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**Vulnerability of Social
Institutions: Lessons from
the Recent Crisis and
Historical Episodes**

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Jon Pareliussen,
Debra Bloch**

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By Falilou Fall, Mauro Pisu, Jon Pareliussen and Debbie Bloch

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ABSTRACT / RÉSUMÉ

Vulnerability of social institutions: Lessons from the recent crisis and historical episodes

The recent economic crisis has provided a stress test for the vulnerability of social institutions. This paper assesses the vulnerability of social institutions in light of the current crisis, and surveys past episodes, when social institutions faced similar challenges. Public pay-as-you-go pension systems have generally weathered the crisis well, but private pension funds were severely affected by the financial crisis. While health care spending drifted up further in the early part of the crisis, it levelled off in 2010 and 2011, on average in the OECD, for an unprecedented two years with no spending growth. But, in countries hard hit by the crisis public outlays on health care declined considerably. Unemployment insurance expenditure increased during the crisis in most OECD countries. In some countries, spending rose considerably more than the number of unemployed, reflecting an extension or more generous benefits, while in others the increase was considerably smaller, pointing to adequacy problems of those unemployment insurance schemes. Five country case studies focusing on how social institutions absorbed shocks in the more distant past are also examined and lessons are drawn from these experiences.

JEL classification codes: H51; H53; H55; I13; I38; J11; J26; J65

Keywords: Social protection, health care, pension schemes, unemployment insurance

La vulnérabilité des institutions sociales: Leçons de la récente crise et d'épisodes historiques

La récente crise économique a fourni un test de résistance des institutions sociales. Ce document évalue la vulnérabilité des institutions sociales à la lumière de la crise actuelle, et analyse les épisodes passés, quand les institutions sociales ont été confrontées à des défis similaires. Les systèmes de retraite publics en répartition ont généralement bien résisté à la crise, mais les fonds de pension privés ont été durement touchés par la crise financière. Alors que les dépenses de soins de santé ont augmenté jusqu'au début de la crise, elles se sont stabilisées en 2010 et 2011 en moyenne dans l'OCDE. Cette période de deux ans sans croissance des dépenses de santé est sans précédent dans l'OCDE. Mais, dans les pays durement touchés par la crise, les dépenses publiques en soins de santé ont considérablement diminué. Les dépenses de l'assurance chômage ont augmenté au cours de la crise dans la plupart des pays de l'OCDE. Dans certains pays, les dépenses ont augmenté beaucoup plus que le nombre de chômeurs, ce qui reflète une extension ou des prestations plus généreuses, tandis que dans d'autres, l'augmentation a été nettement plus faible, indiquant des problèmes d'adéquation de ces régimes d'assurance-chômage. Cinq études de cas de pays sont également examinées en se concentrant sur la façon dont les institutions sociales ont absorbé les chocs dans un passé plus lointain et des leçons sont tirées de ces expériences.

Classification JEL : H51 ; H53 ; H55 ; I13 ; I38 ; J11 ; J26 ; J65

Mots clés : Protection sociale, santé, retraite, assurance chômage

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VULNERABILITY OF SOCIAL INSTITUTIONS: LESSONS FROM THE RECENT CRISIS AND HISTORICAL EPISODES

By

Falilou Fall, Mauro Pisu, Jon Pareliussen and Debbie Bloch¹

Introduction and main findings

1. The recent crisis, the heaviest adverse economic shock since the great depression in most OECD countries, could be seen as a stress test of the vulnerabilities of social institutions. Government revenues declined drastically in many countries, while unemployment shot up. The crisis has had persistent effects on GDP and revenues as potential GDP was adversely affected in almost all OECD countries. This paper assesses the vulnerabilities of social institutions in light of the current crisis and draws lessons from past episodes, when social institutions faced similar challenges. The financial and adequacy impacts of the crisis on pension, health care and unemployment insurance schemes are reviewed.

2. The main findings are:

- Public pay-as-you-go (PAYG) pension systems have generally weathered the crisis well, fulfilling their social goal of maintaining income for pensioners, although the medium and long-term consequences will likely be significant. Prolonged periods of high unemployment and lower earnings erode the contribution base, adding to the existing demographic pressures of ageing populations.
- Private pension funds were severely affected by the financial crisis, with an aggregate real investment loss of 23% in 2008. Moreover, average returns have decreased since the onset of the crisis. The losses were important in countries where private pensions represent an important share of retirees' income, in particular in the United States, Canada, Netherlands and Australia. Those hardest hit were members of defined-contribution (DC) plans who were close to retirement, denting confidence in DC schemes and widening already existing funding gaps in defined-benefit (DB) schemes in some countries (e.g. Ireland).
- While pension spending continued to increase during the crisis, the working age population was particularly hard hit. Sustained high unemployment rates both among younger workers and workers near retirement age will adversely affect their future pension rights. Older workers are particularly at risk of long-term unemployment, resulting in a permanent reduction of their old-age incomes due to reduced contribution periods. Others have accepted lower wage growth or a decline in wages to stay active, thereby lowering the base upon which their pensions will be calculated.

1. The authors are members of the Economics Department of the OECD. They thank Francesca Colombo, Jørgen Elmeskov, Valerie Paris, Mark Pearson, Jean-Luc Schneider and Paul Swaim for comments on earlier drafts and Celia Rutkoski for assistance in preparing the document.

- The poverty rate of the elderly, after taxes and transfers, fell in most OECD countries over the period 2007 to 2010, thanks to the automatic stabiliser effects of DB pensions, and specific stimulus measures to counterbalance losses in individual retirement savings.
- While health care spending (as a share of GDP) drifted up further in the early part of the crisis, it levelled off in 2010 and 2011, on average in the OECD, for an unprecedented two years with no spending growth. During this period, in countries hard hit by the crisis (Greece, Iceland and Ireland) public outlays on health care declined considerably.
- Where reductions in health spending occurred, they came mainly from cuts in administration costs, medical goods and preventive care. These latter cuts represent a risk as they may lead to higher health care costs in the medium to long term.
- Since the onset of the crisis, the share of people with unmet health-care needs rose somewhat on average. The increase was especially marked in countries with a severe economic downturn. Moreover, the crisis seems to have made access to health care systems more unequal. From 2008 to 2011, the percentage of the population reporting unmet medical needs because of cost-related reasons rose more among low than high income people.
- Most worryingly, Greece, which experienced some of the deepest health-care cuts, saw a re-emergence of acute health problems, including new cases of malaria, renewed transmission of dengue fever and a surge in HIV infections, coinciding with cuts in funding for needle exchange programmes. The long-term decline in infant mortality in Greece reversed in 2008.
- Unemployment insurance expenditure increased during the crisis in most OECD countries. For 10 countries, spending more than doubled from 2007 to 2009/2010. In some countries, spending rose considerably more than the number of unemployed, reflecting an extension or more generous benefits, while in others the increase was considerably smaller, mainly because of lower coverage, pointing to problems of adequacy of those unemployment insurance schemes.
- Youth and old workers were the most hit by the surge in unemployment, but the social impact was hardest for the young, who have faced soaring poverty. While some countries have managed to shield their youths, the countries the hardest hit by the crisis (Estonia, Greece, Spain, Portugal and Italy), have also been the least able to shield their youth from poverty.

3. Past episodes of reforms of social institutions were reviewed and there are some lessons on the conditions for the success of reforms and their implementation:

- Successful reforms have been prepared long in advance by independent commissions which helped build consensus among politicians and the public (Germany and Swedish pension reforms). The implementation of reforms was also often phased in, allowing the public to anticipate the effects and adapt to changes.
- The existence of a reserve funds helps to smooth the effect of a reform. Reserve and buffer funds can play an important role in the reform process. They can be used to finance the immediate impacts or costs of reforms before benefits are realised. In Sweden, the magnitude of the reserve fund helped to smooth the use of a balancing mechanism in the first years of reform to transform the pension system from a defined-benefit to a defined-contribution scheme.
- In terms of health care systems, the disconnect between centralised financing and decentralised spending, as well as a lack of clarification between insurance components and social assistance

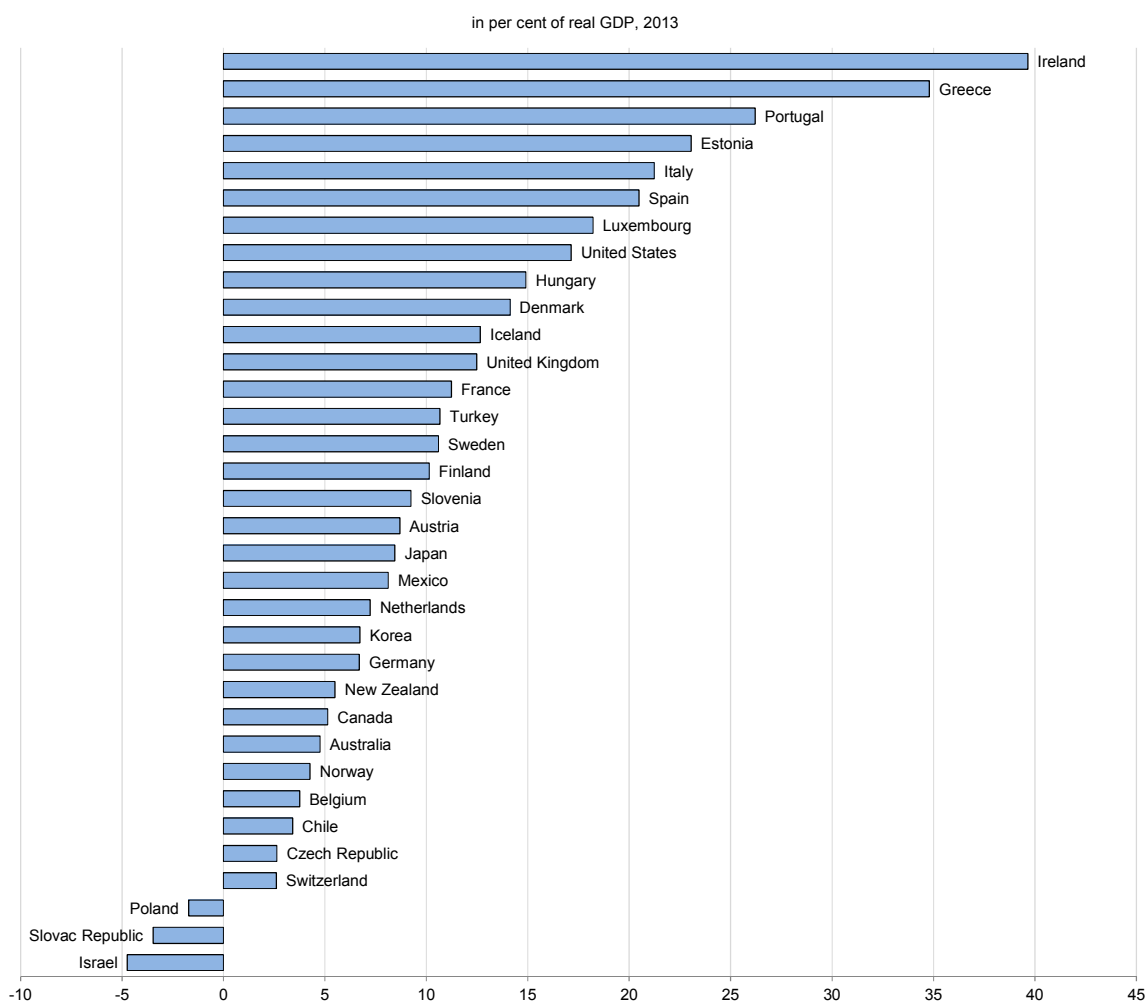
benefits were sources of system failure in the countries analysed (UK, Belgium and Finland). In Finland, the deepening of decentralisation during the 1990s has reduced health care costs because municipalities are responsible for spending and are partly financing health care and because hard budget constraints at the local level have been applied.

- Fragmented social insurance systems are less effective in protecting people from shocks as they are characterised by small risk pools. Fragmented systems may thus achieve a certain degree of sustainability but at the price of shifting risks to individuals. In the case of a shock, systems with larger risk pooling provide a better balance between sustainability and adequacy than fragmented systems.
- Policy makers need to recognise the inevitable uncertainty of the social and economic environment when designing social institutions. There is a need to allow for automatic adjustment mechanisms that may help social institutions adjust smoothly to a changing environment. Automatic adjustments can attenuate dynamic inconsistency problems, which arise as public preferences for certain social policies and institutions change over time (today's choice of high benefits might lead to the need for drastic cuts to restore sustainability tomorrow). Automatic adjustment or state contingent policies may yield a durable and better balance between sustainability and adequacy, which would also ensure a higher degree of intergenerational fairness.
- Adequacy of social systems should be assessed. In particular, in private pension schemes, individuals' entitlements should be protected from the risk of bankruptcy of their employers or pension fund (creation of Pension Benefit Guarantee Funds in the case of corporate failures).

4. This paper is organised as follows. Section 2 illustrates the magnitude of the recent crisis in terms of GDP losses, unemployment increase and overall social security revenue and spending. In Sections 3, 4 and 5, the impacts of the crisis on financing, spending and adequacy of pension systems, health care schemes and unemployment insurance systems are analysed. The reforms undertaken to cope with the crisis are also discussed. Section 6 presents five country case studies of how social institutions absorbed shocks in the more distant past and the lessons that can be drawn from their experience.

The recent economic crisis: A major test of the robustness of social institutions

5. The recent economic crisis was the deepest since the Great Depression. Almost all OECD countries were hit, with GDP contracting by more than 5% in some countries. Even though potential output growth has slowed and even declined in some countries, the cumulative output gap is large. For instance, the cumulative GDP loss relative to potential amounts to more than 25% of 2012 GDP for Ireland, while most Eastern European countries did well (Figure 1).

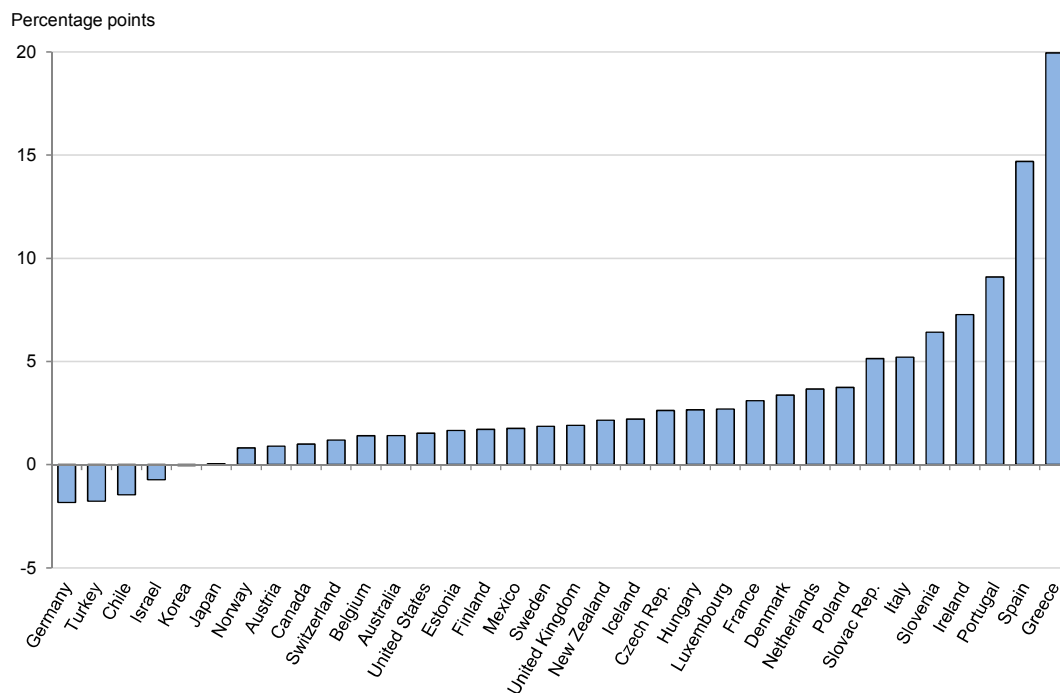
Figure 1. Cumulative GDP loss relative to potential from mid-2008 through 2013

Note: Data for end-2013 are OECD estimates.

Source: OECD Economic Outlook Database, 29 October 2013.

6. Unemployment increased sharply in many countries with peaks in Greece and Spain, where 20 and almost 15 percentage points were added to the unemployment rate, respectively (Figure 2).

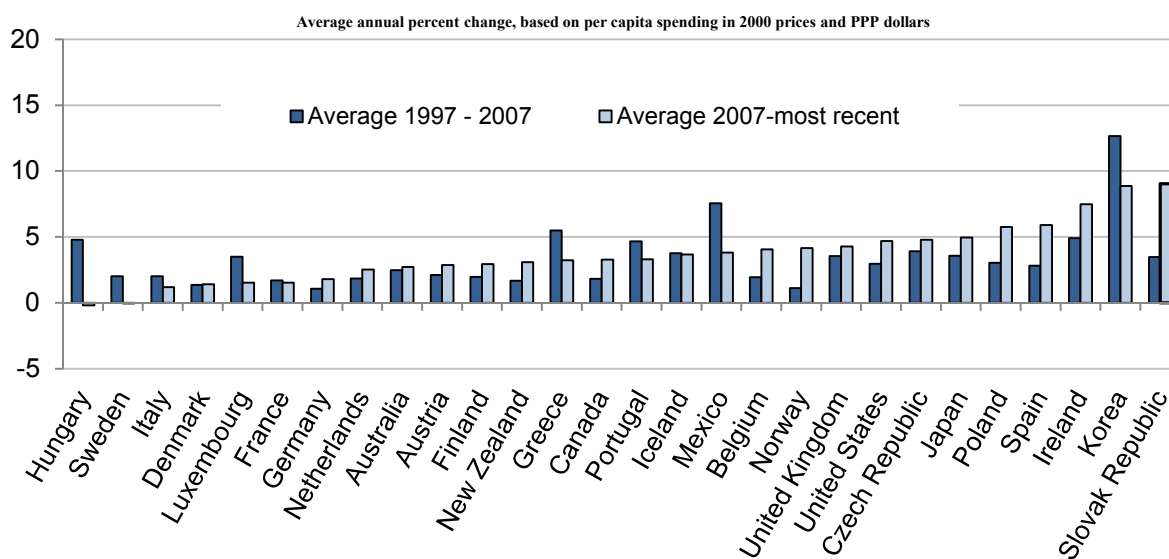
Figure 2. Change in the unemployment rate from mid-2008 to mid-2013



Source: OECD Economic Outlook Database, 29 October 2013.

