹ something governments can contribute to, too. While municipal governments have a critical role in climate change experimentation, they often act alongside other actors and in a variety of forms of partnerships.¹⁹⁰

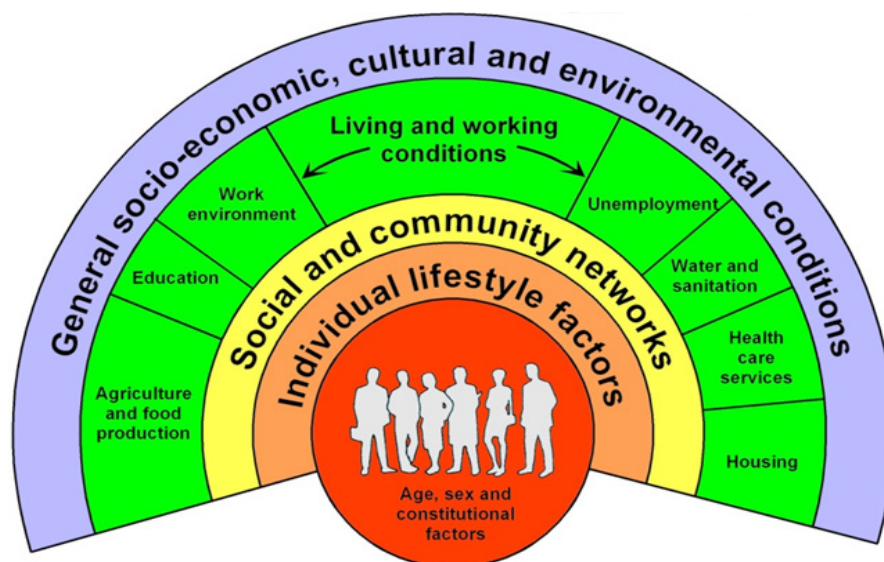
In sum, economic policy impacts upon health inequalities in multiple, important ways. They condition the effectiveness of health systems, but also have direct effects on health outcomes. In many instances, governments are the main actors, but not the only ones. Other stakeholders—whether trade unions or businesses in the case of labour market policies, or cities and NGOs in the case of fiscal policy inputs—have a key role in shaping policymaking, and this affects the prominence of health concerns (or lack thereof).

B3. The Social Determinants of Health Inequalities

The Social Determinants of Health Inequality over the Life Course

In addition to the effect of economic policy on health and social policy and their direct health consequences, economic policies mediate the impact of the social determinants of health inequalities—the conditions 'in which people are born, grow, live, work, and age.'²⁷ These determinants form a complex and interlocking web of upstream factors that affect population health and health inequalities—see Figure B3.1.¹⁹¹

Figure B3.1: The Social Determinants of Health



Source: Dahlgren & Whitehead (1991)¹⁹¹

In the past decade, research has increasingly examined these social factors as the causes of health inequalities.¹⁹² As a result, more data is collected, which we relied on extensively in Section A1.³⁴⁻³⁵ The *Review of Social Determinants and the Health Divide in the WHO European Region* mentioned in the Introduction drew attention to the need for a life course approach.¹³ This is important since it is now recognised that the disadvantages of lower socioeconomic background accumulate over an individual's lifetime.²⁷ For instance, the nature of the environment in which children are raised is consequential for their brain development. In turn, this affects children's chances of fulfilling their potential and succeeding in education—at which stage other social factors are important, too. For instance, wealthier and educated parents are more likely to encourage extracurricular activities, which help children further develop social skills as well as ensure that they get into better quality schools. Subsequently, school qualifications and social skills may facilitate entry into the job market where inequalities are further amplified by occupational class—in terms of working conditions, job security, or income. Better-paid jobs also provide more generous pensions such that individuals of higher socioeconomic background continue to be relatively wealthier once retired.

The social determinants of health inequalities are therefore clearly important at all stages in life and the English Health Inequalities Strategy—discussed in Box B3.1—is a successful example of how to reduce inequalities. Subsequently, this report emphasises three key areas particularly relevant during the working age: education, work and employment conditions, and income.

Box B3.1: The English Health Inequalities Strategy. Between 1997 and 2010, the UK government implemented a comprehensive program to reduce health inequalities in England, one of the most ambitious strategies of its kind. Notably, it differs from other countries' efforts, such as the Netherlands or Finland, in that the English Strategy has been 'more systematically developed, better resourced, more stringently implemented, and more extensively monitored.'¹⁹³ In 2001, the Secretary of State for Health announced two national health inequalities targets, namely, to narrow a) the gap in life expectancy between areas and b) the difference in infant mortality across social classes by 10 percent by 2010 (which were translated into 12 headline indicators). A revised Strategy from 2003 also incorporated the need to address risk factors, such as smoking, poor diet, or physical inability, and further included guidelines pertaining to poverty reduction or educational outcomes. Thus, the Strategy also addressed key social determinants of health. Recent econometric analyses suggest that geographical inequalities in life expectancy declined while the Strategy was implemented. Since it ended, inequalities have started to increase again.¹⁹⁴ Further, between 2001 and 2011, NHS funding in deprived areas in England was increased relative to affluent areas—which also contributed to lower geographical inequalities in mortality amenable to healthcare.¹⁹⁵ In short, the English Health Inequalities Strategy illustrates how health inequalities can be addressed through concerted action and policy coherence.