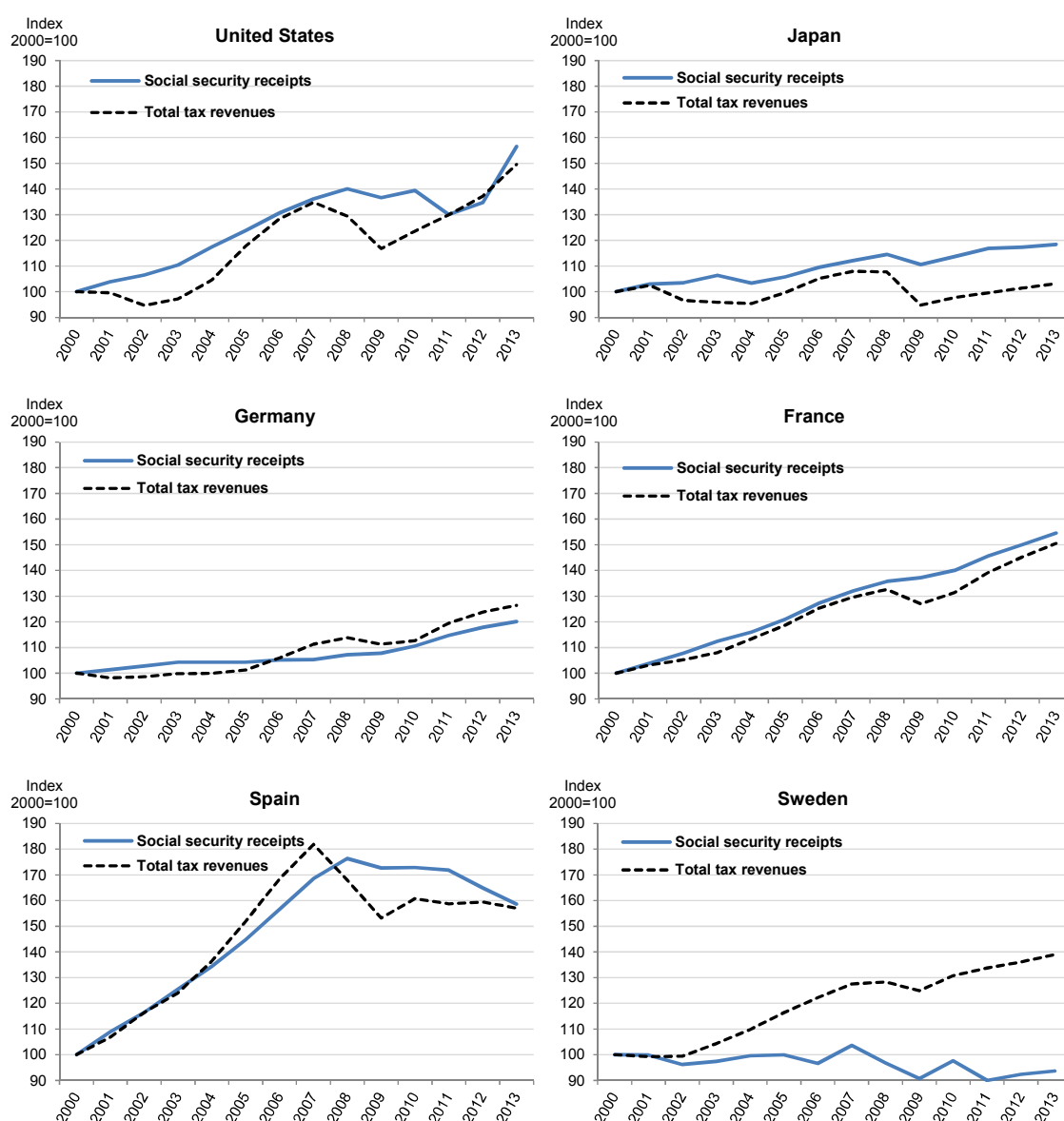
7. Overall public social spending continued to increase in many of the OECD countries (Figure 3). However, in some countries the trend decelerated sharply (Korea, Mexico, Portugal, Greece, Hungary and Luxembourg). Regressions of social expenditure on cyclical variables show that social spending increases with unemployment and GDP (Appendix).

Figure 3. Growth in total public social spending before and after the Great Recession



8. Nearly all OECD countries experienced a significant dip in tax revenues in the early phase of the Great Recession, with the drop starting in 2007 for a few countries (United States, Spain) and in 2008 and 2009 for most of the others. Social security revenues were preserved during the initial downturn (Figure 4), lagging the overall trend of tax revenues in most countries, a notable exception being Sweden where social security receipts fell more sharply (dropping over 8% from 2007 to 2009) than total taxes (falling 2% over the same period).

Figure 4. Social security and total tax revenues in selected OECD countries

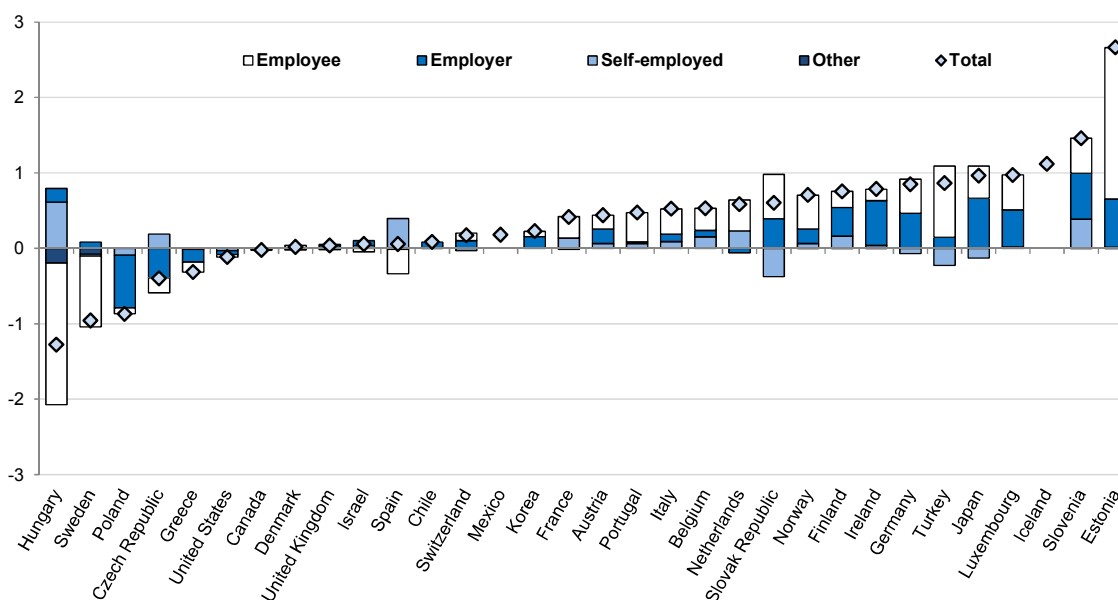


Note: Data for 2013 are OECD estimates.

Source: OECD Economic Outlook Database, 22 October 2013.

9. Cyclical revenue shortfalls were partly offset by higher social security contributions in many countries, with the split between employers, the self-employed and employees differing considerably across the countries (Figure 5).

Figure 5. Social contributions have increased in most OECD countries



Note: Data refer to the change in social security receipts (as % GDP) from 2007 to 2010. For Mexico and Iceland, the full breakdown of social security receipts is not available. Data do not exist for Australia and New Zealand.

Source: OECD Revenue Statistics, accessed 12 November 2013.

10. The structural component of the fall in social security revenues may be important in the countries which saw a significant rise in structural unemployment. These longer lasting effects add to unfavourable demographic trends in many countries. In the following the effect of the crisis on the three main social institutions, pension systems, health care schemes and unemployment insurance, will be analysed in greater detail.

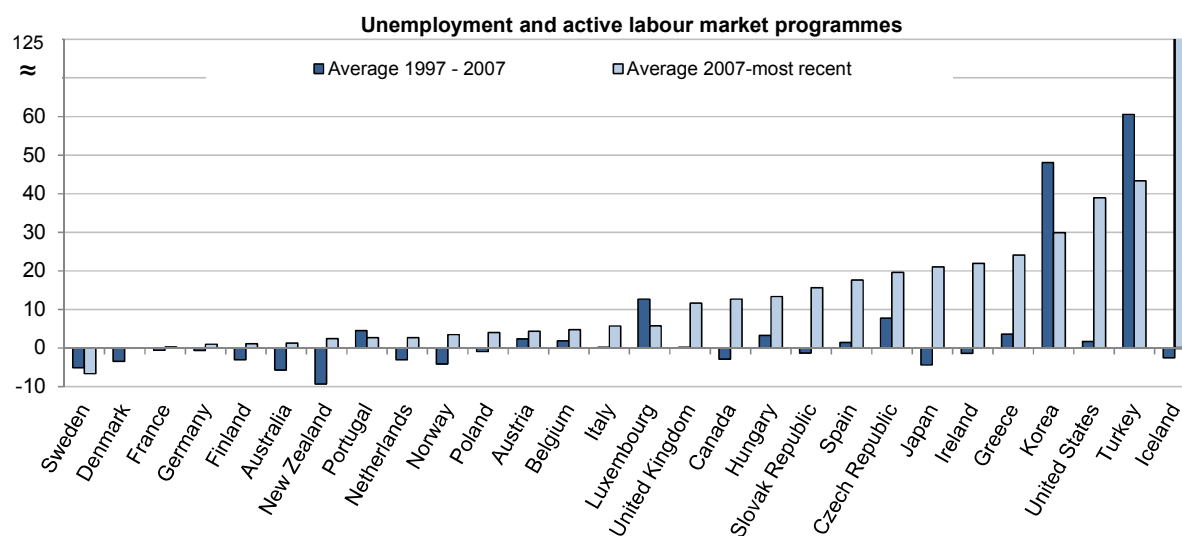
Unemployment insurance systems during the crisis

Spending developments during the crisis

11. Unemployment insurance spending has increased during the crisis in most OECD countries. For eight countries, spending went up by more than 20% in real terms on average between 2007 and 2009/10 (Figure 6), with substantial further increases likely in many countries (more recent data are not yet available). Spending increases were caused by rising unemployment and some rule changes to better protect the unemployed (Box 1).

Figure 6. Unemployment and ALMP spending during the initial phase of the great recession

Average annual per cent changes, based on per capita spending in 2000 prices



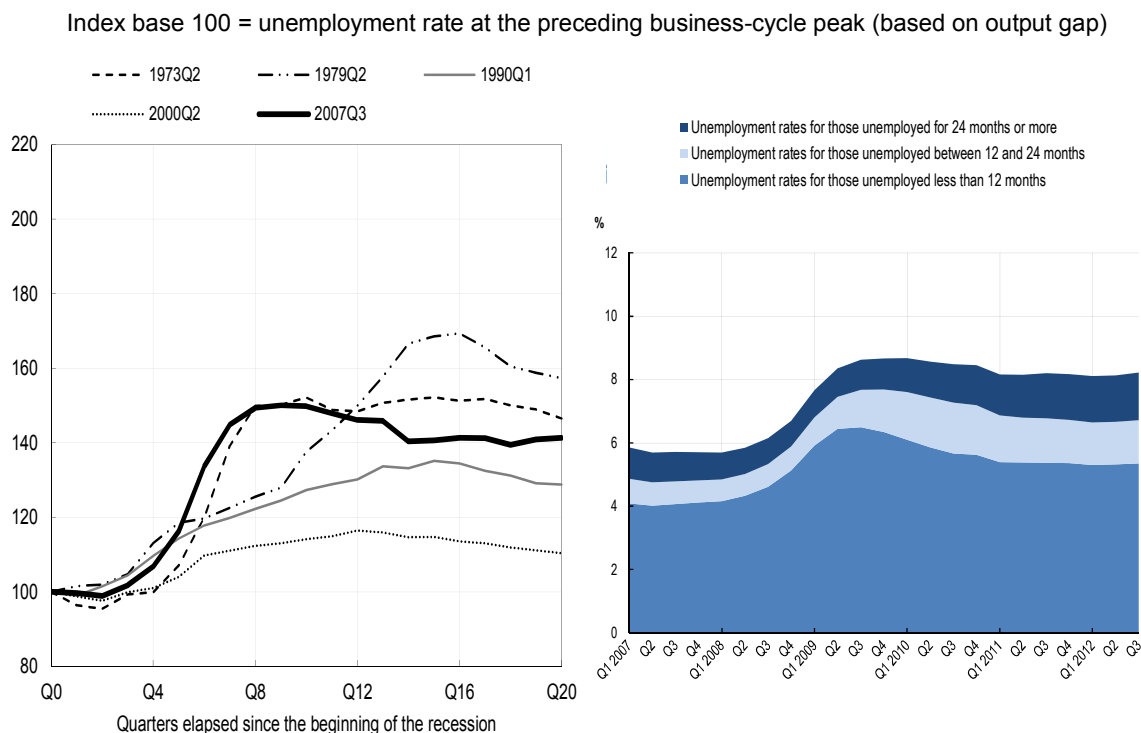
Note: Most recent data refer to 2010 for Australia, Germany, Ireland, Korea, Mexico, New Zealand and the United States. For all other countries shown, most recent data refer to 2009. Data are not available for Chile, Estonia, Israel, Slovenia and Turkey. Data are not shown for Switzerland, where the most recent data available refer to 2008.

Source: OECD Social Expenditure Database, September 2013.

Box 1. Labour market developments during the crisis

Labour market outcomes have diverged. In Germany, the United Kingdom, Japan and the United States employment growth has been positive. Moreover, employment has been higher and unemployment lower than what could be expected given past relationships with output growth (OECD, 2013a). For the euro area as a whole, and for many euro area countries such as France, Italy and Spain, the opposite has been the case. Compared with the previous business cycle peak, OECD-wide unemployment has risen very sharply for eight quarters and has shown very little decline since then (Figure 7).

Figure 7. Comparing unemployment-rate trajectories during previous downturns in the OECD



Note: OECD is the weighted average of 32 countries (excluding Chile and Korea).

Source: OECD Employment Outlook, updated 21 June 2013.

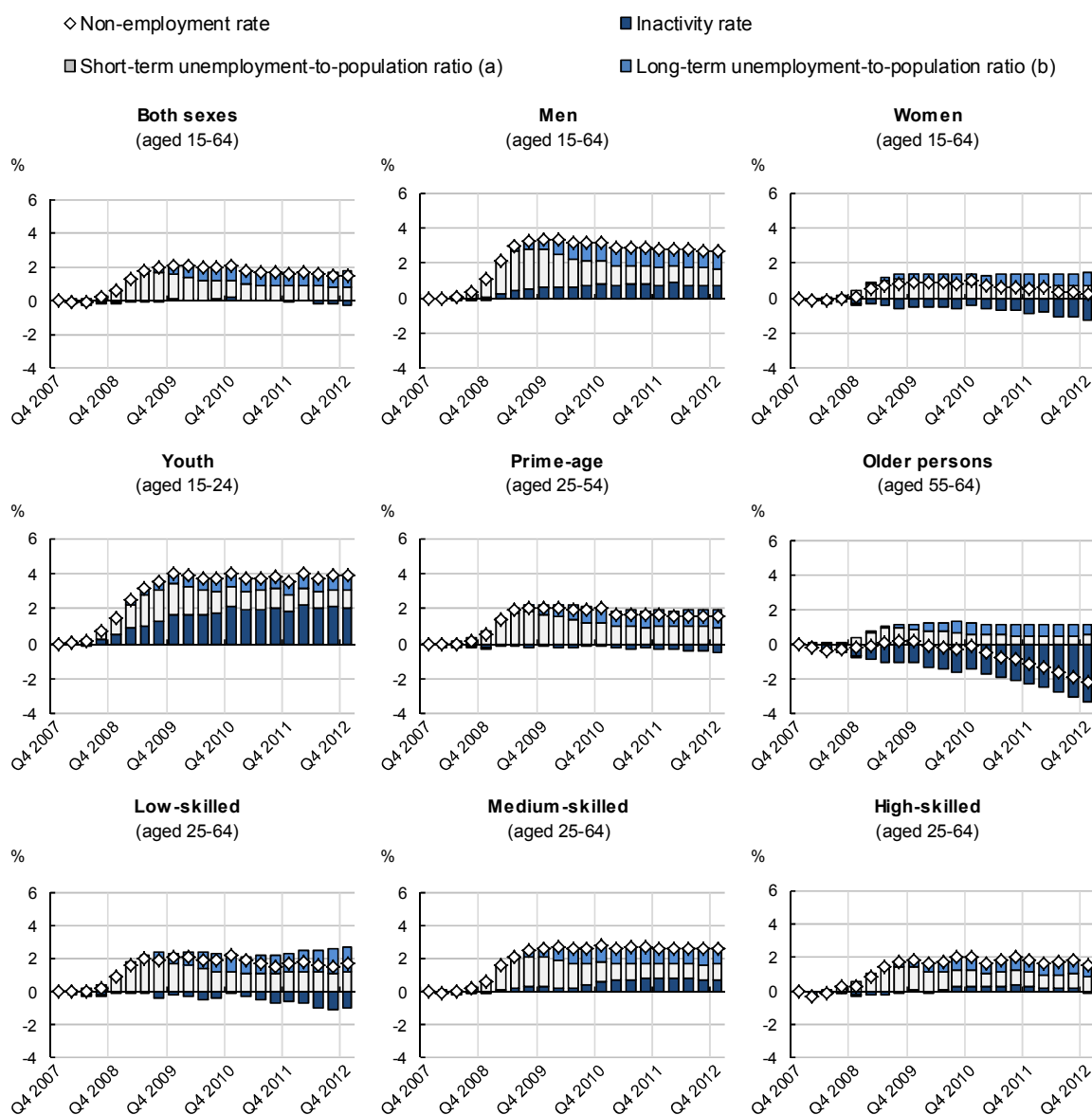
Labour force participation has remained broadly stable in most OECD countries, except in a few countries such as Ireland and the United States (OECD, 2013a). During the early period of the crisis until 2009, rising unemployment largely reflected a surge in unemployment inflows, while the role of long-term unemployment became increasingly important afterwards as job opportunities for the unemployed remained severely depressed.

Different groups were hit differently by the crisis. Unlike previous recessions, the labour market response to the crisis has been more pronounced in increasing unemployment than in labour market withdrawal. Older workers have as a group increased their employment rate, contrary to previous crises. While in earlier recessions, older workers were encouraged by various early retirement schemes to withdraw from the labour force, these routes have become increasingly restricted as most OECD countries prepare for the challenges posed by increased longevity and large cohorts of baby-boomers entering pension age. Female employment has held up better than male employment, and high-skilled workers have been less affected by the crisis than medium and low-skilled workers. The group which is most severely hit by the crisis is youth. Youth show as a group a high and rising prevalence of long-term unemployment and a disturbing rise in inactivity rates (Figure 8).

Box 1. Labour market developments during the crisis (cont.)

Figure 8. Decomposition of the change in labour market slack by groups

Percentage-point change in the number of persons with a given labour market status¹
as a share of population of this group²



1. Short-term and long-term unemployment refer to unemployment durations of less than 12 months and one year or more, respectively.

2. OECD is the weighted averages of 33 OECD countries (excluding Chile) for data by gender and age and 29 countries (excluding Australia, Chile, Japan, Korea and New Zealand) for data by education.

Source: OECD Employment Outlook 2013.

Adequacy of unemployment insurance during the crisis

12. Eligibility and the duration of unemployment insurance are important factors affecting the coverage of unemployment insurance (Figure 9, Panel A). The strictness of eligibility and labour market duality seem to limit coverage in some of the countries who display the lowest coverage, such as Korea, Italy, Poland, Turkey and the Slovak Republic. The average eligibility threshold in the OECD is 11 months of work or unemployment insurance membership² or equivalent earnings.³ When eligibility criteria are very stringent, as e.g. in Italy and Slovakia, a very low percentage of the unemployed will be covered by unemployment insurance. Strict eligibility criteria together with labour market duality can accentuate inequalities between workers on fixed-term and open-ended contracts, if temporary work prevents workers on fixed-term contracts from benefiting from unemployment insurance.

13. For those who are covered, the safety net differs widely across the OECD. Initial net replacement rates vary from 34% of the average wage in the United Kingdom to 87% in Luxembourg. The overall generosity of the unemployment insurance scheme is, however, also a function of how long the benefit is paid, whether the benefit decreases over time and whether there are waiting periods.

14. The duration of unemployment insurance, measured as how many years of the initial replacement rate an unemployed person receives over a 5-year period, varies from five years (there is no drop in the replacement rate during the first five years in Australia, New Zealand and Ireland) to seven months (Czech Republic).

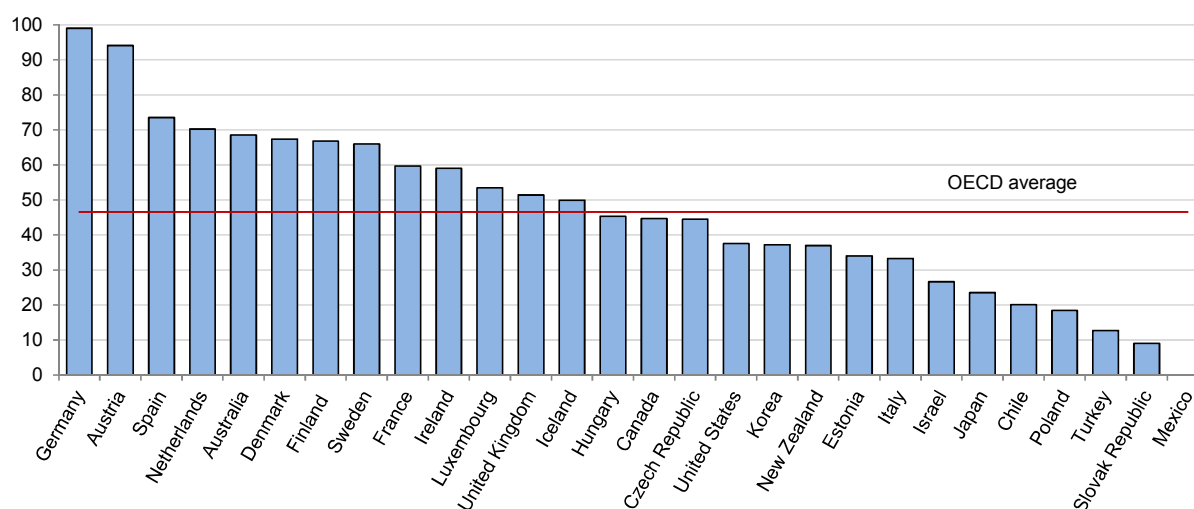
15. Social assistance payments are available in most OECD countries as a last resort for individuals who are not eligible to receive unemployment insurance, individuals who have lost eligibility during the unemployment spell, or as top-ups to the unemployment insurance to cover, for instance, housing costs or living expenses in general. Stringent means-testing is often applied to ensure that benefits serve the most vulnerable. As a result, typically self-supporting families who experience long-duration unemployment during a deep recession may encounter difficulties in accessing last-tier benefits or are obliged first to run down their savings or even sell their home, potentially jeopardising their long-term economic status (OECD, 2011a). Means testing based on household earnings generally also reduces incentives for second earners to take up work, as is the case in the United Kingdom (Pareliussen, 2012).

16. Taking social assistance into account changes the ranking of the generosity of the different systems. Replacement rates increase for many countries, increasing the ranking of countries that are extensively relying on means-tested social assistance, such as Ireland, the United Kingdom and Japan. Duration, measured as total benefits for the first five years divided by initial replacement rates, increases across the board, highlighting the importance of social assistance in providing a last resort safety net.

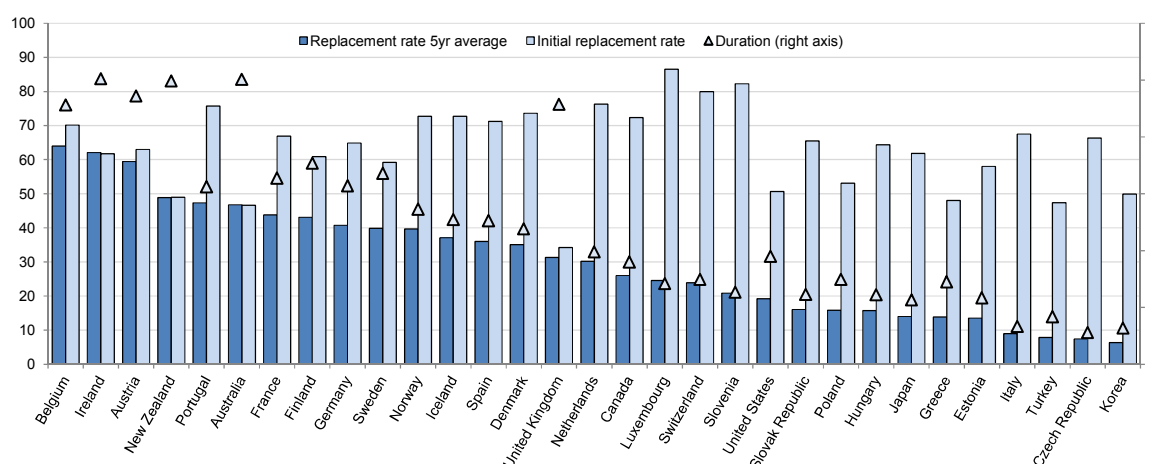
2. In some countries the threshold is defined as a minimum period of membership in the unemployment insurance scheme. This membership is tied to work status, but does not necessarily mean that the individual has been continuously in work for the full period.

3. In some countries the threshold is defined as a minimum level of labour income during the period before unemployment. "Equivalent earnings" are calculated as this threshold divided by the country-wide average wage.

Figure 9. Unemployment insurance generosity
Share of the unemployed who receive unemployment benefits, 2007-08



Replacement rates and duration, 2011



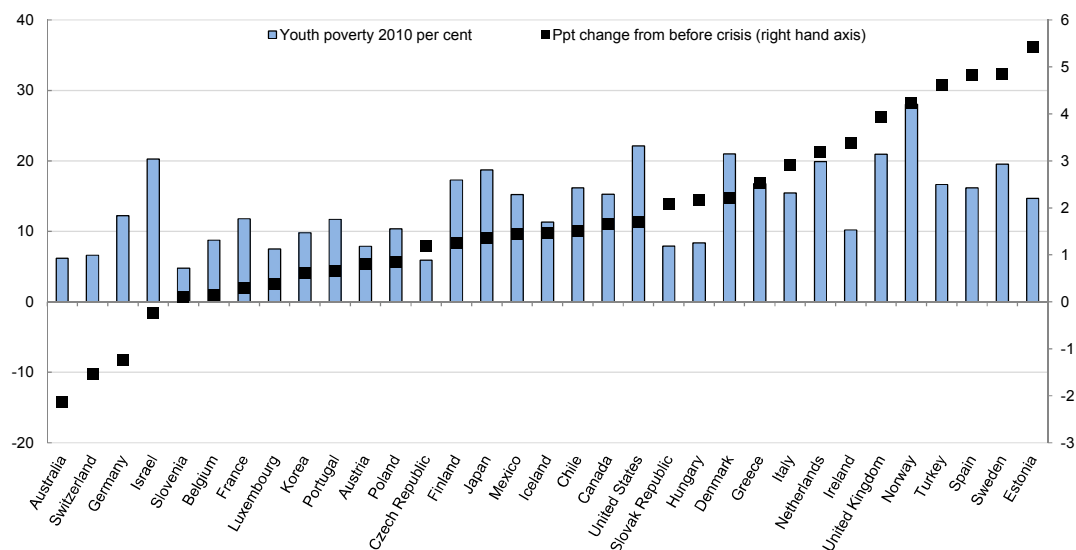
Note: Recipiency is defined as the share of the unemployed who are entitled to unemployment insurance benefits. For Austria and Ireland, recipiency rate data do not include unemployment assistance which exists in case the unemployed do not meet minimum eligibility conditions for UI or have exhausted the right to UI benefits. For the United Kingdom, recipiency rates include jobseeker's allowance (social insurance and social assistance).

Replacement rates are unweighted average annualised benefit values, for full-time earnings levels of 67% and 100% of the average wage calculated as the average over four different family types (single person household, lone parent household and one earner married couple with and without children). No social assistance "top-ups" or cash housing benefits are assumed to be available in either the in-work or out-of-work situation. Duration is defined as sum of the replacement received each year over a five-year period divided by the initial replacement rate, measured in months. Eligibility is the number of months of work, unemployment insurance membership or equivalent earnings necessary to gain eligibility to unemployment insurance.

Source: OECD, Tax-Benefit Models; OECD Employment Outlook 2011.

17. The generational divide in employment outcomes has led to soaring youth poverty (Figure 10). While some countries have managed to protect their younger populations, Estonia, Greece, Spain, Portugal and Italy, the countries the most hardest hit by the crisis, have also been the least able to shield their youth from poverty.

Figure 10. Youth poverty

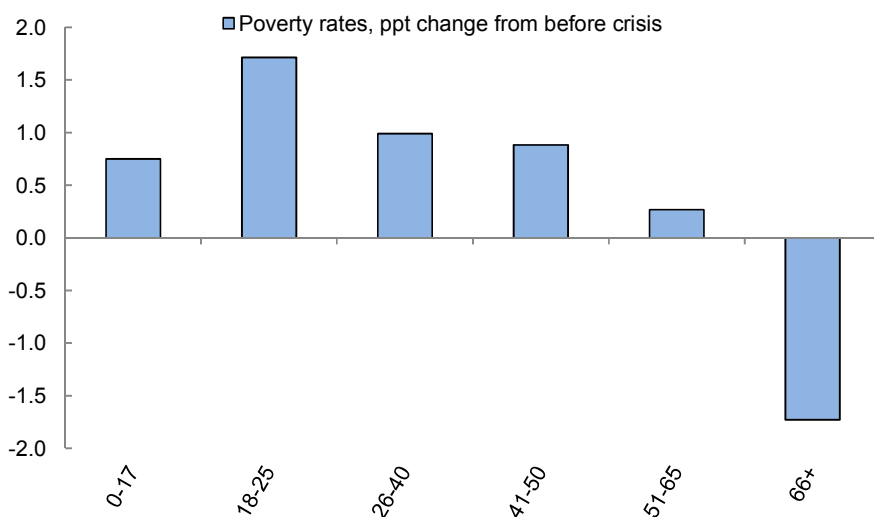


Note: 2010 refers to 2009 for Switzerland, Chile, Hungary Ireland Japan and Turkey. “Before crisis” refers to 2007 except for Chile and Japan (2006), Switzerland, France, Israel and the United States (2005), Australia, Germany, Finland, Mexico, Norway and Sweden (2004).

Source: OECD Income Distribution Database, extracted September 2013.

18. There is also a clear generational divide in how the crisis has affected living standards. While relative poverty declined for people who are older than 65 years, all other groups have seen increased poverty rates. The young aged 18 to 25 have been particularly hard hit, with a more than 1½ percentage point increase in relative poverty in the OECD on average (Figure 11).

Figure 11. Youth poverty has soared during the crisis, while older people were better protected



Note: The poverty rates refer to 50% of the median income after taxes and transfers, percentage point change from 2008 to 2010.

Source: OECD Income Distribution Database, September 2013.

19. There is a potential danger that the current generation of youth will experience long-term negative effects on employability and earnings as a result of the crisis. 18.4% of the 20-24 year-olds and 8.3% of the 15-19 year-olds in the OECD were neither in employment, education or training (NEET) in 2011. The proportion of the 20-24 year olds increased by 2.4 percentage points between 2007 and 2011 (OECD, 2013b), following a decrease by 1.6 percentage points between 2000 and 2007. The NEET ratio differs widely across OECD countries. In the Netherlands less than 8% of the age group 20-24 was neither in employment nor education in 2011, while in Ireland, Israel, Italy, Mexico, Spain and Turkey, the figure exceeded 25%. The number of youth not in employment, education or training should be contained as far as possible, in order to maintain the long-run growth potential of the economy and avoid a widening of inequalities. Special care should be taken to avoid that youth are sacrificed by current institutional arrangements such as labour market duality and generous pension rights in some countries which may benefit older generations to the detriment of the young.

Reforms of unemployment insurance in response to the crisis

20. During the crisis, there have been notable changes to the generosity of unemployment insurance in several OECD countries. As unemployment drags on, the long-term unemployed tend to lose their eligibility when maximum duration is reached. Several countries have seen a decline in coverage from 2007 to 2011. In the United States the fall has been almost 30%, despite the extension of benefit duration through the Emergency Unemployment Compensation Programme, which increased the benefit duration from 6 months to approximately two years (Box 2). Canada, Israel and Iceland have also introduced temporary extensions to their unemployment benefit duration.

Box 2. Temporary extension of unemployment benefit duration: The example of the United States

The US labour market was hard hit by the Great Recession. The unemployment rate shot up from its pre-crisis level of 4.4% to a high of almost 10% in the fourth quarter of 2009. With aggregate demand growth sluggish since then, the labour market recovery has been painfully; the current episode marks the first time since the Great Depression that the US unemployment rate has been above 8% for more than two years (OECD, 2011a). Part of the improvement since then has been due to a discouraged job seeker effect as well as an increase in disability benefit recipients (Cutler et al., 2012).

As a response to this precarious situation, federal support for unemployment benefits was strengthened by increasing both the benefit level and the maximum duration of eligibility (federal benefits take effect when state aid expires). The period of eligibility for unemployment benefits was increased in steps from 26 weeks to 99 weeks, beginning with the American Recovery and Reinvestment Act (ARRA) in 2009. Since then the maximum duration has been gradually reduced (OECD, 2012a).

From a macroeconomic perspective, UI benefits represent an effective tool for keeping up demand during a downturn, because benefit recipients are likely to be liquidity constrained and have a high propensity to consume (Johnson et al., 2006; Bender et al., 2010; Parker et al., 2011). More generous unemployment benefits therefore strengthen the automatic stabilisers during a downturn. In addition they provided a much-needed cushion for many of the most financially stressed households. There is also some evidence that the relevance of financial incentives to work is somewhat lower during a recession due to lower job search externalities. Kroft et al. (2011) and Schmieder et al. (2011) conclude that the optimal level of both the replacement rate and the maximum duration of unemployment benefits rise in recessions, because their role in smoothing consumption of unemployed workers who are liquidity constrained becomes more important.

These potential advantages need to be balanced against the risk that too generous income support for job seekers will dull job search incentives and thus exacerbate the risk of long-term unemployment.

Given the severity of the recession, some of the cyclical unemployment will inevitably increase the natural rate of unemployment (NAIRU) over the medium term. The OECD NAIRU estimate shows a small increase from 5.7% in 2007 to 6.1% in 2012. This will happen regardless of temporary benefit extensions, but some critics argue that by raising recipients' reservation wages, UI benefits might push down labour supply and thus aggravate this trend. This would have short-run costs in the form of lower GDP and higher public spending, while also increasing the risk of hysteresis

effects (e.g. due to a deterioration in human capital, while jobless). In the absence of UI benefits, however, many of those who are unable to find work might have given up searching and dropped out of the labour force altogether. UI benefits therefore may actually raise the reemployment prospects of displaced workers by encouraging continued job search activity (Krueger and Mueller, 2011). Given the especially weak labour demand conditions in the current episode, the positive effects of encouraging labour supply are likely to be larger than usual.

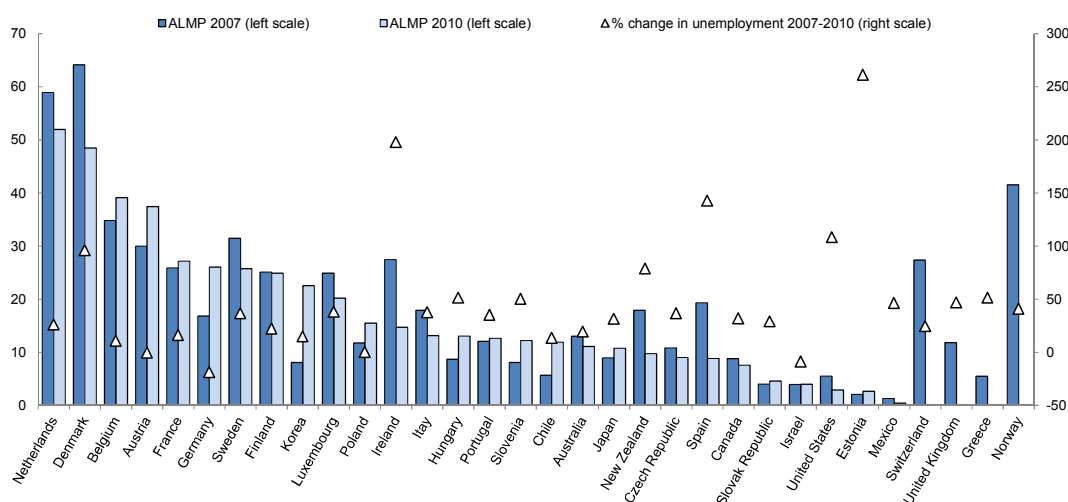
On balance, temporary extensions of the maximum period of unemployment benefit receipt during a recession can have a useful role to play. Such policies are not suitable for countries where duration and replacement rates are already generous. In countries like the United States, where the normal duration of these benefits is relatively low and access of the long-term unemployed to last-resort benefits such as social assistance is limited, such extensions can provide a timely response to the individual hardship brought about by a deep recession. Such policies must be scrutinised carefully in light of the incentives and costs of policies already in place and their potentially adverse impacts on job search intensity and the public purse (OECD, 2011a).

21. Net replacement rates have risen on average in the OECD. Slovenia, Greece and Poland have seen the biggest rises, while Hungary and Sweden have had the biggest falls and net replacement rates decreased also in the United States and Australia.

22. Eligibility criteria, on the other hand, have not changed much in most countries. Notable exceptions are Ireland, who has doubled the contribution period from 12 to 24 months, Iceland with a one month tightening, and Canada and France who have both loosened contribution criteria.

23. Active labour market policies may be scaled up in times of crisis, as a higher number of unemployed needs to be catered for. Figure 12 shows that some of the countries which are most in need do not have activation policies that have been responsive. Strong increases of unemployment combined with fiscal austerity have left active labour market policies lagging in countries such as Spain, Ireland, New Zealand and the United States. Other countries, such as Korea, Poland, Belgium and Austria, have managed to scale up active labour market policies in line with the rise in unemployment.

Figure 12. Active labour market policies are not responsive enough where they are most needed



Note: ALMP data refer to public expenditure on active labour market policies per unemployed worker as a ratio of GDP per capita.

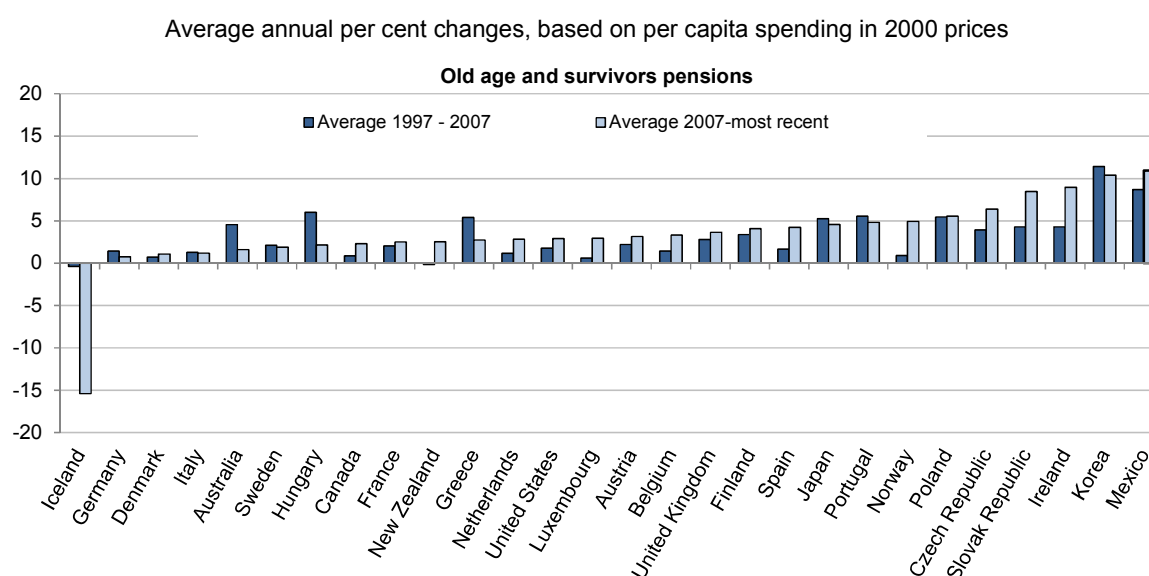
Pension systems and the recent crisis

The impact on pension spending and financing

24. Public old age pension expenditure in real terms continued to drift up during the crisis, though Iceland is an exception, as it recorded a sharp drop (Figures 13 and 14). Indeed, pension reforms aside, public pension expenditure are not sensitive to cyclical changes, depending largely on past wage and contribution trends along with demographic patterns.