Education

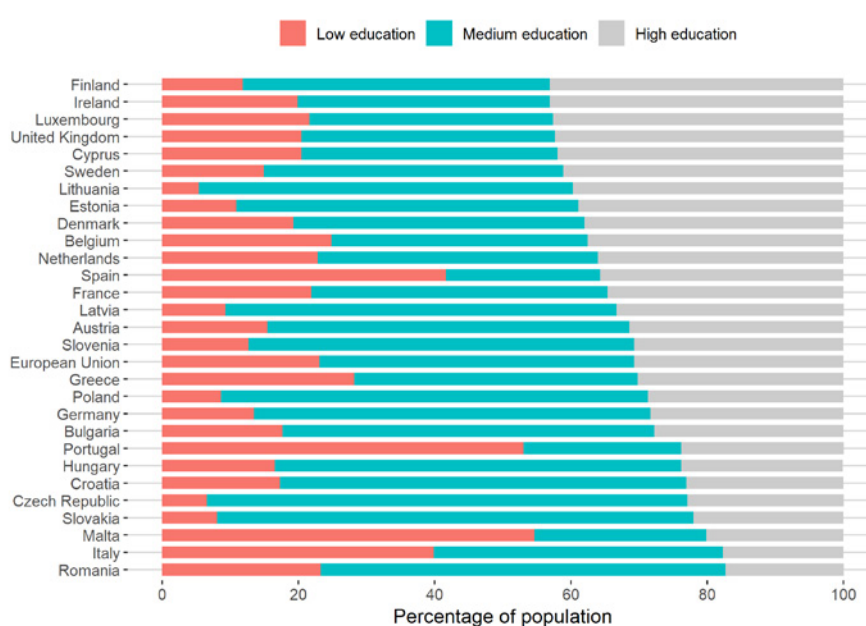
Education is a powerful marker of social standing since it affects individuals early on in their lives, with subsequent consequences over the life course.³⁰ Inequalities in health by level of education have already been discussed at length in this report (see Section A1). Data on life expectancy at age 25 by different levels of education illustrates this further. Accordingly, men with the lowest level of education in Austria are expected to live an additional 51.4 years, whereas those in Poland had only 42.6 years. By contrast, their peers who have completed tertiary education enjoyed an additional 57.8 and 55.2 years, respectively.³⁶ In addition to these health inequalities, the underlying differences in the education of European populations are also substantial. For instance, the proportion of individuals with low education is almost twice as high in Austria (15.5 percent) than in Poland (8.7 percent).⁷ We investigate educational attainment in the EU using the definition of levels of education following the International Standard Classification of Education (ISCED):

- The lowest level of education includes individuals with less than primary, primary, and lower secondary education (ISCED 2011 levels 0–2). Primary education is designed to provide students with fundamental skills in reading, writing, and mathematics (i.e., literacy and numeracy). Subsequently, lower secondary education aims to lay the foundation for lifelong learning and human development. For example, lower secondary education corresponds to schooling up until grade 10 in Germany, the first three years of secondary school in the UK, and four-year *collèges* in France for pupils aged 11 to 15.

- Medium education corresponds to upper secondary and post-secondary non-tertiary education (ISCED 2011 levels 3 and 4). Usually between ages 14 and 16, pupils enter upper secondary education, which prepares for tertiary education, or provides skills relevant to employment, or both. In Germany, upper secondary education encompasses grades 11 to 13 and *Abitur*, it includes both secondary schools and sixth form in the UK, or *Lycée* in France. Post-secondary non-tertiary education is usually designed to prepare for direct labour market entry, such as vocational programs.
- All individuals who have completed tertiary education are deemed to have the highest level of education (ISCED 2011 levels 5-8). These programs provide learning at a high level of complexity and specialisation, which is also sometimes referred to as academic learning. Thus, it encompasses all Bachelor's degrees or postgraduate qualification from universities, universities of applied sciences, vocational academies, and specialised academies.

Throughout Europe, the educational attainment of the population has already improved considerably in recent years. For instance, the share of individuals with tertiary education in the EU has increased from 22.5 percent in 2005 to 30.8 percent in 2016. In part, this is due to recent efforts by politicians and policy makers who have recognised the importance of education. For instance, one of the headline targets set by the *Europe 2020* strategy pertains to tertiary education, notably, that by 2020 the proportion of 30 to 34 year-olds with tertiary educational attainment should be at least 40 percent. In 2016, 39.1 percent of the population aged 30 to 34 in the EU had completed tertiary education (women already reached the target in 2012, with 40.2 percent having completed tertiary education that year). Figure B3.2 depicts the educational attainment of the European population in the three levels discussed above. These figures refer to the working population, aged 25 to 64 years, and therefore do not fully reflect the recent advances. Yet, there is substantial variation. Finland boasts the highest share of individuals with tertiary education, which stands at 43.1 percent. By contrast, in Romania, 17.4 percent of the population has completed high education.⁷

Figure B3.2: Educational Attainment in Europe



Note: Population by educational attainment level, individuals aged 25 to 64 years. Data refer to 2016. Data for Luxembourg has low reliability (2015 values are 24.0, 34.9, and 41.1, respectively).
Source: Authors, based on data by Eurostat (2018) (indicator codes: edat_lfs_g903)⁷

It is beyond the scope of this report to discuss different education policies in Europe, which vary widely. Nonetheless, policies regulating access to education have important health consequences. In systems with predominantly publicly funded education, such as is the case in Finland,¹⁹⁶ inequalities in access and utilisation are less pronounced, thereby promoting education overall. In addition, some studies link schooling to health-related behaviour—e.g., reduced smoking or lower body mass index.¹⁹⁷⁻¹⁹⁸ In short, extensive evidence points towards education as a key dimension of social status, with important implications for health at all stages of adult life.¹⁹⁹

Employment and Working Conditions

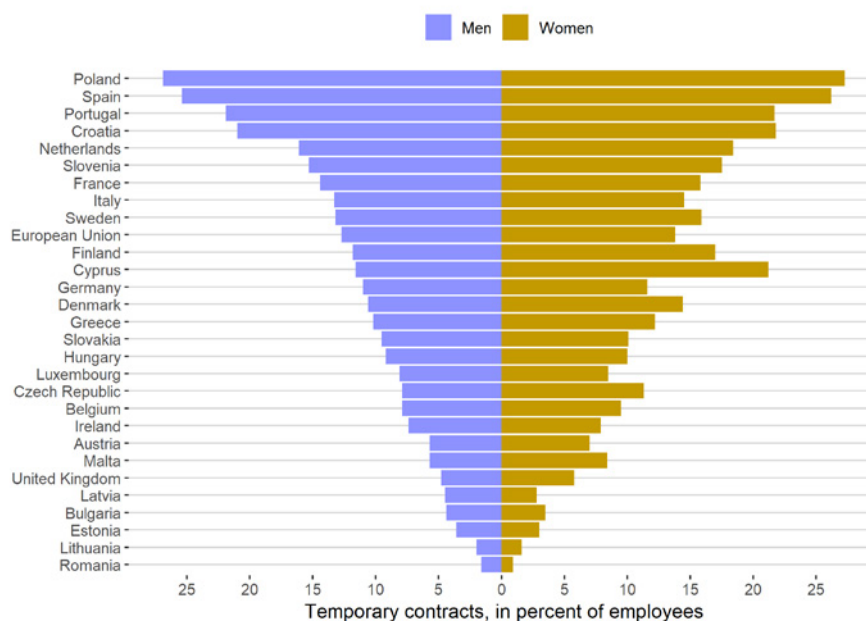
The impact of the global financial crisis has demonstrated that health inequalities respond to policy intervention beyond the realm of health. Closely linked to labour market policies, we discuss employment and working conditions—a key social determinant of health inequalities—in more detail. Good work and employment conditions support health through multiple mechanisms—ranging from financial security to social status, and from providing social networks to the protection from physical and psychosocial hazards.^{25,30} Poor quality work and employment conditions can have the opposite effect.

In Europe, the process of labour market deregulation—introduced in Section B2—has been accompanied by a rise in flexible—precarious—employment, a term encompassing informal work, temporary or fixed-term work, part-time work, and other less regulated forms of labour.³⁰ With trends towards less well-regulated labour markets, increasing numbers of people are working on such contracts that are characterised by a lack of security, poorer work conditions, and instability²⁰⁰⁻²⁰¹—as evidenced by zero-hours contracts, discussed in Box B3.2.

Box B3.2. Zero-Hours Contracts in the UK. Zero-hours contracts that do not guarantee a minimum number of hours are an example of precarious employment *par excellence*. Since the global financial crisis, the number of zero-hours contracts has risen rapidly, from about 120,000 in 2005, representing 0.4 percent of people in employment, to over 900,000 in 2016, accounting for 2.9 percent of the British working population.²⁰² While studies suggest that the growth in zero-hours contracts has prevented the unemployment rate to rise rapidly (see Figure B2.1), it has contributed to the growing occurrence of underemployment.²⁰³ Crucially, zero-hours contracts are most often used in low-skill and low-wage occupations, thereby exposing the most vulnerable to even higher health hazards.²⁰⁴

Temporary, insecure, work accounts for an average of 13.2 percent of paid employment across the EU, amounting to 24.1 million temporary workers.⁷ Across most European countries (except Bulgaria, Latvia, Lithuania, Portugal, and Romania), temporary work is higher amongst women than men—as Figure B3.3 shows. However, not all temporary work is involuntary—e.g., students might find it convenient to take on part-time work that allows them to balance the time spent at university and in the labour market. For example, Figure B3.3 depicts that temporary contracts are relatively widespread in Sweden, accounting for 14.5 percent of all employees. Yet, less than half of those, or 6.7 percent of all employees, are employed in temporary contracts involuntarily because they could not find a permanent position.⁷

Figure B3.3: Share of Employees with Temporary Contracts



Note: Percentage of employees aged 20 to 64 with temporary contracts. Data refer to 2016.