25. Pension financing, however, is sensitive to cyclical variations, particularly with regard to changes in wage growth, potentially resulting in pension system deficits. Contribution rates remained unchanged in most countries over the period 2007 to 2010, at close to 20% of gross earnings on average in the OECD. More recently, with the persistence of the crisis, some countries have raised contribution rates, while some others lowered contributions as part of their stimulus-related policies to increase domestic demand. In the United States, for instance, a temporary measure to lower the contribution rate by 2 percentage points for employees and self-employed during the height of the financial crisis was compensated by transferring money from the general fund of the Treasury to the old age and survivor insurance (OASI) and disability insurance (DI) trust funds. Employer contributions were not affected by this measure. The two year measure expired at the end of 2012 and rates returned in 2013 to their pre-2011 levels, at an overall 12.4% (employee plus employer) rate, where it has been since 1990. In Germany, pension contributions were lowered from 19.6% to 18.9% in 2012 as part of the stimulus package, with the reduction benefiting both employers and employees.

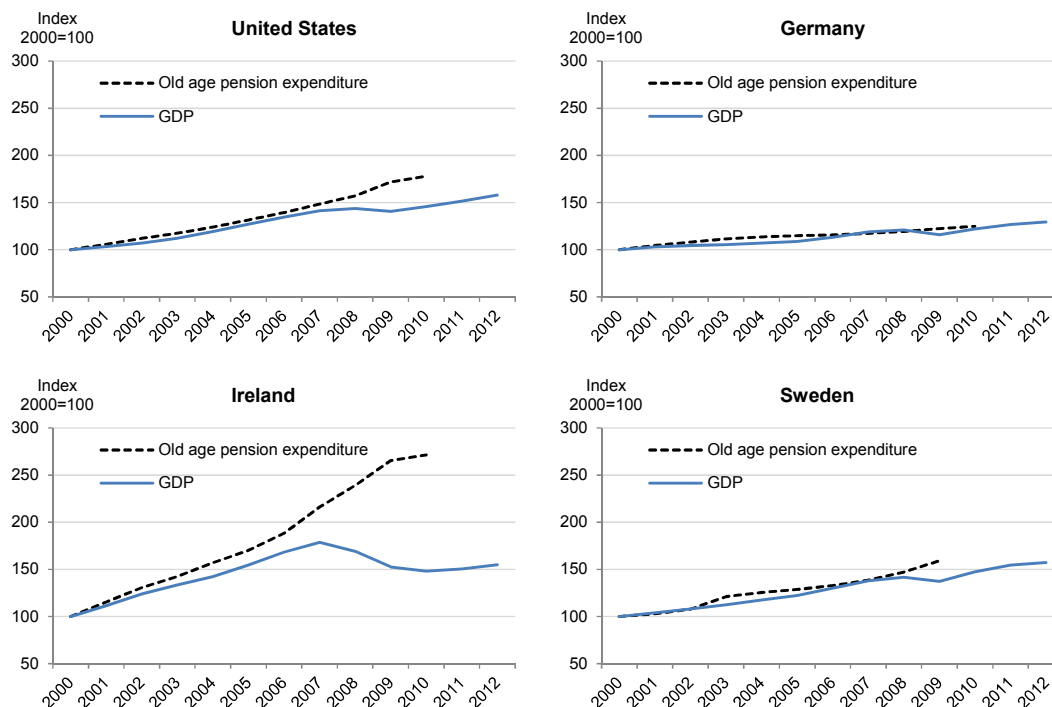
Figure 13. Public old age and survivor pension expenditure before and during the Great Recession



Note: Most recent data refer to 2010 for Australia, Germany, Ireland, Korea, Mexico, New Zealand and the United States. For all other countries shown, most recent data refer to 2009. Data are not available for Chile, Estonia, Israel, Slovenia and Turkey. Data are not shown for Switzerland, where the most recent data available refer to 2008.

Source: OECD Social Expenditure Database, September 2013.

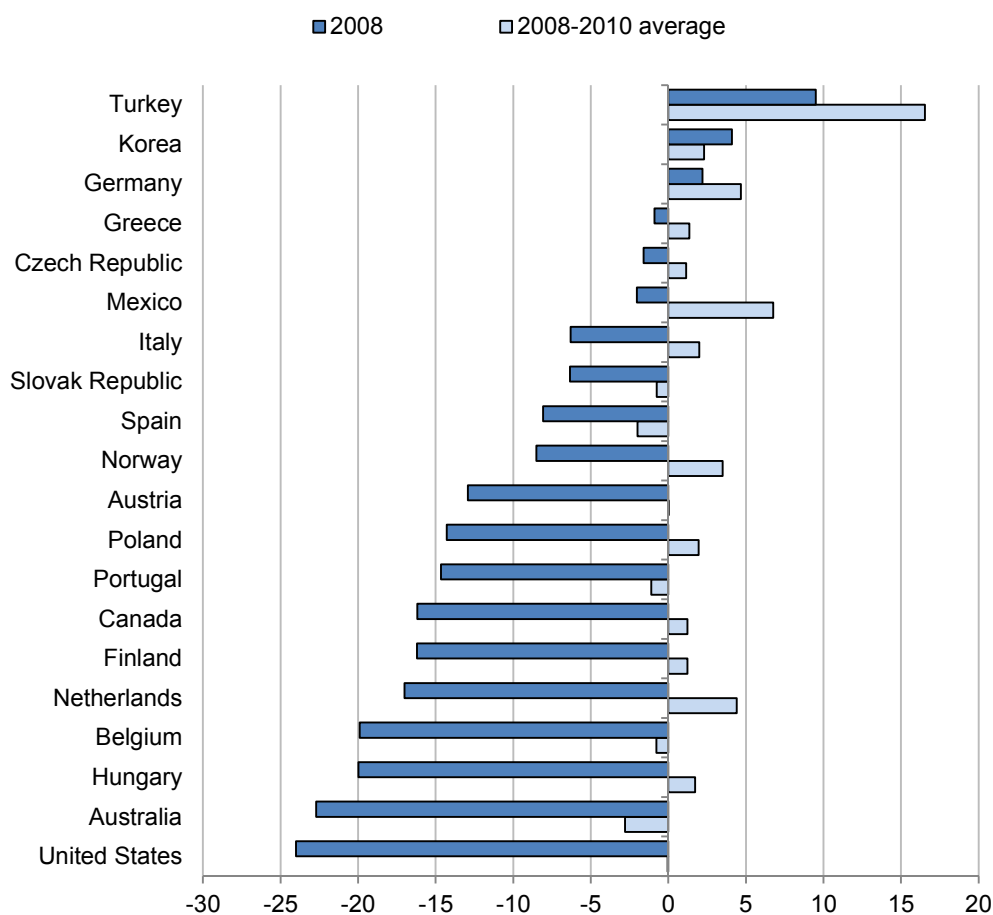
Figure 14. Evolution of public old age pension expenditure and GDP in selected OECD countries
Index 2000=100



Note: Selection of countries with different types of pension schemes and impacts of the crisis.

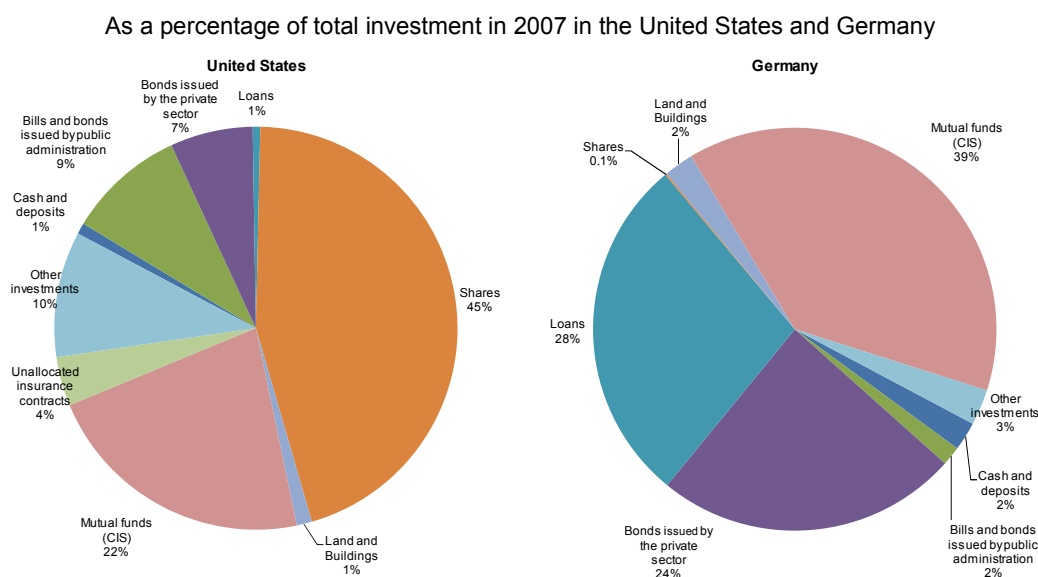
Source: OECD Economic Outlook Database; OECD Social Expenditure Database, June 2013.

26. Private pension funds in the OECD countries were hard hit by the financial crisis, with an aggregate loss of 23% of their real value in 2008 (D'Addio et al., 2009). However, there are considerable differences in portfolio performance across countries. Ireland, the United States and Australia experienced the greatest decline in pension funds' nominal investment rate of return in 2008, with declines well over 20%, while in other countries, notably Germany, Korea and Turkey, modest positive returns were maintained (Figure 15). From 2008 to 2010, average returns were still negative for some countries, such as Spain, the Slovak Republic, Portugal or Belgium.

Figure 15. Pension funds' nominal investment rate of return

Source: Pension Markets in Focus No. 8, July 2011.

27. Differences in pension fund performance are largely explained by the differences in their portfolios. Countries with a greater share of equity holdings in 2007 experienced the greatest investment loss, while those less vested in the stock market remained relatively unscathed. For instance, equity holdings represented 45% of assets in the United States in 2007 and only 0.1% in Germany where the majority of investment was held in mutual funds (Figure 16). The real average net annual rate for German pension assets has been stable thanks to the relatively conservative investment strategy of German pension funds, avoiding the downturn in financial markets in 2008, while the average rate of return in the OECD fell by 11.5%.

Figure 16. Pension fund asset allocation

Source: OECD Global Pension Statistics, May 2013.

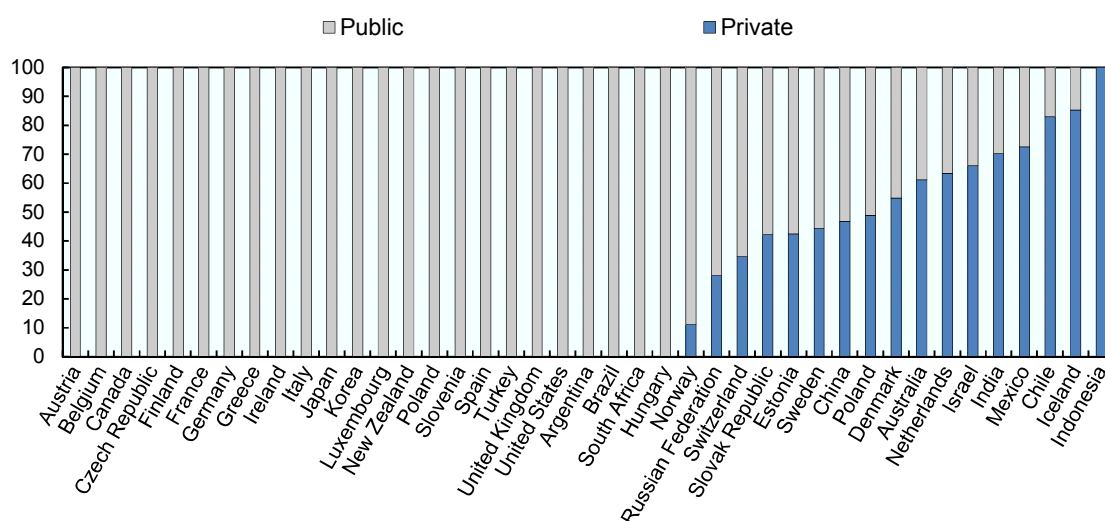
Adequacy of pensions during the crisis

28. Public PAYG pension systems generally weathered the initial crisis, fulfilling a counter-cyclical role by maintaining income for pensioners, although the medium- and long-term consequences both in terms of financing and expenditure will likely be significant.

29. The importance of public pensions for maintaining incomes for the elderly depends on the proportion of their pensions in overall retirement income, which differs widely across the OECD. On average, public pensions account for about 75% of total pensions in OECD countries. A number of countries (Estonia, Greece, Poland and Turkey) rely uniquely on public pensions, while for others (Germany, Italy, Hungary, Luxembourg and Slovenia) public pensions accounted for 98% of total pension expenditure in 2011. Furthermore, public pensions account for 100% of all mandatory pensions in 21 OECD countries (Figure 17).

30. The weight of public pensions in pensioner income is much less important in other OECD countries, accounting for less than 25% of all pension expenditure in Iceland. Private pensions and income from accumulated financial assets play a large role in several OECD countries, representing about 44% of retirement income in the United States and nearly half of all retirement income in Australia and the United Kingdom.

31. Even where incomes are not predominantly based on public pensions, current pensions are often sheltered from losses, with occupational pensions protected by guarantee schemes. In the United States, the Pension Benefit Guaranty Corporation (PBGC) insures defined-benefit plans offered by private-sector single employers, as well as multi-employer plans. The United Kingdom and Germany have similar pensions guarantee schemes. Others, such as the Netherlands have a legal funding requirement to assure that pension funds remain solvent. For instance, in the United States, the crisis affected revenues of the elderly mostly through its impact on assets returns (Box 3).

Figure 17. Balance between public and private provision of mandatory pensions

Source: OECD (2013), *Pensions at a Glance 2013: OECD and G20 Indicators*.
doi: 10.1787/pension_glance-2013-en

32. In several countries (Australia, Denmark, Iceland and the United States), measures have been put into place to facilitate the early withdrawal of retirement savings for working-age participants in need (OECD, 2012b). Indeed, early withdrawal has been documented as rising sharply after 2007 from personal retirement vehicles in the United States, as job losses mounted and housing wealth plummeted. The effects of early withdrawal will be felt in the medium term, as diminished retirement savings will translate into lower income at retirement.

Box 3. Decomposition of the revenues of the retired: The example of the United States

In the United States, the BLS Consumer Expenditure Survey shows that the average overall income of people aged 65 and over stood above USD 43 000 in 2011. The pension part of their income (social security, private pensions and or government pensions) rose steadily over the past decade, while the interest, dividend, rent income and property income category shrunk somewhat in 2008 and 2009 (Figure 18). Interestingly, income losses from the dot-com bubble burst in 2000 were more significant than the income losses during the recent crisis. Over one-third of the monetary income of households aged 65 and over comes from wages and self-employment income as many elderly supplement their social security income by continuing to work.

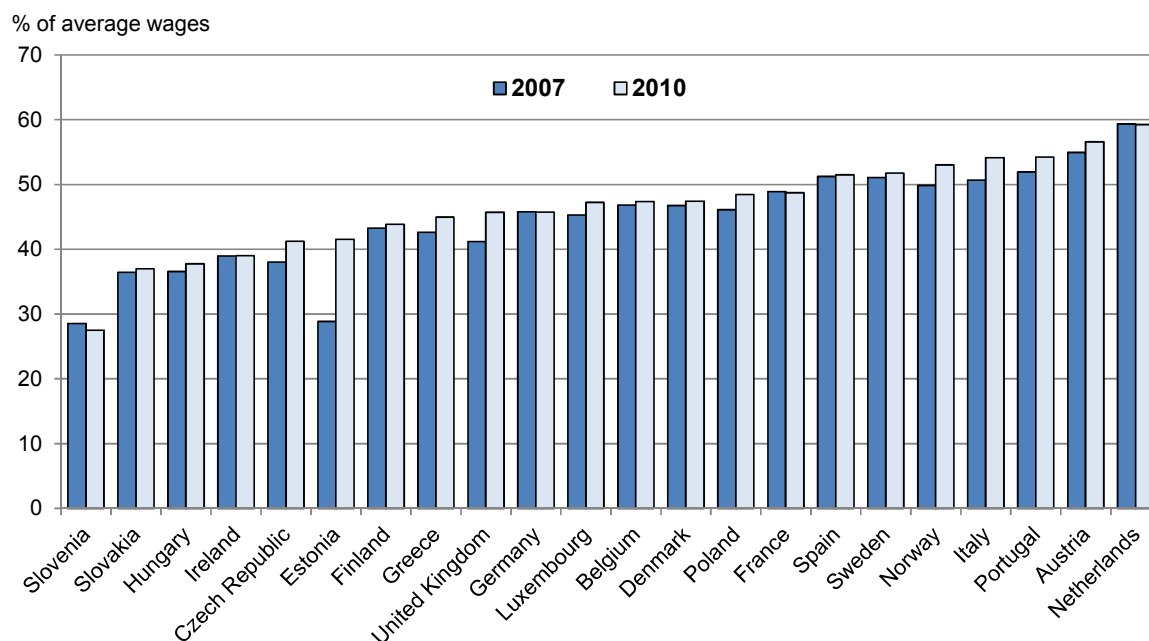
Figure 18. Income of households aged 65 and over in the United States



Note: Excludes wage and self-employment income, which accounted for 35% of total monetary income for the 65+ population in 2007 and 2011.

Source: BLS Consumer Expenditure Survey.

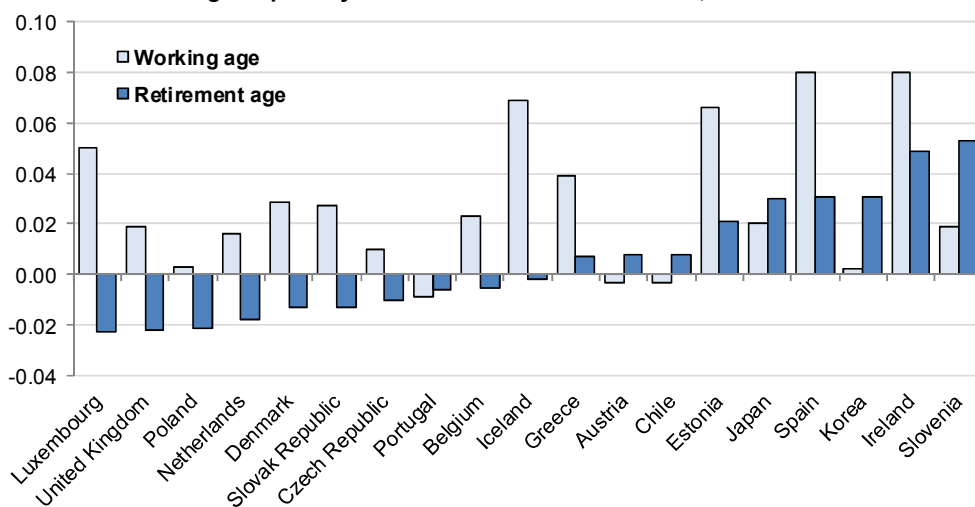
33. In most European countries, retirement incomes have largely been unaffected by the crisis. Average old age pensions have grown, albeit modestly over the crisis period in most OECD countries. In terms of buying power, compared to the active population, retirement pensions rose largely in line and sometimes slightly more than average wages over the period 2007 to 2010, with the only small dip being seen for Slovenia, and a significant catch-up of average pensions to average wages for Estonia (Figure 19).