Source: Authors, based on data by Eurostat (2018) (indicator codes: lfsi_pt_a)⁷

The gains to employers from such job flexibility include increased performance and productivity, lower wages, and lower associated costs such as pensions or sickness benefits—all of which translate into higher profits.¹⁴⁰ However, these benefits to capital are accompanied by adverse consequences for labour. Precarious employment is linked to lower wages, long working hours, high strain and stress, and higher job insecurity.^{135,205} It therefore impacts on health and wellbeing through material, psychosocial, and behavioural pathways.

Work insecurity and stress at work is associated with adverse effects on both physical and mental health.^{19,206-208,212} Likewise, poor work quality may lead to worse mental health status.²⁰⁹⁻²¹⁰ In addition, the psychosocial work environment—autonomy at work, decisions, efforts and rewards—significantly impact upon mental health.²¹¹ Thus, zero-hours contracts—and precarious employment more generally—are linked to significant health risks. These effects are compounded since many workers on atypical contracts can cycle from precarious work into unemployment, thus augmenting the negative consequences for health.²¹³

In addition, the adverse consequences are often gendered or vary by socioeconomic status, thereby exacerbating health inequalities. For example, precarious work is more detrimental to women’s health than men’s.²¹⁴ In addition, poor mental health, such as depression, is more prevalent among those in non-standard employment, i.e., part-time, temporary, and daily work. While lower socioeconomic position and poor health behaviour account for this variation for men, worse mental health for women in non-standard work persist after controlling for these.²¹⁵ Other groups who are most vulnerable with regard to employment security include young workers, lower-skilled individuals, and older workers, who may face significant challenges in finding a new position in case of job loss.²¹⁶

However, employment-related health varies by welfare regimes.²¹⁷ For instance, precarious workers in Nordic welfare states report equal or better health status relative to their permanent counterparts. In other welfare regimes, precarious employment is associated with a range of adverse health outcomes, including poor self-rated health, injuries, and mental illness.²¹⁷ In terms of job insecurity, a sizeable proportion of studies again does not find a link to adverse health outcomes in Scandinavian populations. By contrast, in Conservative and Southern European welfare states, job insecurity is—as anticipated—detrimental to individuals' health.²¹⁷ Research suggests that Nordic countries best manage the health risks associated with precarious employment because of high union density and the social dialogue with multiple stakeholders—see Box B3.3.

Box B3.3: Mitigating Health Risks of Non-Standard Employment. Finland and Sweden have been relatively successful in accommodating the career risks of non-standard employment.²¹⁶ These two countries have a strong tradition of social dialogue, particularly high union density—the Nordic countries are leading amongst OECD countries, with union density above 65 percent—and collective bargaining at industry/sector level (both countries) and at national level (Finland). The government plays a facilitating role in negotiations between social partners (which have relatively extensive autonomy from public authorities) by setting the legal framework of collective bargaining and passing basic labour regulations, including social policy and labour legislation reforms. The result has been a comprehensive institutional system that tends to diminish the differences between standard and non-standard forms of work.²¹⁸

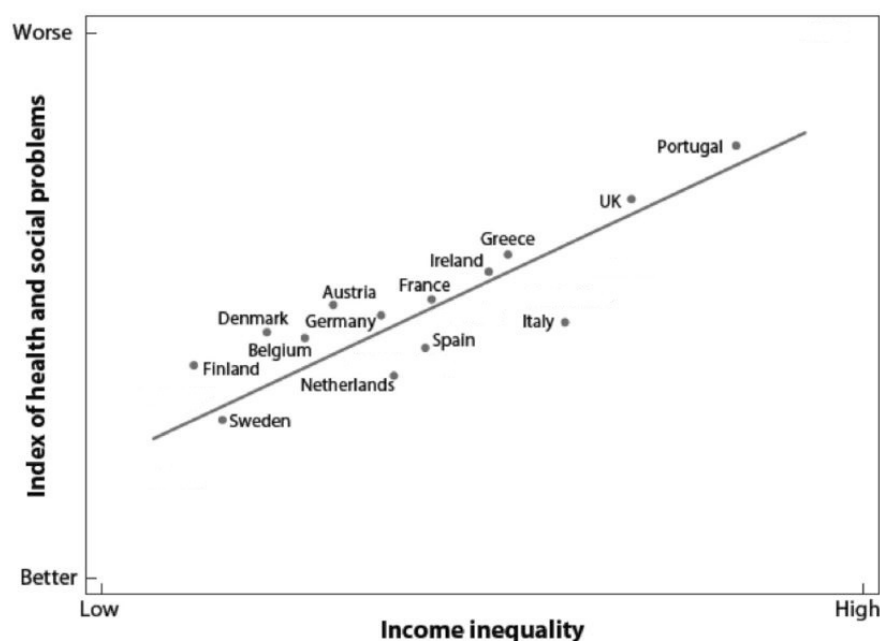
In contrast to precarious employment, job quality is strongly and positively associated with well-being. Among its many dimensions, intrinsic job quality and job prospects have the most impact on well-being. These include skill and autonomy, support from managers and colleagues, and—as discussed above—perception of job security.²¹⁹ Such beneficial job qualities are captured by the notion of 'sustainable work.' However, the concept is relatively new and varies in the public discourse in Europe.²¹⁶ Sweden, the Netherlands, and Belgium are three countries in which sustainable work is present in the public debate. In a second group of countries, key features are covered through other concepts such as quality of work or decent work (e.g., in Germany, and to different extents in Poland, Lithuania, and Finland). In this group, specific policies exist to address the inclusion of workers faced with specific barriers to employment, such as health problems or care responsibilities, or spells of unemployment.²¹⁶