Figure 19. Evolution of average pension earnings to average wages in selected OECD countries

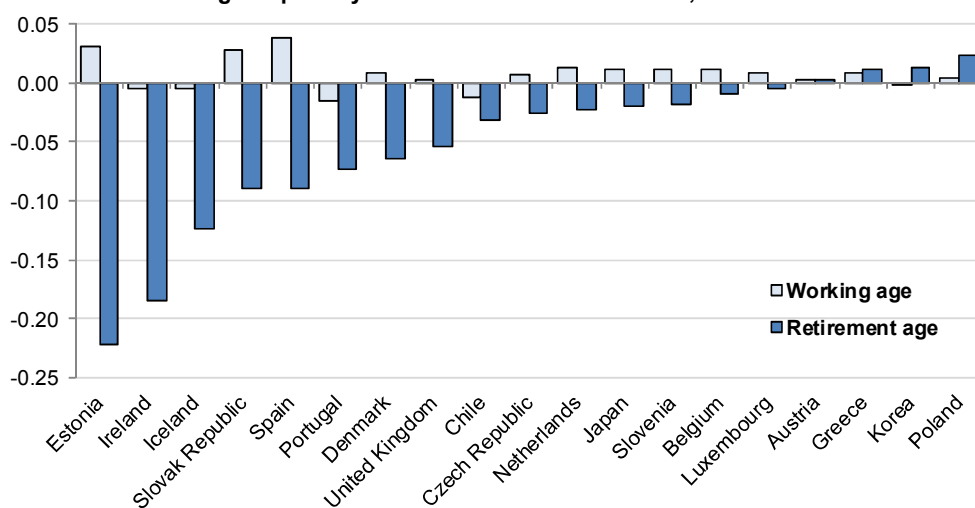
Source: OECD Economic Outlook Database; Eurostat, extracted 2 July 2013.

34. The poverty rate (60% poverty line) for the elderly, after taxes and transfers, fell in most OECD countries over the period 2007 to 2010, thanks to the automatic stabiliser effects of DB pensions, and specific stimulus measures set to counterbalance losses in individual retirement savings and the decline in housing market wealth. The working age population also benefited from transfers and tax relief to offset the recession, although the poverty rate for this demographic group nonetheless lost some ground in most OECD countries, as younger and older workers lost jobs and income, thereby taking a harder hit than the elderly (Figure 20).

Figure 20. Taxes and transfers mitigated poverty for both the retired and working age populations
Change in poverty rate before taxes and transfers, 2007 to 2010



Change in poverty rate after taxes and transfers, 2007 to 2010



Source: OECD Income Distribution and Poverty Database, 3 June 2013.

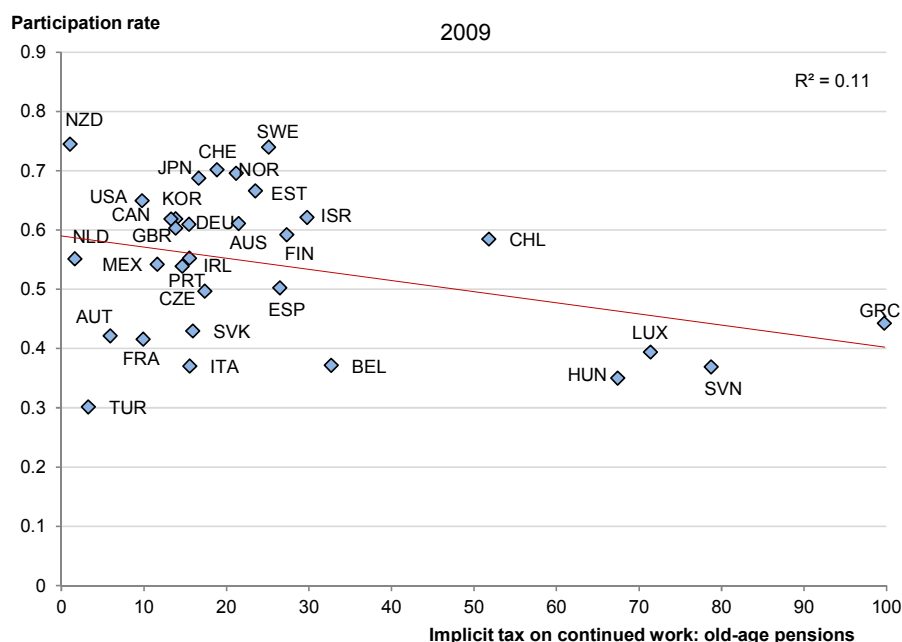
Pension reforms in response to the crisis

35. The crisis led to a renewed reform push in many countries. Most reforms have focussed on increasing the retirement age either directly or by increasing the minimum number of years of contributions required for full pension eligibility. For instance, the retirement age was increased (often with a phase in) in Belgium, France and Denmark for the voluntary early retirement pensions.

36. The effective retirement age is lower than the pensionable age in many OECD countries due to early retirement schemes and distortions of the retirement-income system which affect individual's retirement decision. The implicit tax rate on continued work for 60 year olds is still high in many countries, and, it is negatively correlated with the participation rate (Figure 21). Countries with higher implicit tax rates tend to have lower labour market participation rates of older workers. Many countries have already increased the incentives to work longer (14 countries in recent years). Austria, the Czech Republic, France,

Greece, Hungary, Italy and Spain have tightened the conditions for receiving an early pension, while Australia, France and Portugal have introduced pension gains or contribution exemptions to encourage people to work beyond the official pension age.

Figure 21. Participation rate of older workers and implicit-tax on continued work



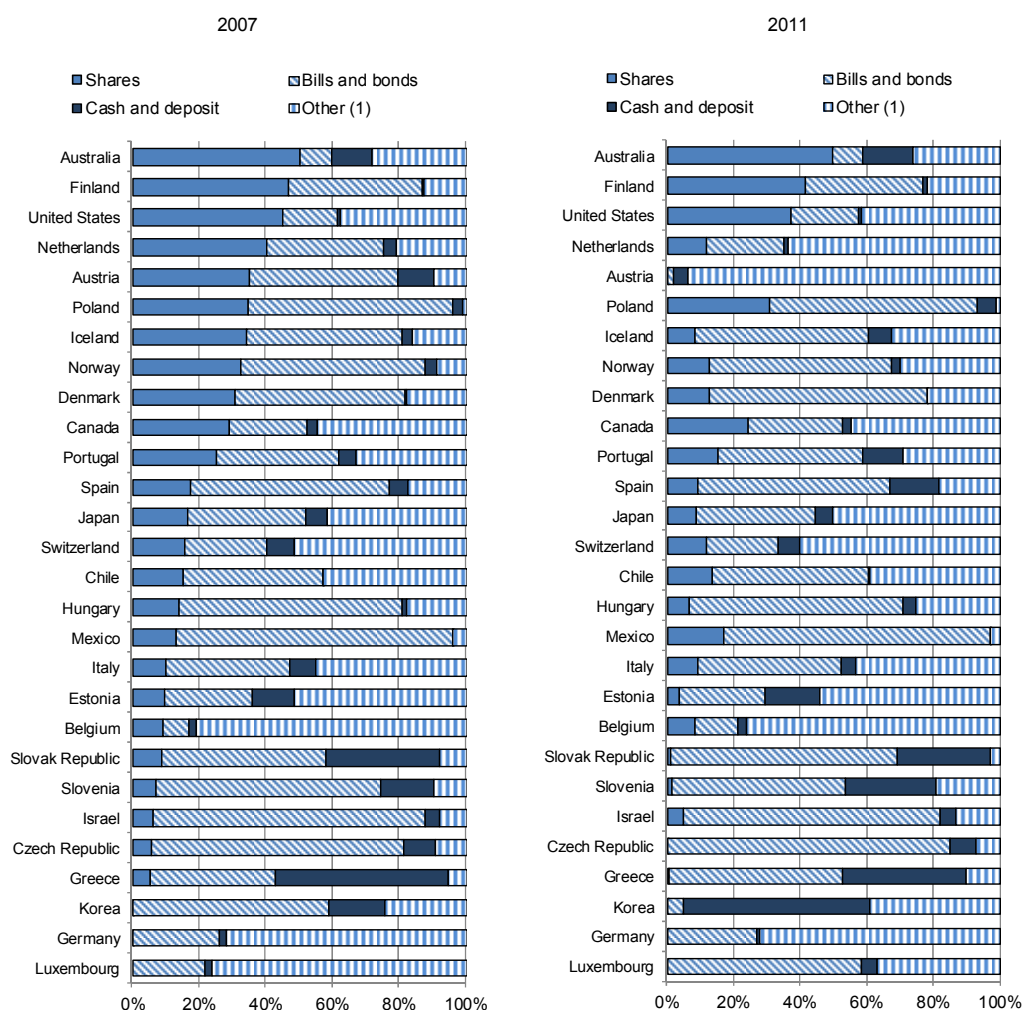
Note: The participation rate refers to the population aged 55 to 64 years.

Source: OECD Labour Force Statistics Database; *Going for Growth 2012*, Chapter 3.

37. Furthermore, the fragility of some private pension systems and concerns about prolonged effects of the crisis have halted or partially reversed pension reforms. Estonia, Hungary, Poland and the Slovak Republic have reversed to some extent their earlier reforms aimed at partially replacing PAYG public pensions with private DC plans (OECD, 2012b). Other countries have suspended their balancing mechanisms to avoid the need to raise contributions or lower benefits during the peak of the crisis (Germany and Sweden), thereby allowing their systems to go into temporary deficit.

38. For private plans, the crisis led to a better diversification of asset holdings of private plans to avoid the dramatic losses experienced at the onset of the crisis. Some countries, such as Austria, the Netherlands and Iceland, divested massively from equity markets, with Iceland favouring bills and bonds, and Austria and the Netherlands investing in mutual funds with a better split of monetary and equity holdings (Figure 22). Pension funds in the United States moved 8% of total pension fund investments from equity holdings towards public sector bills and bonds and other investments. Only Germany and Mexico increased their equity holdings, but in both instances by small amounts.

Figure 22. Pension fund asset allocation
In 2007 and 2011



1. The "Other" category includes loans, land and buildings, unallocated insurance contracts, hedge funds, private equity funds, structured products, other mutual funds (i.e. not invested in cash, bills and bonds, shares or land and buildings) and other investments.

Source: OECD Pension Markets in Focus No. 9, September 2012, Statistical Annex, Tables A7 and A8 provide detailed notes.

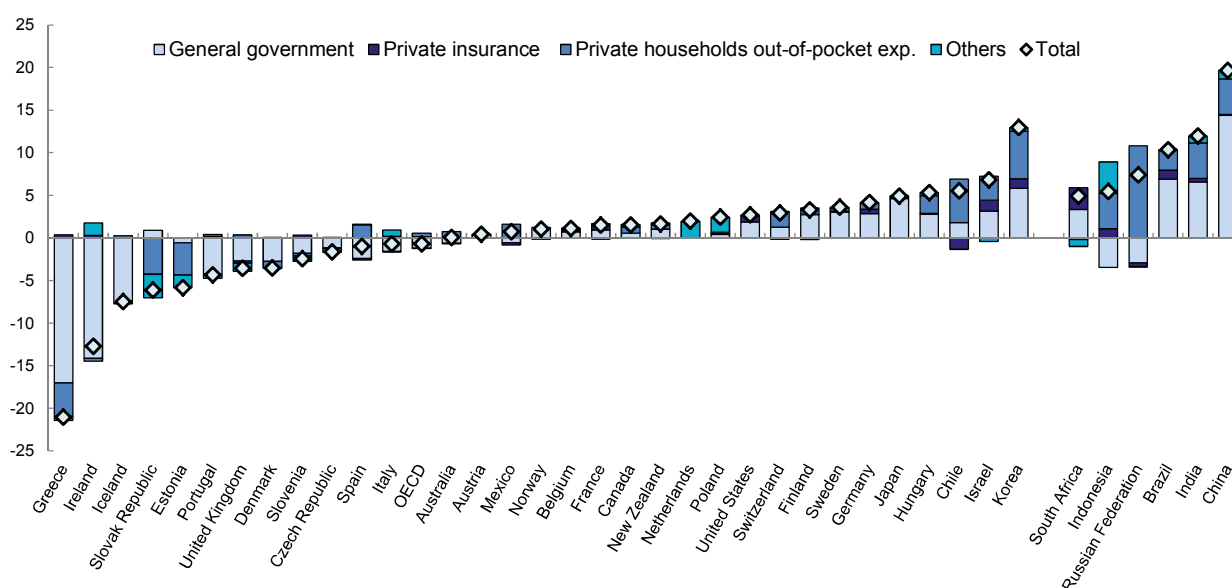
Health care systems and the recent crisis

The impact on health spending

39. Health spending growth has slowed down considerably in the wake of the crisis. From 2009 to 2011, on average across OECD countries, total per capita health spending decreased in real terms by about 0.7% (Figure 23). This follows a yearly rise by 3.4% in 2009 and a yearly average increase by about 5% from 2000 to 2009. The changes in 2010 and 2011 are the lowest since records started in the 1960s (Morgan and Astolfi, 2013). Preliminary data for 2012 for a sub-set of OECD countries confirms the low growth of health spending has continued (OECD, 2013c).⁴

4. The growth of long-term care spending has also slowed down considerably after 2009. Across the OECD, the median real growth in long-term care spending between 2009 and 2011 was about 2% against around

Figure 23. Per capita real health spending dropped dramatically in some countries during the crisis 2009-11



Note: Data for Australia, Japan and Mexico refers to 2010 and not 2011.

Source: OECD Health Data 2013, WHO for the BRIICS countries.

40. The average growth rate of total health spending in 2010 masks considerable variation across countries (Figure 23). Greece, Ireland, Iceland, the Slovak Republic and Estonia stand out because of their steep drop in *per capita* real health spending, following deep budget cuts. The decline in health spending was mostly due to public sector cuts. The Slovak Republic and Estonia are exceptions as in these countries the private sector was the main determinant of the reduction in total health spending.⁵

41. The evolution of health spending in Greece appears to be especially dramatic. Although no official figures for people without health care insurance exist, between 2008 and 2012 a significant share of the population (around 10%) appears to have lost health care insurance coverage. This is explained in part by the steep rise in unemployment especially among self-employed people and small entrepreneurs. Before the crisis, the Greek health care system consisted of a mix of a national health care system (named ESY) and several fragmented social security funds in addition to a large supply of private services provided by independent medical offices, diagnostic centres and hospitals (Economou and Giorno, 2009). Social security funds provided different benefit packages with different contributions rates and coverage rules and limited risk-pooling. Unemployed persons were covered by IKA (the largest social health insurance fund), which received public transfers for this purpose by the state (Economou and Giorno, 2009). The recent crisis exposed the weakness of this complex arrangement as the health care system was unable to keep providing the same standard of services. Because of the fiscal crisis, public health care spending was cut and over indebted sickness funds merged into a single one with a reduced budget. Co-payments for pharmaceuticals also increased and as a result of uncoordinated decisions on drug policy, some pharmaceuticals became unavailable.

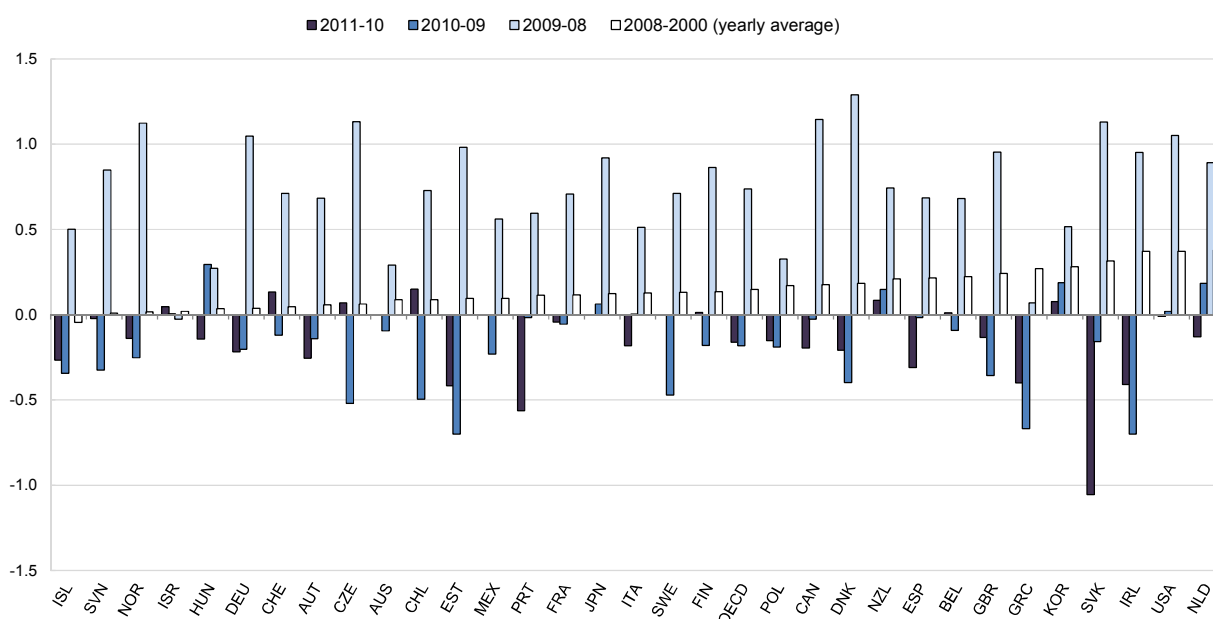
5% over the 2000-09 period. Real per capita long-term care expenditure declined in Iceland, Estonia, Denmark and Hungary.

5. In Estonia and the Slovak Republic, the fall in private health spending from 2009 to 2011 was mostly due to out-of-pocket spending, which declined by 15%. The share of the private health insurance sector is too small to have any noticeable effect on the total.

42. In the wake of the crisis, a number of reforms were implemented. Importantly, all health care insurance schemes were merged into a single organisation, rendering health care access more equitable and increasing risk pooling. Yet, some features of the current health care system still unduly penalise unemployed and self-employed people (OECD, 2013d). After two years of being without work, the unemployed lose both unemployment benefits and health care coverage, while self-employed people who are in arrears with their social security contributions also have no health care coverage. Some without health care insurance benefit from means-tested access to limited basic health care services, but certain vulnerable groups are excluded – such as illegal immigrants (as in some other countries), households whose income exceeds the means-test threshold of EUR 5 000 per year and the self-employed who closed down their businesses and do not have a tax clearance certificate. Recent policy initiatives to counter these trends include a reduction in the days of insurance payments required to get full medical coverage and a temporary extension of health coverage for the unemployed from two to three years.