Beyond the immediate health consequences of working conditions, employment provides the primary source of income for a majority of the working-age population. Thus, income disparities are another important determinant of health inequalities—discussed next.

Income Inequality and Health Inequality

A large body of literature has examined the extent to which income disparities affect population health and health inequality.²²⁰⁻²²³ Figure B3.4 captures the findings of this body of work: income inequalities are associated with a higher frequency of most of the problems associated with low social status within societies. These include life expectancy, mental illness, obesity, infant mortality, teenage births, homicides, imprisonment, educational attainment, distrust, and social mobility. As such, Figure B3.4 reveals that income inequality is linked to a series of worse health and social outcomes between countries.²²²⁻²²³ Within countries, inequality matters, too. For instance, in Finland, widening differences in income may account for as much as half of the increase in health inequalities.²²⁴ Alternatively, consider the case of Sweden, where income inequality at the municipality-level is associated with worse self-rated health.²²⁵

Figure B3.4: Adverse Consequences of Income Inequality



Note: Index of health and social problems in relation to income inequality in selected European countries. Income inequality is measured by the ratio of incomes among the top to the bottom income quintile in each country. The index combines data on life expectancy, mental illness, obesity, infant mortality, teenage births, homicides, imprisonment, educational attainment, distrust, and social mobility. Raw scores for each variable were converted to z-scores and each country given its average z-score (Wilkinson & Pickett 2009).²²³

Source: Pickett & Wilkinson (2015, p. 317), excluding countries outside the EU²²²

While the adverse health consequences of income inequality are—therefore—well documented, the mechanisms are less well known. A recent explanation put forward centres on social strategies—how social relations are organised in societies.²²⁶ In more egalitarian societies, reciprocity, sharing, cooperation, and trust, are essential. By contrast, in relatively hierarchical societies—in terms of the distribution of material resources—status becomes more important, status anxiety increases, and self-serving individualism is more prevalent.²²⁶ For example, civic participation—belonging to groups, clubs, or organisations—is significantly lower in more unequal European countries.²²⁷

Part C: The Impact of Health Inequalities

Part C: The Impact of Health Inequalities

Part C of the report shifts the focus from the determinants of health inequalities to their welfare impact and associated economic costs. In doing so, it establishes in more detail why health inequalities matter.

- Section C1 discusses the right to health and its instrumentality in achieving better social and economic outcomes. It emphasises why addressing risk factors and the social determinants of health can narrow health inequalities while producing additional economic benefits. In addition, we link the discussion to the Sustainable Development Goals.

C1. Health Inequality, Empowerment, and the Economy

Health Equity Empowers Individuals and Societies

As documented throughout this report, high levels of health enable individuals to improve their lives, and have positive implications for social mobility and cohesion. Consequently, reducing health inequalities matters for individual health, and also society at large.²²⁸ In particular, the report has documented how different institutions—e.g., welfare regimes and health systems—and social determinants—e.g., education or occupation—influence health. Good health empowers individuals by allowing them to make better, informed choices regarding their lifestyle and health service access and utilisation. In contrast, ill-health may prevent individuals from reaching their full potential at school or at work, or from fully participating in activities of family, friends, and communities. In doing so, ill-health and health inequalities can lead to a vicious cycle: Low health leads to reduced economic opportunities—e.g., being too ill to work or having reduced productivity because of health problems—which further deteriorates health due to increased job insecurity. Thus, while health inequalities matter in themselves due to their implications for the human condition, they are also associated with significant economic consequences for individuals and society.

Economic and Welfare Costs of Health Inequalities

In addition to the multifaceted impacts of health inequalities on individuals, ill-health and health inequalities incur substantial costs for society. First, individuals are indispensable in the labour market, and better health tends to improve individuals' productivity—reflected in labour market participation rates, working hours, and efficiency.^{31,229} While quantifying these links is methodologically challenging and the relationship is relatively understudied, research suggests that health promotes economic activity and is linked to higher GDP growth.²²⁹ Calculations for the EU indicate that increasing the health of the bottom half of the European population in terms of social standing (approximated by education) to the average health of the top half would improve labour productivity by 1.4 percent of GDP each

year.³¹ This means that within five years of these improvements, GDP would be more than 7 percent higher.

A second type of cost encompasses the value individuals attribute to health itself. Naturally, it is challenging to quantify the value of health and wellbeing for individuals—yet not impossible, e.g., by looking at the wage premia for workers who perform dangerous tasks. A simple calculation reveals that in many WHO European Region countries between 1970 and 2003, the gains associated with improvements in life expectancy totalled between 29 to 38 percent of GDP.²²⁹ In 2015, over 250,000 excess hospitalisations were associated with socioeconomic inequalities in England,²³⁰ with an estimated cost to the English NHS of GBP 4.8 billion per year.²³¹ In the EU, the monetary value of health inequality related losses is estimated to be €980 billion per year, or 9.4 percent of GDP (data refer to 2004).³¹ The latter calculation is based on a scenario where the health of populations with lower secondary education or less (approximately half of the population) would be improved to the average health of individuals who have completed higher secondary education or above. Due to their complex underlying assumptions, these figures contain a high degree of uncertainties, though.²

Cost of Risk Factors

Health risk factors—such as smoking, alcohol consumption, and unhealthy diets—incur both direct and indirect economic losses. The former pertains to the cost of healthcare services, such as hospitalisation, ambulatory care, medicines, and so forth. The latter refers to lost productivity due to absenteeism, unemployment, decreased output, reduced earnings potential, and related. For instance, the total cost of smoking in the EU—public health spending on treating smoking attributable diseases and smoking-related productivity losses—were estimated to be €7.3 billion in 2009.²³² In addition, research suggests that substantial tobacco industry lobbying at the EU was associated with policy shifts in the EU Tobacco Products Directive legislation between 2010 and 2014—thereby reflecting additional expenses incurred as ‘unproductive spending.’²³³

Alternatively, consider alcohol consumption, whose costs approximately represent 1.3 percent to 3.3 percent of the GDP.²³⁴⁻²³⁵ In 2017, this amounts to between €200 and €500 billion in the EU.⁷ In addition, these estimates usually abstract from intangible costs, related to pain and diminished quality of life—which are usually borne by the drinkers and their close environment.²³⁶

Finally, there is a large economic burden associated with unhealthy diets and low physical activity. In 2012, it was estimated that the obesity cost in Europe was more than €80 billion per year.²³⁷ Some of these costs can be attributed to single diseases. For example, in 2020, the estimated cost of predicted diabetes due to unhealthy diets and low physical activity corresponds to €883 million for France, Germany, Italy, Spain and the UK alone. The ‘true’ costs will be higher, as unhealthy diets and low physical activity are linked to increased prevalence of several diseases.²³⁸

² Data refer to 2004 and to the EU-25, before the accession of Bulgaria, Romania, and Croatia.

Since these risk factors follow a social gradient (see Section A1), addressing health inequalities offers a way to disproportionately lower the economic cost while empowering individuals most in need. While these risk factors are sometimes referred to as 'unhealthy behaviours' it is important to clarify that these are by no means solely individual-level determinants. These behaviours—and quality of life more generally—are influenced by the physical and social characteristics of people's direct surroundings.²³⁹ Thus, in addition to the economic and individual-level benefits, combatting these risk factors promises to improve living standards of societies at large.

Action on the Social Determinants of Health

Similar to behavioural risk factors, the social determinants of health inequalities have socioeconomic consequences for the economy as a whole. Thus, tackling health inequalities through the social determinants of health is expected to yield a range of economic benefits. As above, we focus primarily on three social determinants of health: education, employment, and income.

First, in today's knowledge-based society education plays an ever-increasing role. Better educational attainment increases the 'set of knowledge, skills, competencies, and abilities embodied in individuals and acquired' of the labour force.²⁴⁰ This provides individuals with more economic opportunities over the entire life course. At a national level, education increases labour productivity and enhances the innovative capacity of the economy, knowledge of new technologies, products, and processes, thereby indirectly promoting growth.²⁴¹ While the precise quantitative impact of education on economic growth is uncertain due to different classifications of schooling and measurement error,²⁴⁰ the effect of investment in education on productivity growth is sizeable.²⁴²⁻²⁴⁴

Second, the value of employment for health has already been discussed at length. In the EU, individuals with better health are more likely to be in the labour force. In turn, this is important for an economy as it boosts economic activity, consumption and taxes, and finances the welfare state. Among employees, it has been documented that healthy workers are more productive. Thus, by levelling the health inequalities through action on employment and work condition, the economy stands to benefit.

Third, we discussed the adverse *social* consequences of excessive income inequality in Section B3. In addition, unsustainable inequalities in the distribution of income carry sizeable *economic* costs. For example, attention to income inequality can bring significant long-term gains in terms of economic growth.²⁴⁵ Further, the notion of 'trickle-down economics'—suggesting that higher incomes for the rich trickle down to the lower strata of the population—has been largely discredited. Even research staff from the International Monetary Fund—usually ardent advocates of free markets—admits that trickle-down economics is a myth: 'If the income share of the top 20 percent (the rich) increases, then GDP growth actually declines over the medium term, suggesting that the benefits do not trickle down. In contrast, an increase in the income share of the bottom 20 percent (the poor) is associated with higher GDP growth.'²⁴⁶

Reducing Health Inequalities and the Sustainable Development Goals

In 2015, the EU adopted the Sustainable Development Goals (SDGs) which set 17 specific targets for both high- and low-income countries to be achieved until 2030. Crucially, reducing health inequalities resonates with the SDGs' overarching principle of 'leaving no one behind.'²²⁷ Ultimately, the achievement of all SDGs may therefore entail health benefits. Yet, the following selected goals merit separate discussion as they relate to themes discussed in earlier sections of the report:

- Goal 3: Ensure healthy lives and promote well-being for all at all ages.
- Goal 4: Ensure inclusive and equitable quality education and promote life-long learning opportunities for all.
- Goal 5: Achieve gender equality and empower all women and girls.
- Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.
- Goal 10: Reduce inequality within and among countries.