43. During the initial phase of the crisis, the health spending to GDP ratio was highly volatile as changes in health spending were not in the same direction or commensurate to GDP changes (Figure 24). In 2008, when the crisis hit OECD economies and GDP slowed down considerably, the health spending to GDP ratio soared as health spending continued to grow. In 2010 and 2011, the health spending-to-GDP ratio declined markedly in most countries as a result of policies aimed at containing health costs, along with the rebound – or slower decline – in GDP.

Figure 24. Dynamics of total health spending-to-GDP ratio before and during the crisis
Percentage point changes



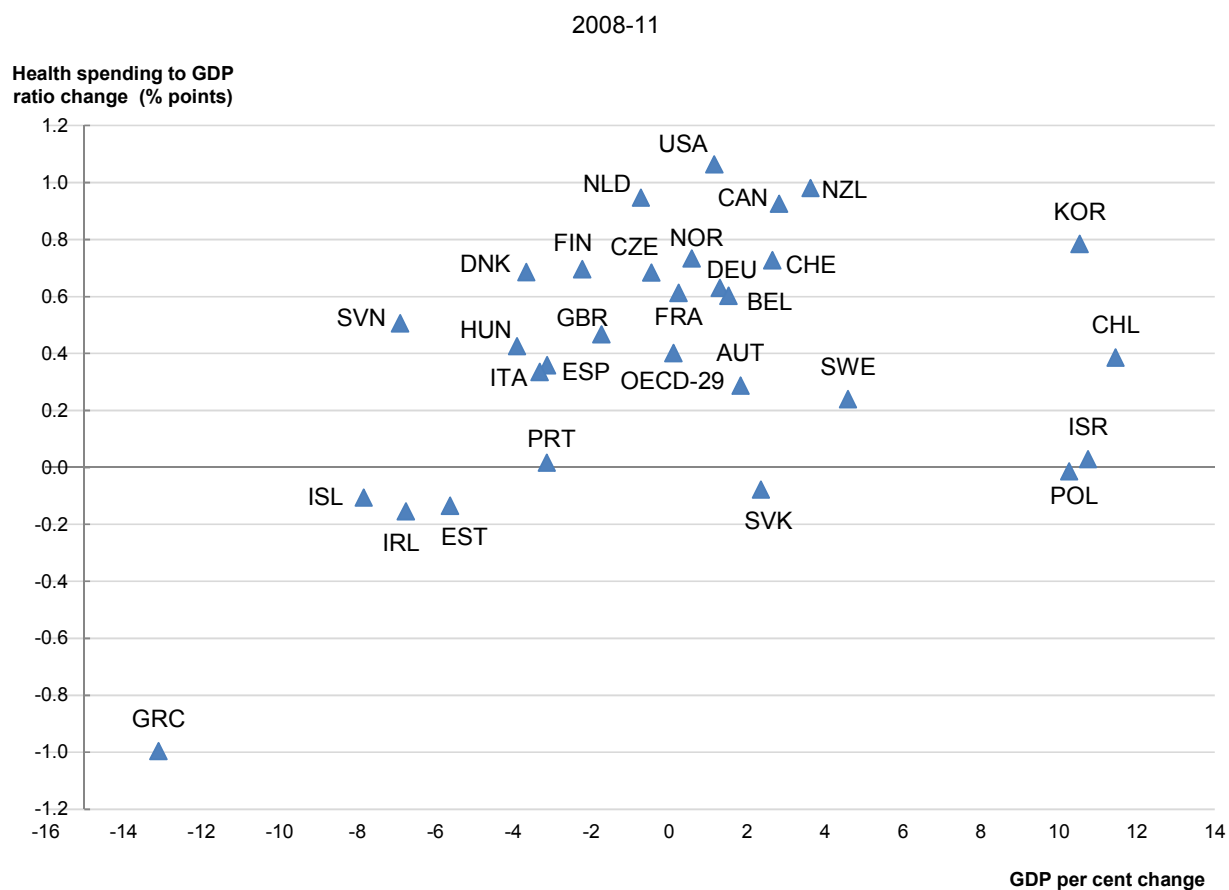
Note: Countries are ordered by the 2000-08 yearly average change; for Australia, Mexico and Japan the 2011-10 change is missing as no figures are available for 2011.

Source: OECD Health Data 2013.

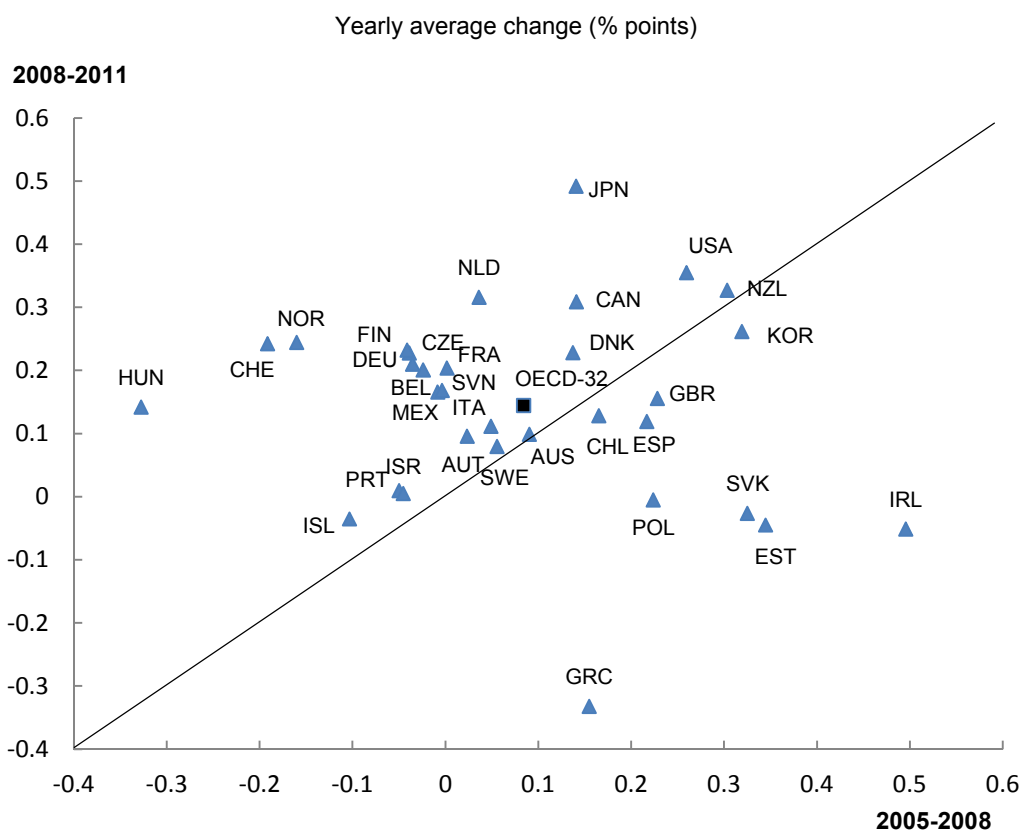
44. Overall, the crisis has contributed to raising the health spending-to-GDP ratio further. On average from 2008 to 2011, real GDP increased by about 0.1% and the health spending-to-GDP ratio increased by 0.4 percentage points (Figure 25). Countries that experienced a modest GDP rise or decline, from 2008 to 2011, such as the United States and the Netherlands saw more pronounced spikes in health spending as a share of GDP. Those that experienced the largest GDP declines saw their health spending-to-GDP ratio decrease as these countries – facing default risks – adopted more aggressive health cost containment

measures. Overall, in more than two-third of OECD countries, the yearly average change in the health spending-to-GDP ratio over the 2008-11 period was higher than that between 2005 and 2008 (Figure 26).

Figure 25. The health care spending to GDP ratio went up during the crisis



Source: OECD Economic Outlook Database and Health Data 2013.

Figure 26. Health spending-to-GDP before and after the onset of the crisis

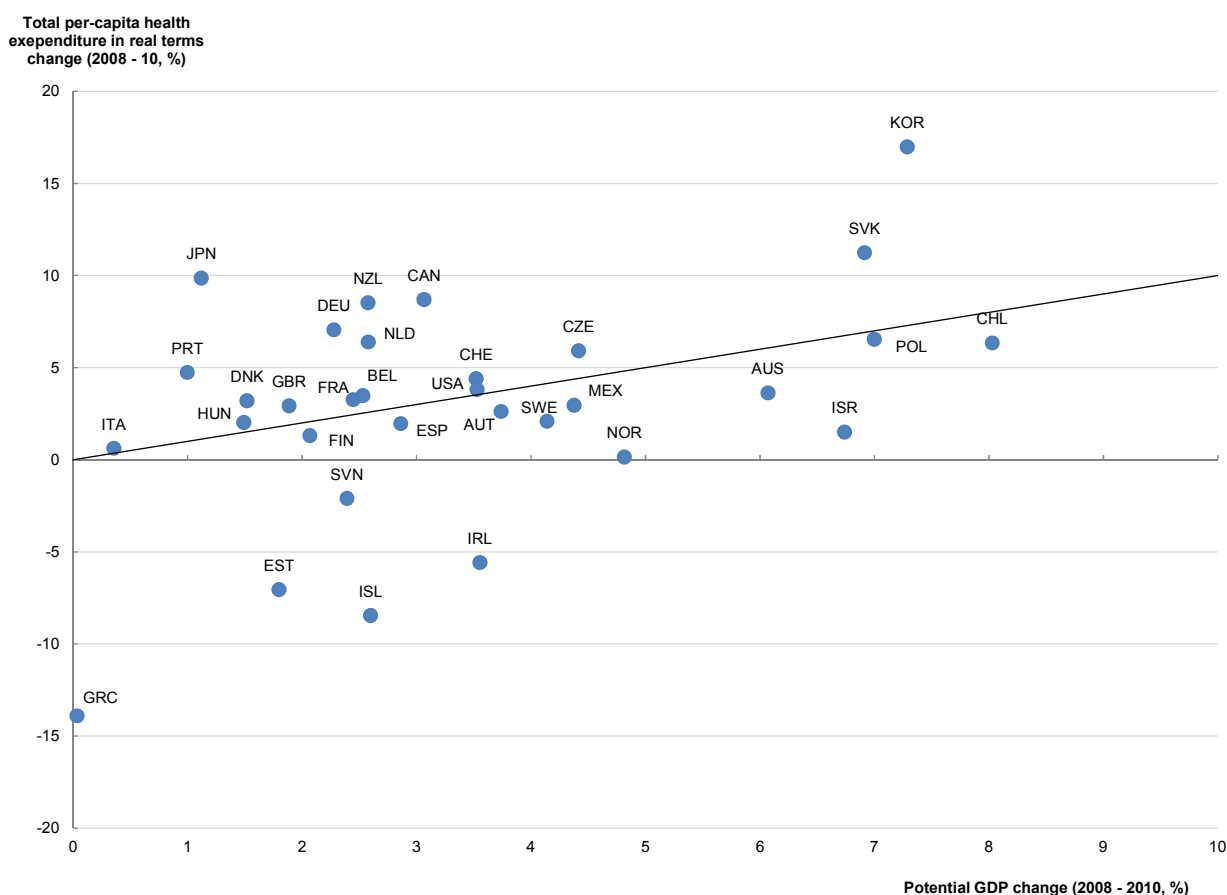
Source: OECD Economic Outlook Database and Health Data 2013.

45. In some of the countries most affected by the crisis (i.e. Greece, Estonia, Iceland, Ireland and Slovenia) the change in real *per capita* health spending from 2008 to 2010 was lower than that in potential GDP (Figure 27).⁶ However, for the slight majority of OECD countries (17 out of 32), health spending rose faster than potential output, as has been the case in past economic downturns.

6. Simple regressions of the health spending-to-GDP ratio on a constant, the output gap and potential GDP (in logarithmic form) indicates that health spending is only weakly sensitive to the economic cycle. A one percentage point rise in the output gap is associated with a 0.05 percentage point increase in health spending as a percentage of GDP. Regressions were run in first difference for an unbalanced panel of OECD countries from the mid-1980s or early 1990s to 2011. This point estimate is qualitatively similar to the 0.09 estimate reported by Darby and Melitz (2008) for a subset of OECD countries and controlling for additional variables.

Figure 27. Changes in health expenditure and potential GDP

2008-10



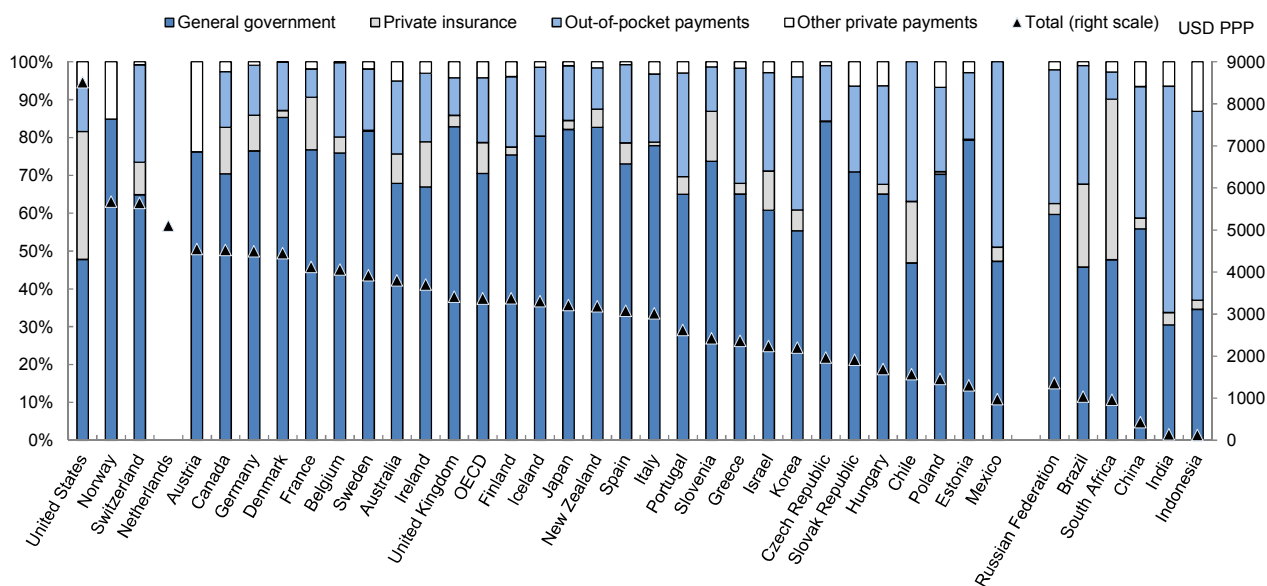
Note: Health spending in *per capita* real terms.

Source: OECD Economic Outlook Database and Health Data 2013.

46. In 2011, among the OECD countries, public health spending accounted for around 70% of the total. The United States and Korea featured the lowest share of public health spending (around 50%) and Denmark and Norway the highest (about 85%) (Figure 28). The share of public health spending is also low in Indonesia, India, China and South Africa as public health care systems are generally still in their infancy. As documented in previous OECD publications (e.g. OECD, 2011b) *per capita* health spending (in USD PPP) is highest in the United States and lowest in Estonia, Chile and Mexico. Health spending *per capita* in Russian Federation, Brazil and South Africa is comparable to the lowest levels among the OECD countries while it is considerable lower in China, India and Indonesia.

Figure 28. Total health expenditure per capita

Public and private spending, 2011 (or nearest year)

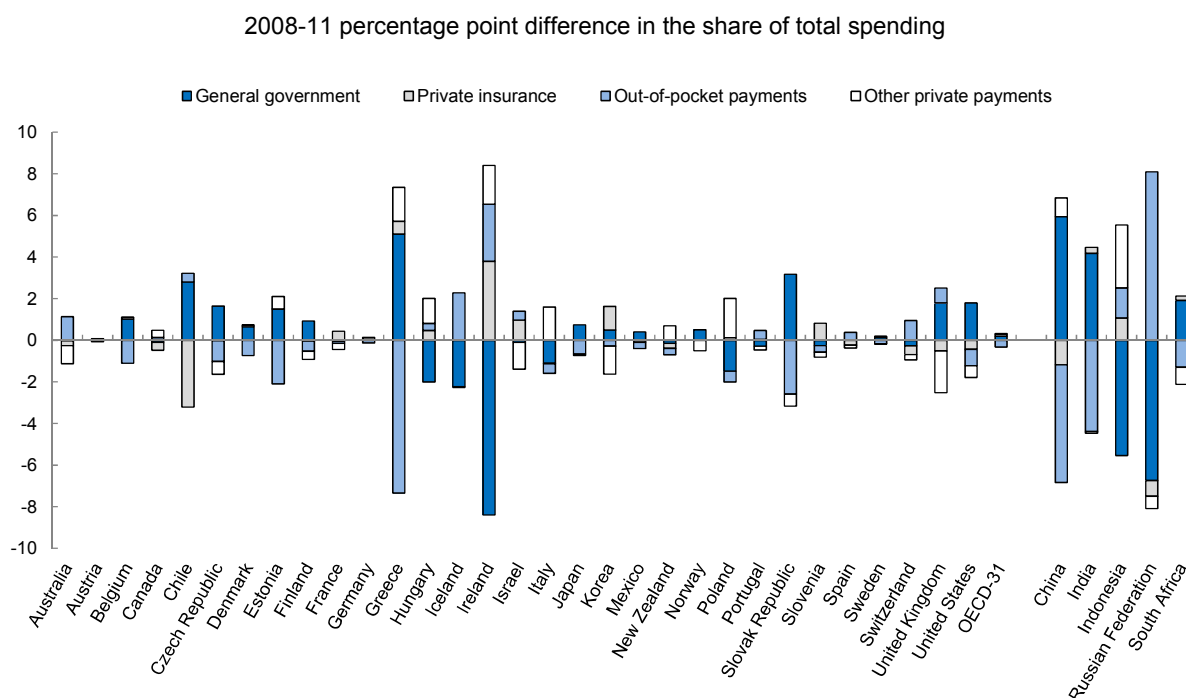


Note: For South Africa, China, India and Indonesia no sub-decomposition of private financing is available. For South Africa, China, India and Indonesia the data refer to 2009. For the Netherlands, no split between private and public spending is available.

Source: OECD and Health at a Glance (OECD, 2011b; Figure 7.1.1).

47. In most OECD countries, the recent economic crisis has not altered markedly the split between public and private health spending. Only Ireland and Greece have experienced large changes in this respect, but in different directions. In Ireland, the share of government spending decreased and that of out-of-pocket payments increased, whereas the opposite happened in Greece (Figure 29).⁷ Overall, changes in spending shares were more pronounced in the BRIICS countries, as they have been implementing new health care policies.

7. The large drop in the share of out-of-pocket payments – from a high base – for Greece is a signal of the fragility of the pre-crisis Greek health care system to large negative income shocks.

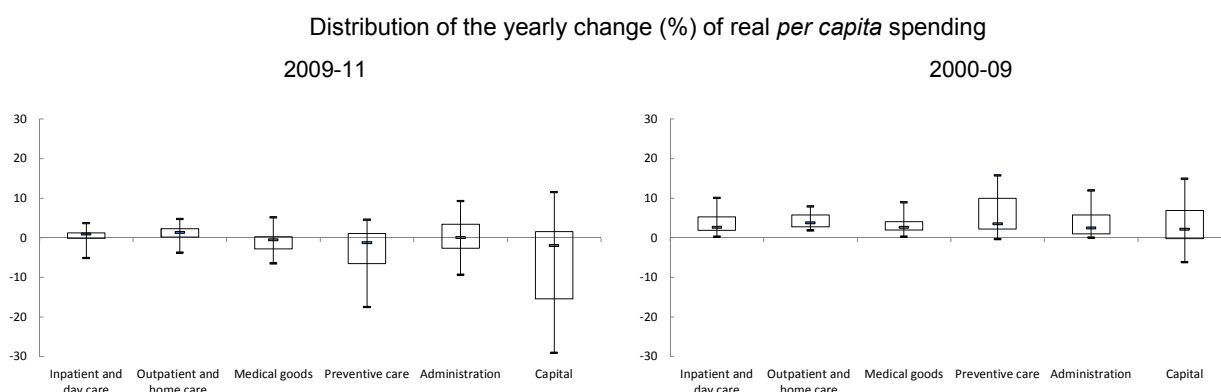
Figure 29. The health spending composition changed in a few countries

Note: Data for Australia Japan and Mexico refer to 2010 and not 2011.

Source: OECD Health Statistics 2013.

48. The impact of the crisis affected the health expenditure components in different ways. As regards in-patient and out-patient care, between 2009 and 2011 their yearly growth slowed to about zero, from yearly growth rates of more than 4%, from 2000 to 2009 (Figure 30). The dynamics of these two spending items explain a large part of the slowdown in total health spending as they account for about 35 and 30% of it, respectively. Spending on administration and medical goods also declined for about half of the OECD countries that reported data. The yearly change over the period was about zero for administration costs and -1% for medical goods. This contrasts with general spending increases from 2000 to 2009, when both rose by more than 3% annually.⁸ Spending on preventive care was also cut (in 70% of the country) against large yearly increases (10% on average) in the preceding period. Finally, capital investment was also reduced markedly since the onset of the crisis in almost all countries.

8. Over the 2000-09 period only Italy, for medical goods and Hungary, for administration, recorded (slight) spending declines.

Figure 30. The crisis altered the dynamics of health expenditure

Note: Changes refer to real per capita spending. The top and bottom sides of the box denote the 75th and 25th percentile of the distribution for the OECD countries that reported data. The horizontal mark inside the box is the median and the top and bottom outside the box are the 95th and 5th percentiles.

Source: OECD *Health Data 2013*.

49. The decline in administrative costs may signal a renewed push to enhance health care system efficiency, but deep and uncritical cuts in preventive care may become a source of vulnerability. Cuts in preventive care are likely to shift health care costs into the future as savings can be realised immediately whereas the negative health effects and the additional health costs they entail will be manifest only after some time. Besides, the potential savings from cutting prevention care are modest – as prevention accounts for a small share of total health spending (about 3% on average across OECD countries in 2010), but its health benefits have been estimated to be large (Sassi and Hurst, 2008; Asaria *et al.*, 2007; Lim *et al.*, 2007).

Health adequacy during the crisis

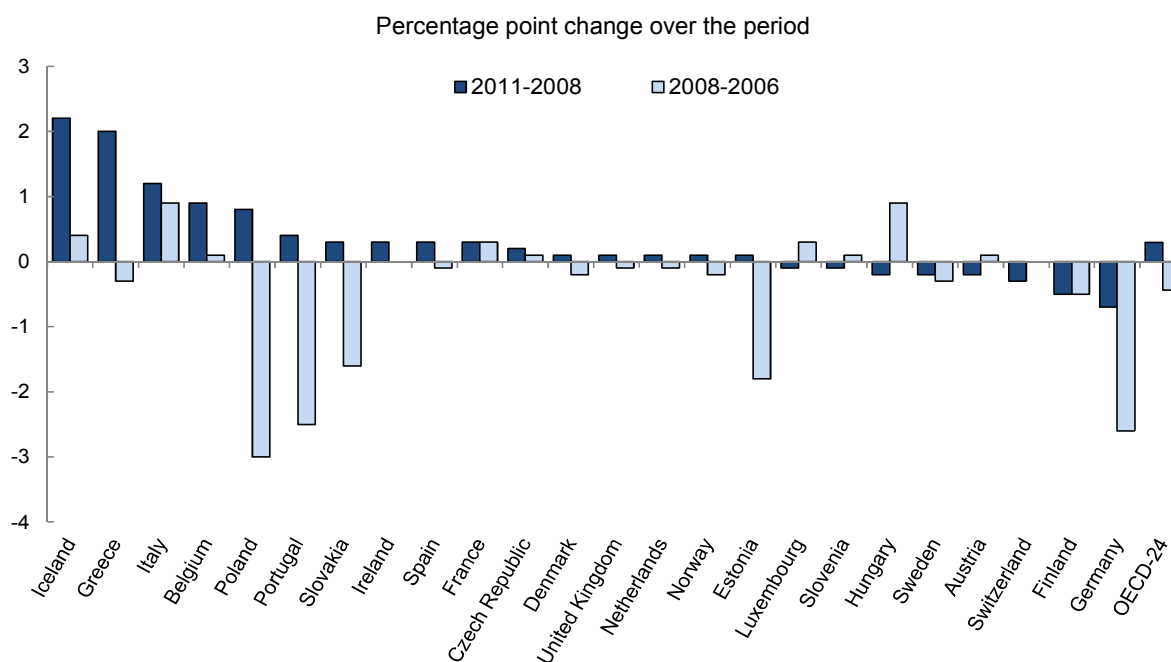
50. Past economic crises have shown that individuals' health status may be vulnerable to sudden and large macroeconomic shocks. The recent crisis is no exception, as evidenced by the rise in the share of the population reporting to have foregone health care for cost-related reasons, especially in crisis-hit countries.

51. In the EU countries, the percentage of people reporting unmet medical needs is generally low (OECD, 2011b), but since the onset of the last crisis it has risen in many of them.^{9,10} Between 2008 and 2011, the share of people with unmet health care needs rose from 1.1 to 1.4% (Figure 31). This contrasts with a reduction by about 0.4 percentage point from 2006 to 2008. The increase in unmet medical needs was especially marked in countries facing severe economic downturns, such as Iceland, Greece, Portugal, Ireland and Spain, but also in Italy, Belgium and Poland.¹¹ Most of these countries have gone through a trend reversal in unmet medical needs since the crisis started.

9. The only cross-country comparable dataset for OECD countries is collected by Eurostat and covers only EU countries.

10. Cross-country data on unmet care needs are not fully comparable because of socio-cultural differences and health care reforms. However, data over time within the same country are more likely to be comparable.

11. In Portugal, the share of people reporting unmet medical needs spiked in 2009 and declined in the following two years. This shows that fiscal consolidation enacted in Portugal as the crisis unfolded (in 2010 and 2011) may have prevented further increases in the share of people with unmet medical needs, although in 2011 this share was still higher than in 2008. For instance in 2008 a new Citizen Card was

Figure 31. Unmet medical needs before and during the crisis

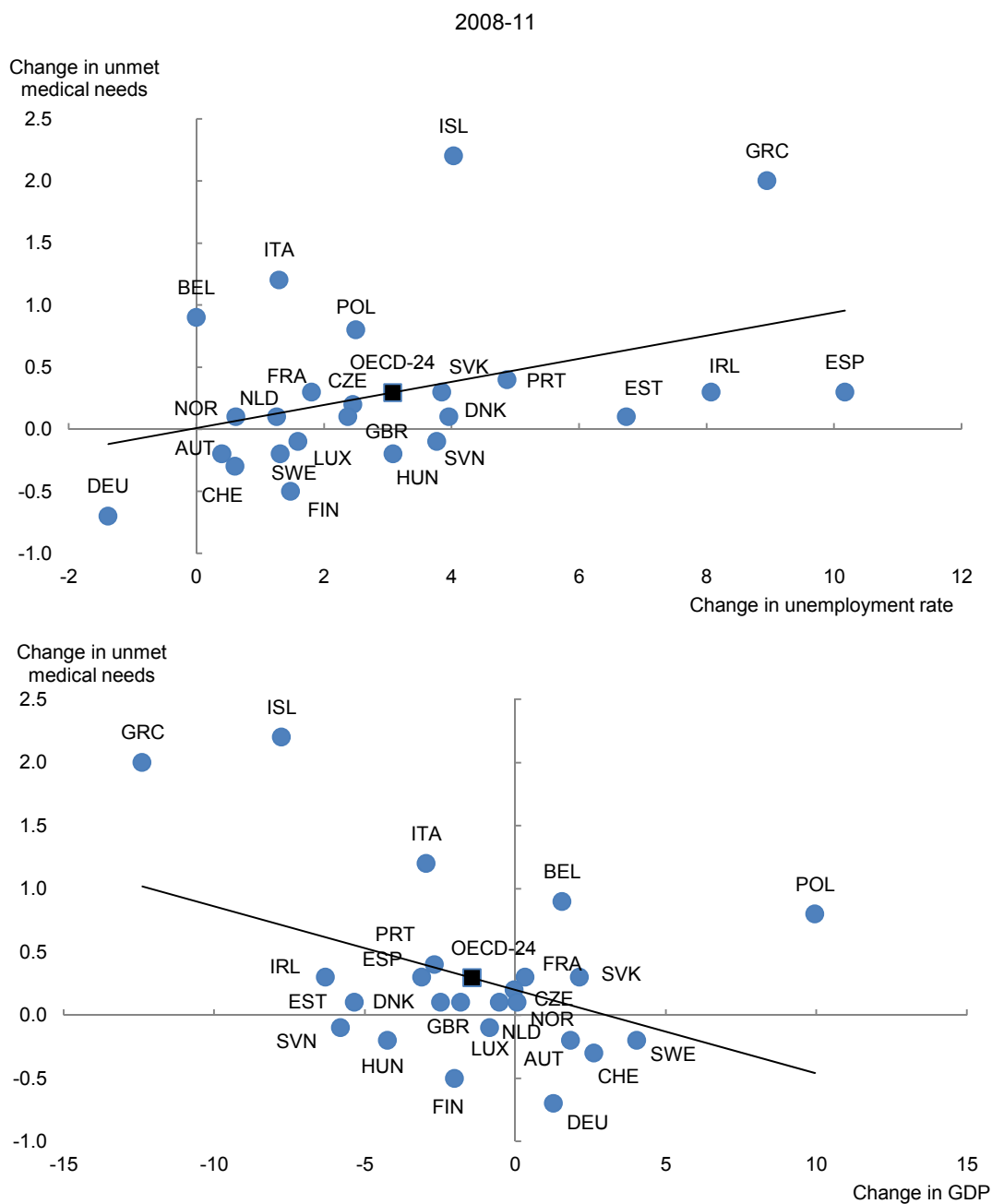
Note: Share of population who reported unmet needs for medical examination because they were too expensive.

Source: Eurostat (SILC).

52. Figure 32 shows that those countries hardest hit by the recent economic crisis experienced a larger rise in unmet medical needs over the 2008-11 period. There are exceptions however: in Poland, which was left relatively unscathed by the crisis, unmet health care needs rose significantly; on the contrary, in Ireland and Spain forgone health care increased only modestly when compared with their macroeconomic performance.

introduced, gathering all the individual's information (identity, tax, social security and health), to better identify people exempt from out-of-pocket payments (such as pregnant women, children under 12 years of age, pensioners on low income, persons responsible for disabled young people, and socially and economically disadvantaged populations) (Barros et al., 2011).

Figure 32. Countries hardest hit by the crisis experienced the largest rise in unmet medical needs



Note: The change in GDP is the average yearly percentage change between 2008 and 2011. The change in the unemployment rate is the difference in the unemployment rate (in percentage points) between 2008 and 2011. The change in unmet medical needs is the difference between the percentage of the population reporting unmet medical needs for cost-related reasons in 2011 and 2008.

Source: Eurostat (SILC) and Economic Outlook Database.

53. The economic cycle can affect people's health status through a variety of channels which can have opposite effects. These include pollution levels, frequency of traffic accidents, alcohol consumption or the level of anxiety and stress (Box 4). Some, such as pollution and traffic accidents – contribute to the pro-cyclicality of mortality rates. Yet, other channels – such as anxiety, stress and alcohol consumption – are negatively associated with the state of the economy, tending to increase during economic downturns.

Box 4. Economic cycles and health outcomes

Recent research suggests that economic downturns were associated with lower mortality rates. Mortality rates associated with motor vehicle accidents, cardiovascular and liver diseases, and influenza and pneumonia have been found to be pro-cyclical whereas suicides as well as mental health problems appear to be counter-cyclical (i.e. they rise during recessions). A variety of factors can explain the pro-cyclicity of mortality rates, including the expansion of traffic and industrial activity raising traffic and work-related accidents, weakened immune systems (due to a higher level of stress and reduction in sleep time) and increased consumption of tobacco, alcohol and saturated fats (Tapia Granados, 2005a).

Evidence pertaining to 23 OECD countries, covering 1960 to 1997 shows that a 1 percentage point reduction in the unemployment rate raises the mortality rate by 0.4% (Gerdtham and Ruhm, 2006). As concerns specific causes of deaths, the decline in mortality rate is about 0.4% for cardiovascular diseases, 1.1% for influenza/pneumonia, 1.8% for liver diseases and 2.1% for motor vehicle accidents. Similar country-specific evidence has been reported by, *inter alia*, Ruhm (2000) and Tapia Granados (2005a) for the United States, Neumayer (2004) for Germany, Tapia Granados (2008; 2005b) for Japan and Spain. Also, recessions appear to affect mortality non-linearly and differently according to the specific causes of deaths. For instance, in a study on European countries, Stuckler et al. (2009) found that a one-percentage point increase in the unemployment rate is associated with a rise in suicides and murders whereas a three-percentage point increase is associated with a larger number of alcohol-related deaths.

54. Empirical evidence from past crises shows that health - and more generally social welfare - spending can help mitigate the negative health effects of severe economic downturns. Drastic austerity policies – e.g. abrupt cuts in public health spending and/or increase in cost-sharing – can compound the short-term health effects of adverse macroeconomic conditions as they curtail access to healthcare and shift health risks to households and individuals, who may be unable to deal with them because of budget constraints (Karanikolos et al., 2013).

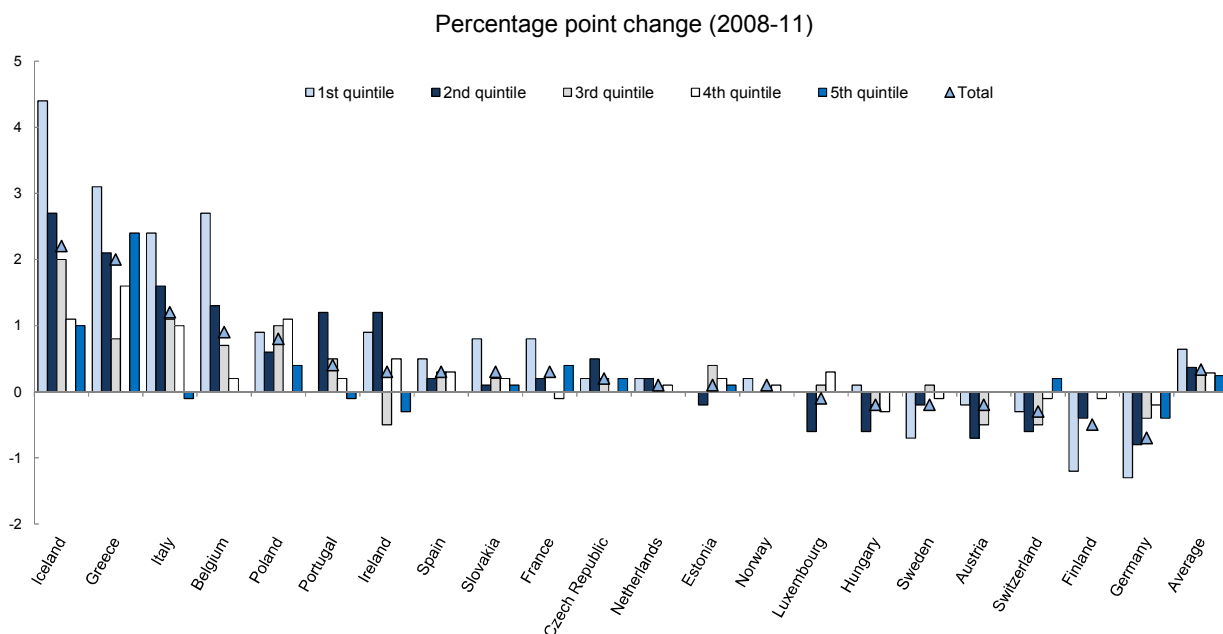
55. Large economic shocks can trigger wide-ranging policy reforms. OECD countries' policy responses to the recent crisis varied and may help explain the different dynamics in foregone health care and health outcomes. Recent studies show that countries which have experienced the deepest cuts, such as in Spain and Greece, saw a re-emergence of acute health problems, including new cases of malaria and renewed transmission of dengue fever. Greece has seen a surge in HIV infections coinciding with cuts in funding for needle exchange programmes. Its long-term decline in infant mortality reversed in 2008, rising for two consecutive years (WHO, 2013). Also, not all effects of uncritical health-care-service cuts are immediately seen. Some may take time to materialise as they may follow from heightened difficulties in accessing services, such as regular checks in case of chronic diseases and lower preventive care.¹²

56. Most OECD countries aim at providing equal access to health care for people in equal need of care. The crisis seems to have made access to health care systems more unequal. From 2008 to 2011, the percentage of the population reporting unmet medical needs for cost-related reasons rose more markedly among low income people (Figure 33). The increase was about 0.64 percentage point for people in the bottom quintile of the income distribution and about 0.24 for those in the top quintile. The changes in the same direction at opposite ends of the distribution suggests that the crisis, through forced cutbacks in private health spending, and recent health care reforms affected people of different income levels similarly, although not to the same extent. The difference between the change among low-income and high-income groups was highest in Iceland (3.4% points), Belgium, Italy (about 2.5% points) and Ireland (1.2% points). Some countries, such as Greece, and to a lesser extent France, have avoided increases in cost-related unmet medical needs for the middle class but not for the poor and the better off. In Germany and Finland, the

12. For instance, neglecting diabetes increases the risk of amputations, blindness or renal failure.

health care system seems to have become more equitable as low-income individuals reported a steeper reduction in cost-related unmet healthcare needs than high income ones.

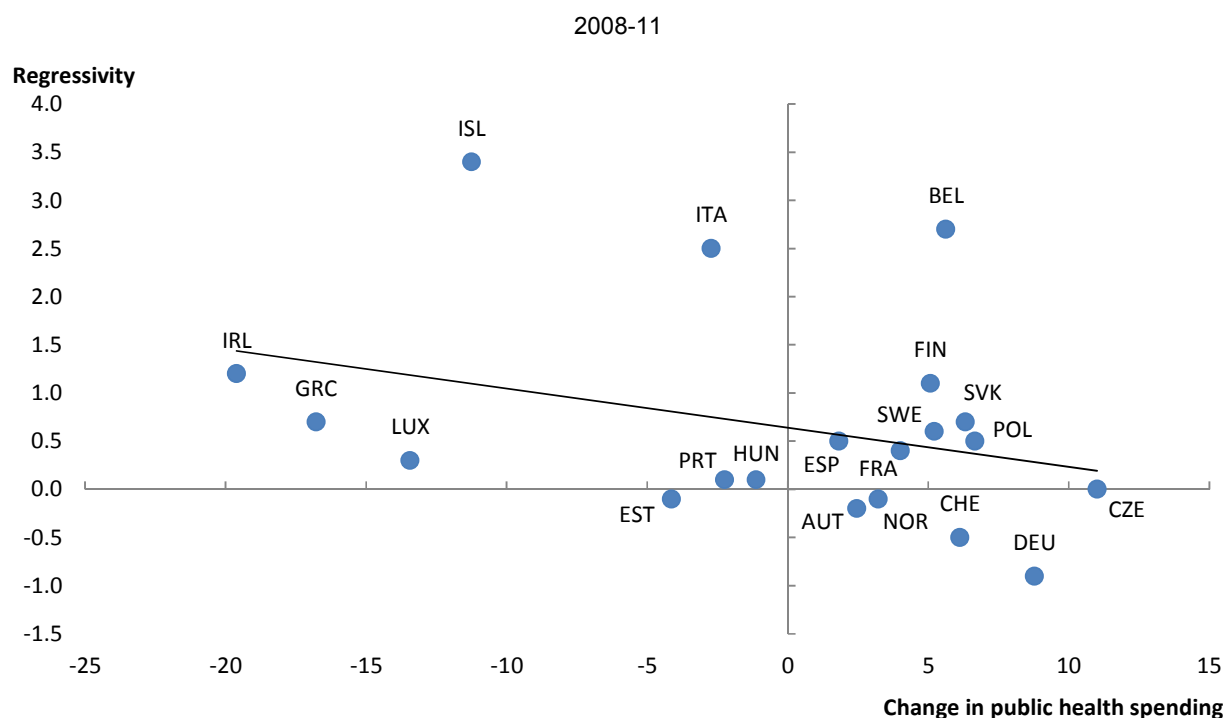
Figure 33. The rise in unmet medical needs was more pronounced at lower income levels



Note: Self-reported unmet needs for medical examinations because they are too expensive; quintiles refer to the distribution of equivalised household disposable income.