According to the latest progress report by the European Commission,²⁴⁸ the EU made unequal progress towards achieving the SDGs over the past five years. First, results in terms of 'good health and well-being' are slightly behind schedule. The EU monitors the goals by focusing on four sub-themes. In terms of headline indicator of *healthy lives*, the report finds that life expectancy has increased both over the short and long run (5 and 15 years, respectively). By contrast, the number of Europeans reporting good or very good health has fallen slightly since 2010. In terms of *health determinants*, the Commission reports that conditions pertaining to external factors—exposure to air pollution and noise—have improved substantially. Likewise, selected indicators on the *causes of death* show that deaths due to chronic diseases, suicide rates, and people killed in accidents at work are lower than five years ago. Finally, *access to healthcare* has not changed substantially as reflected in relatively stable proportions of self-reported unmet needs by the European population (see also Figure B1.5). However, the EU's own assessment is relatively narrow since it only focuses on one dimension of access to healthcare. Independent evaluations of access to public services include further considerations, such as delays in getting appointments, waiting times, or concerns about future access.⁴²

Second, the EU monitors 'quality education' in three related clusters. Numbers in *basic education* paint an improved picture: At the European level, early leavers in basic education as well as young people neither in employment nor in education/training have decreased. Performance in reading, maths, and science among 15-year olds has not seen any considerable improvements, though. As already discussed in terms of *tertiary education*, a higher share of the European population than ever before has completed tertiary education. Yet, the employment rate of recent graduates stands at 78.2 percent, considerably lower than the 2020 target of 82 percent (which corresponds to the pre-economic crisis peak). Finally, achievements in *adult education* are below the targets set for the SDGs.²⁴⁸

Third, progress towards achieving 'gender equality'—which is closely linked to other SDGs—is mixed. For instance, some statistics on *education* have improved since 2010, notably, the shares of early leavers from education and training have fallen steadily for both men and women. Men are still more likely than women to drop out of school, even though the gap has narrowed in recent years. By contrast, the gender gap in tertiary educational attainment has diverged further in favour of women. The picture is similarly uneven for progress on *employment*. While the gender employment gap has narrowed between 2005 and 2016, the proportion of working-age men in employment still exceeds that of women by 11.6 percent. Likewise, the proportion of inactive individuals in the labour market due to caring responsibilities in 2016 is 30.7 percent of inactive women aged 20 to 64, up by 3.2 percentage points from 2011 (and in stark contrast to 4.3 percent, the respective figure for men). Further, the gender pay gap persists—with women earning 16.3 percent less than men (gross hourly earnings in 2015). However, women are now more present in *leadership positions*—both in parliaments and senior management—relative to 2012 levels (although there is still a long way to go to parity, with shares of 28.9 and 24.6 percent in 2017, respectively).²⁴⁸

Fourth, two indicators on 'decent work and economic growth' pertaining to *decent work* are particularly relevant for health inequalities. We have already drawn attention to the rise of involuntary temporary employment, which has been particularly pronounced in the past four years. By contrast, progress in terms of accidents at work is positive, since the number of fatal accidents fell from 2.01 in 2009 to 1.83 in 2010 (per 100,000 persons employed aged 25 to 64).²⁴⁸

Finally, evidence on the SDG 'reducing inequalities within and among countries' is mixed. As a result of improved incomes and living standards as well as convergence across the EU, *income inequality between countries* have narrowed. However, measures on *inequalities within countries* show that these have widened. For instance, the income share of the bottom two quintiles of the distribution has been shrinking over time, from 21.5 percent in 2005 to 20.9 percent in 2015 (exacerbated by wage stagnation, unemployment, austerity).²⁴⁸

While many countries have devised national strategies to achieve these goals and implemented policy reforms, the academic literature assessing them is still in its infancy. Yet, studies from NGOs provide some preliminary evidence of successful stories. A recent independent review of projects on the SDGs finds that governments should select national targets and strategies through inclusive consultation with local stakeholders.²⁴⁹ For instance, many local governments and local government associations in the Netherlands are taking action on the SDGs. A good example is the city of Utrecht, which has set itself a number of specific targets: It wants to have the lowest unemployment rate in the Netherlands by 2018, more than triple the number of solar panels to 15,000 by 2020, and make 75 percent of its residents aware of the SDGs by 2030. To facilitate the achievement of these goals, the city has launched the *Utrecht4GlobalGoals* campaign that awards inspiring initiatives helping to achieve the SDGs. Further, it invites residents to share SDG-related stories and promotes dialogue with SDG initiatives through a digital information platform, *HeelUtrechtU*.²⁴⁹

Conclusion and Policy Recommendations

Conclusion and Policy Recommendations

This report assembled comprehensive evidence on health inequalities and its multiple causes in the EU.

- Over the past decade, health at an aggregate, European-level has improved—e.g., as measured by life expectancy at birth. However, such gains are unevenly distributed across countries, exacerbating *between-country* health inequalities.
- Furthermore, sizeable differences in health continue to exist *within countries*. Self-reported health, non-communicable diseases, and individual-level risk factors all follow a social gradient, with individuals of higher socioeconomic background often faring better than those with lower social standing.

The extent and variation of health inequalities observed in the EU point towards their complex set of determinants. We have discussed the role of the *welfare regime and national health systems* that determine what services are provided to whom, and how they are financed. Through their impact on access and utilisation of health services, these institutions may inhibit or widen health inequalities. However, debates on health inequalities remain incomplete when focusing solely on social policy. The design of social policies and their effectiveness largely depends on other institutional arrangements, including *economic policy*—especially, labour market regulation and fiscal policy—and the *social determinants of health*—most notably, education, the workplace, and income.

The complementarities of institutions and interconnectedness of different determinants signal that concerted action and policy coherence is required for tackling inequalities in health—as has been illustrated by the English Health Inequalities Strategy. Further, inclusive policies that consider the interests and resources of a wide range of stakeholders promise to address key health concerns. This has been evident in how Nordic countries in particular managed the risks associated with precarious employment—e.g., taking into account the needs of labour—or in global city networks that have put mechanisms in place to effectively exchange information and learn from each other in their fight against climate change.

While providing evidence on the extent of health inequalities in Europe, we have also highlighted areas in which such evidence is lacking. Box 8.1 identifies three broad clusters of blind spots that future research should address.

Box 8.1: Future Research

- Data on health inequalities remains incomplete, especially *cross-nationally comparable time-series data on health inequalities*—which in turn limits our understanding of cross-national patterns of health inequalities.
- Academic scholarship predominantly documents the extent of health inequalities at the expense of systematic analyses on what can be done to reduce health inequalities. There needs to be more research into the effects of healthcare, public health, and economic policies on health inequalities.²⁵⁰
- Subsets of the population—including gender, migrant status, and ethnicity—are often evaluated in isolation. An *intersectional approach* would look at combinations of different demographic elements, thereby helping explain how individuals from multiple minority groups (e.g., unemployed women with migrant status) are particularly exposed to health risks. At present such evidence is lacking.²⁵¹

Despite these important areas for future research and related shortcomings, we derive several important lessons for policy reforms. Box 8.2 summarises the key elements of a progressive agenda on health inequalities.

Box 8.2: A Progressive Agenda on Health Inequalities

- Welfare systems need to better target populations in vulnerable situations. Providing *universal healthcare coverage* should be a key element in such efforts, levelling the playing field in terms of access and utilisation of health services.
- Other economic institutional arrangements are closely linked to the effectiveness of social and health policy. In view of the deleterious health consequences of unemployment and precarious employment, the *regulation of the labour market* is a key policy area of interest. Specifically, policy interventions should aim to provide opportunities for decent work for individuals irrespective of their level of education or socioeconomic background.
- *Fiscal policy* measures should at least aim to protect job and income security of individuals in vulnerable situations—e.g., through redistributive measures—but better still, to create opportunities where economic gains are aligned with social benefits.
- Better regulation of risk factors pertaining to *health-related behaviour* is required. Examples include controls on tobacco and alcohol consumption, restrictions on advertising, or the implementation of a tax on unhealthy foods.
- A further element of such a holistic approach would *reduce access barriers to schooling* in view of the significant gains that better education provides.
- More broadly, we advocate for the use of *health impact assessments*, which are 'means of assessing the health impacts of policies, plans and projects in diverse economic sectors' in advance of policy implementation.²⁵²

The right to the highest attainable level of health is enshrined in the charter of WHO and many international treaties. Further, countries have a moral obligation to reduce health inequalities, and they are committed to the Sustainable Development Goals. In addition, the EU promotes good health as part of the *Europe 2020* vision, which also encompasses strategies to address health inequalities. To reach this twin-goal of reducing health inequalities and achieving the SDGs, we echo earlier calls by the WHO of proportionate universalism, that 'policies are needed that are universal but are implemented at a level and intensity of action that is proportionate to need.'^{13,27}

Thus, if health inequalities in the EU are to be reduced, concerted action that takes due care of the complex web of determinants of health inequalities as well as the individuals in vulnerable situations is required. Policymakers are in a prime position to take such action—by building on academic evidence and consulting with civil society.

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While the health of Europeans has improved over recent years, differences by gender, birthplace, and/or socioeconomic background persist. This report maps the extent of such health inequalities, its determinants, and costs to society. The findings indicate that differences in health between and within countries are attributable not only to social and health policies, but also depend on economic policy and the social determinants of health. Thus, holistic policy interventions are required to tackle health inequalities.

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ISBN 978-0-9931593-9-8



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Design: www.neatdesign.ie