Source: Eurostat (SILC).

57. Overall, cuts in health spending have tended to be regressive. Health spending reductions have led a larger increase in unmet medical needs among people at the bottom of the income distribution than at the top (Figure 34). The vulnerability of health care systems to large macroeconomic shocks and the necessity to cut spending may thus have unequal repercussions on people’s health depending on their income.

Figure 34. Cuts in public health spending tend to be regressive

Note: The change in public health spending (x axis) refers to the percentage change in per capita health spending in real terms from 2008 to 2011. The regressivity (y axis) corresponds to the 2008-11 change in the difference in unmet medical needs between the first and fifth quintile of the household equivalised income distribution.

Source: Eurostat (SILC) and OECD Health Data 2013.

Health care reforms during the crisis

58. In many countries, the decrease in health care funding engendered by the crisis has triggered or accelerated already-planned health care reforms. Broadly, the areas of most active policy actions covered financing, coverage, supply side and structural issues.

59. Some countries were more prepared than others to cope with a sudden drop in revenues. Reserve funds and counter-cyclical formulas of health financing (e.g. Czech Republic, Estonia and Slovenia Slovak Republic) have proved effective in smoothing cyclical variations in health care funding, thus reducing pressures to cut spending (WHO, 2013).¹³ Many other countries have implemented policies to generate new revenue. These include (WHO, 2013; OECD, 2013e): increasing contribution rates across the board (Netherlands); raising the ceiling on contributions (Czech Republic for self-employed people and the Netherlands); broadening the revenue base by extending contributions to non-wage income – such as dividends (Slovakia) and pensions (Greece and Portugal for civil servants) – to the self-employed (Slovenia) and redundancy payments (France); and combating tax evasion (Hungary). In other countries, the share of non-wage taxes allocated to health care (France with capital gains tax; Estonia with tobacco and health levies) was increased and new taxes were earmarked for social security including health (France, Hungary). Some countries have also raised VAT on health-related products (the United Kingdom, the Czech Republic, Finland, Portugal and Poland). Ireland undertook a more important structural change

13. In Estonia, political issues impeded the full use of the reserve fund. If the fund had been used fully, coverage cuts could have been lower.

in health care financing with the introduction (in 2011) of a progressive universal social charge (between 2% and 7% of annual earnings). This new tax makes the Irish health care system financing more progressive as it replaces a proportional health levy that was set at 4% of earnings.

60. Public health coverage reforms touched its three main dimensions (WHO, 2013):

- *Breadth* (the share of the population covered): in this sphere, policy actions have been limited: the Czech Republic and Spain have removed entitlements for non-permanent residents; Spain has also changed the entitlement basis from residence to insurance status (for people aged above 18);
- *Scope of the benefit package* (i.e. the range of services covered); reductions in the scope of benefits concerned temporary sick leaves (Estonia and Hungary), some mental health services (Netherlands) and dental services for adults (Estonia and Ireland).
- *Depth of coverage* (i.e. the share covered for each service by public or private insurance): co-payments or user charges were raised for ambulatory care (Estonia, Greece, Iceland, Italy, Portugal, Turkey), prescription drugs (Czech Republic, France, Greece, Ireland, Portugal, Slovenia, Spain) and hospital care (Czech Republic, France, Greece, Ireland, Portugal, Russia). At the same time, some of these countries took actions to shield poor people from these increases by expanding exemptions (e.g. Spain has linked co-payments for medicines to income, including most pensioners with limits depending on their pensions); as regards generics, prices have been cut in Spain (30%), Italy, (12.5%) and Ireland (20-30%).

61. Supply-side reforms have involved workforce supply and wage controls, and a rationalisation of health care service provision. Some countries have reduced the compensation of the medical and administrative staff (e.g. Greece, Ireland, Iceland and Estonia have lowered salaries of nurses and GPs; Spain has cut salaries of health care personnel by 5-7%, as for all other civil servants); others have cut the health workforce or at least slowed its growth. Greece, Ireland, Italy, Portugal and Spain have cut the number of hospital beds, although this is a continuation of past policies.

Lessons from historical episodes: The broken promises of social institutions

Lessons from reforming pension systems

A brief history of pension reforms: From fragmented public or private pension plans to national pension systems

62. The history of retirement pensions can be traced back to the Middle Ages, where trade guilds often provided for their elderly members. Communities organised care for the needy, and family units were generally the primary responsible for older generations (Box 5). The need to protect retired workers better became evident as industrialisation brought more workers into major urban areas, far from their family and community support systems. Early pension plans in the industrialisation era were either public pension schemes or private company pension plans. The first organised pension scheme is generally considered to be that of the Royal Navy Officers and was introduced in the 1670s in the United Kingdom.

Box 5. The Speenhamland system

One of the earliest systems of income support was established in England in 1795 when Berkshire County judges met in Speenhamland to establish a relief allowance for poor workers. The system was innovative, creating an allocation scale based on the price of bread and family size to create a minimum income for the poor. The rule stated (Polanyi, 1944):

“when the loaf of a gallon of bread, of a specific quality, cost 1 shilling, then every poor and industrious person will receive for support three shillings per week, provided either through his work or that of his family or by an allowance drawn from tax for the poor, and to support his wife and each family member, 1 shilling 6 pence; and when the cost of a gallon loaf is 1 shilling 6 pence, then he will receive four shillings per week, plus 1 shilling 10 pence; for every penny that the price of bread rises above one shilling, he will receive 3 pence for himself and one penny for the others”.

The Speenhamland System of Poor Relief is recognised as the first means-tested system with an indexation rule. It embodies the main issues facing modern social security systems: the capacity to prevent poverty through income transfers, coping with rapidly expanding social benefits and indexation of the benefit to inflation etc. A major aim of poor relief was to reduce the large amount of food riots, which it did.

The system was strongly criticised for economic and moral reasons by economists such as Eden (1797), Bentham (1797) and Malthus (1807). Critics argued that the method resulted in lower wages, inducing an indirect subsidy for farmers and manufactures at the expense of the community. The Speenhamland System was also suspected of hampering development of labour markets by allowing individuals to refuse to work for low wages. For many authors, the measure was harmful to workers because of the negative effect on wages.

The Speenhamland System was repealed in 1834 after a fierce campaign by liberal economists and philosophers. The main vulnerabilities of the system were that it had established a ceiling of individual or family income as a guaranteed minimum income reference inducing employers to pay their workers less than that minimum income and the parishes to pay the difference; therefore, in particular in times of crisis, the tax burden was important for contributors.

63. Private pension plans were developed mainly in the United States, where the first private pensions plan was implemented in 1875 by the American Express Company. By the 1930s, several large corporations were sponsoring retirement plans for their employees, including Standard Oil of New Jersey (1903), U.S. Steel Corp. (1911), General Electric Co. (1912), American Telephone and Telegraph Co. (1913). Most of these early pension plans were financed fully by the employer, and were defined-benefit plans, paying the retired worker a monthly benefit.

64. Between the end of the 19th century and the early twentieth century, national pension schemes were established in many industrialised countries (in Germany in 1889 and in the United Kingdom in 1908). In the United States, the Social Security Act was designed in 1935 to provide retirement pensions for workers in the aftermath of the Great Depression.

65. With mounting concern about old age poverty, the implementation of national pension systems accelerated with the Great Depression and the Second World War. In almost all industrialised countries, pension systems were reformed or generalised (Japan (1942), France (1945), United Kingdom (1946)).

66. In the United States, following a high profile pension failure in the automobile industry, the public outcry was strong and resulted in the creation of the Employee Retirement Income Security Act (ERISA), which founded the Pension Benefit Guaranty Corporation (PBGC) that safeguards workers' private pensions (Box 6). The ERISA also paved the way for the creation of individual retirement accounts (IRAs) that give individuals a tax-advantaged savings plan.

Box 6. The Studebaker pension failure: Broken promise and regulatory catalyst

The history of pension systems is rife with examples of small and not-so-small failures, especially of systems which were not able to deliver the benefits they promised. Often these broken promises served as a catalyst for system changes, including stronger regulation and better protection of beneficiaries. One such example is the Studebaker pension failure of 1963 in the United States, considered by historians to be the watershed event which led to the creation of the Employee Retirement Income Security Act (ERISA).

In the aftermath of World War II, private corporate pension systems multiplied in the United States, as collective bargaining agreements increasingly put retirement pensions high on the agenda. Following on the heels of Ford (1949) and General Motors (1950), the Studebaker Corporation, joined the “stampede” towards implementing pension plans for automobile workers in June 1950. The Studebaker plan was a defined-benefit plan, promising to pay employees a set amount per month for each year of service up to a maximum of thirty years. Studebaker agreed to finance the plan by making regular contributions to a fund, but did not accept direct contractual liability for the plan.

In 1954, Studebaker merged with a smaller car manufacturer, Packard, in an attempt to compete with the “big three” automobile companies. While the United Automobile Workers union (UAW) insisted that the two corporate pension plans be merged as well, the company nonetheless maintained two separate trusts and continued to calculate pension liabilities separately for Studebaker and Packard retirees.

By the end of 1957 the liability for Packard retirement benefits was about USD 27 million, while the Packard trust had only USD 9.6 million in assets. Facing the inability to meet future retirement obligations, and recognising the failure of the Studebaker-Packard merger, the company defaulted on its Packard pension liabilities in 1958, closed the Packard facility in Detroit and dropped the Packard name, thereby officially separating the two pension plans. In 1959, the company reached a settlement with the UAW which specified the pension termination procedures for the Packard retirees and ex-employees, which paid reduced benefits to some, a lump sum to others, with some vested ex-employees getting nothing at all. The hope was that by splitting the plans, the Studebaker retirement pension plan would remain unscathed, but the seeds of concern regarding termination protection were sown.

In 1959, the UAW negotiated further pension increases for retired Studebaker workers in line with those won at the other automobile manufacturers, while the company, under financial pressure, bargained to lighten its funding schedule. This agreement also allowed the union to preserve wages, while giving management some balance sheet flexibility in the hope of better future profitability. However, it clearly put the Studebaker pension fund in further danger, lowering the means to finance future pension liabilities.

Four years later, in 1963, Studebaker collapsed, and their South Bend, Indiana plant was closed. In the ensuing agreement between the union and the company, retired workers were able to continue to receive their full pensions, while older workers with more than ten years of seniority received a lump sum payment covering a small portion of the actuarial value of their pensions. Nearly 3 000 workers lost their entire pension rights.

The Studebaker failure provided the impetus for the UAW to lobby the government to legislate federal pension protection insurance. The Employee Retirement Income Security Act was passed some ten years later, codifying the foundation for a programme to guarantee workers’ benefits in private pension plans through the Pension Benefit Guaranty Corporation (PBGC), thereby creating a social safety net in case of pension plan failure.

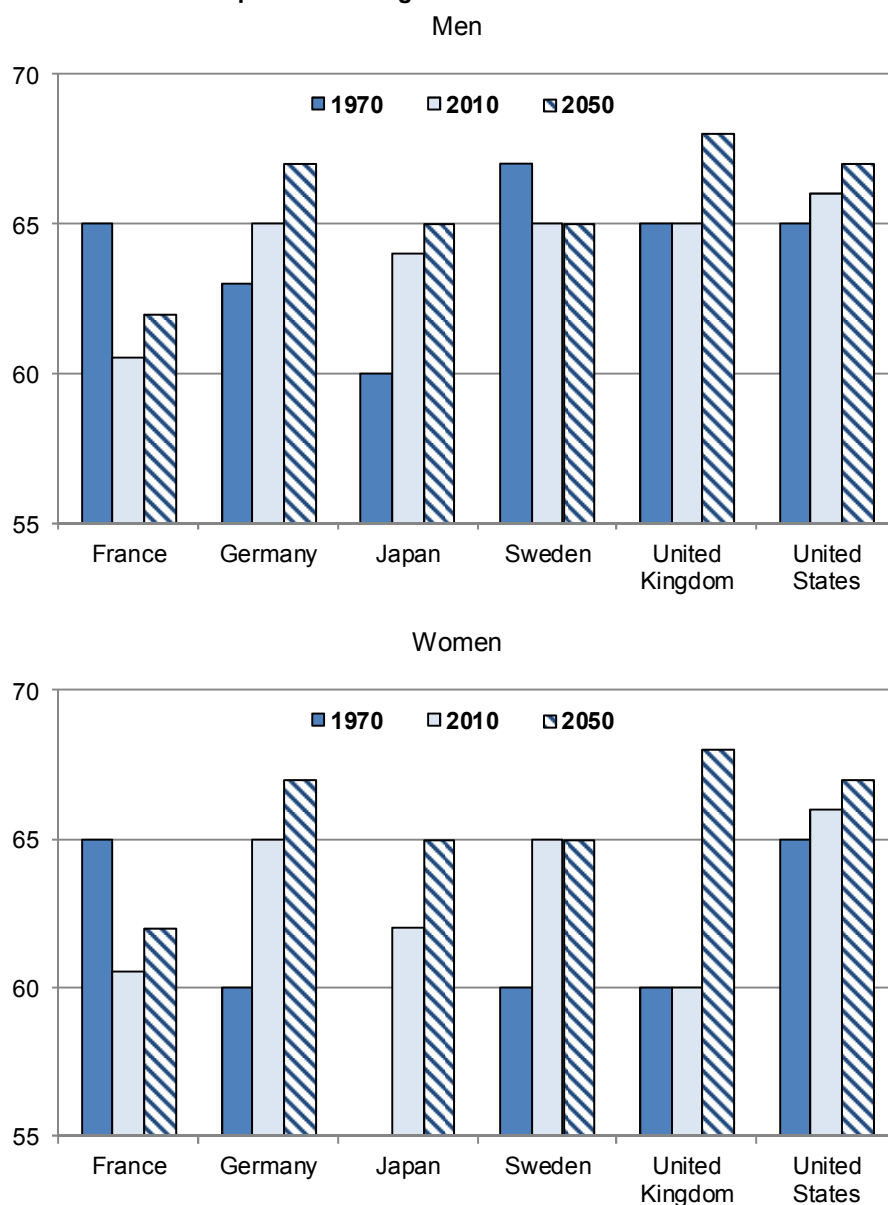
Aging and financial imbalances have triggered reforms

67. By the end of the 1970s, several countries began to question the sustainability of their pension systems. For example, in 1977 the United States amended the Social Security Act to “restore the financial soundness of the Social Security system into the 21st century”, thereby correcting a flaw in the cost of living calculations put in place five years earlier.

68. Likewise in Japan a major reform of the system passed the Diet in 1985 and took effect in April 1986 to reduce the imbalance between benefits and contributions and to tackle the effects of the rapidly aging population.

69. In many countries, the retirement age decreased from the 1950s to the 1970s before being increased progressively as changes in demographic trends, and particularly ageing populations, became a concern. Figure 35 illustrates the evolution of retirement age for a sample of countries, highlighting the sharp increase already enacted or legislated to take effect by 2050 to ensure future sustainability.

Figure 35. Evolution of pensionable age for men and women in selected OECD countries



Source: OECD (2011), Pensions at a Glance 2011.

70. The other countries followed suit, reforming their pension systems to improve their sustainability. Germany and Sweden enacted particularly important reforms of their pension systems in the 2000s, including major changes to pension rights. These examples provide useful insights concerning the trade-offs policy-makers face between breaking promises and ensuring long-term sustainability.

The German pension reform: From generosity to sustainability

71. Germany's pension system operated as a fully-funded system until the late 1950s. The system replaced the Federation of German Pension Insurance Institutes (Verband Deutscher Rentenversicherungsträger) after World War II in 1946, and became a self-administered fund in 1953, with employees and employers electing representatives.

72. The first major pension reform came in 1957. The two World Wars left the pension funds in financial distress, with reserves heavily eroded (Börsch-Supan and Wilke, 2004). The 1957 reform changed the fully-funded system to a PAYG system. In terms of benefits, measures were enacted to ensure equal treatment of blue-collar and white-collar workers, and a wage-indexed pension formula linking pensions to earnings was implemented to provide sufficient income replacement to maintain the standard of living of the beneficiaries. Pensions spending rose rapidly because generosity increased (for instance, a high replacement rate at 70% and the possibility for early retirement were introduced in 1972), but this was financed by rising contribution rates so that the federal government transfer nearly disappeared by 1973.

73. With looming fiscal and demographic pressures, a large pension overhaul was spearheaded in 2001 by Labour Minister Walter Riester, transforming the pension system into a multi-tiered system. The so-called "Riester reform" aimed to reduce the PAYG aspect of pension funding with a complementary (and voluntary) funded private pension system. Among the key decisions, contributions were to be kept below 20% until 2020 (and 22% by 2030) and full pensions would be gradually lowered from 70% of net earnings to 67% of net earnings by 2030. For the funded pension system, 4% of gross earnings would be transferred to private pension plans, lowering net earnings (and thereby lowering further actual pension pay-outs by about 10% (Börsch-Supan and Wilke, 2004). A means-tested first pillar level was added to insure a minimum pension for the neediest.

74. Shortly after the Riester reforms were enacted, it was clear that the reforms had not gone far enough, and that the limit on pension contributions was not sustainable given expenditure trends. In 2004, following the Rürup Commission findings, further measures were introduced. A "sustainability factor" was included into the benefit indexation formula to take into account the rising dependency ratio. This factor makes the current value of pensions an inverse function of the ratio of pensioners to contributors in the system. The average pension replacement rate is to fall from 70% to 63.5% of net earnings (Börsch-Supan et al. 2004). Finally, in 2007, the retirement age was raised from 65 to 67, with gradual implementation between 2012 and 2029 (with those born in 1964 and onwards retiring at 67 years).

Impacts of the reform on sustainability and adequacy

75. The Riester reform of 2001 aimed to encourage private pensions, with the goal to shift part of retirement earnings from the public system to private funds. Funded pensions can take the form of occupational pensions or individual pension savings (the latter being named Riester plans). More than 17 million Germans currently participate in occupational plans, which exist in the form of defined-benefit (DB) and hybrid plans. Riester Plans allow participants to benefit from either public subsidies or tax deductions, based upon contribution rates (a minimum of 4% of earnings) and family composition. In 2010, it was estimated that 26.7% of the working age population participated in a Riester plan. According to European Union projections, the increase of the public pension spending should be limited, going from 10.8% of GDP in 2010 to 12.0% of GDP in 2030.

The Swedish pension reform: From a defined-benefit to a defined-contribution scheme

76. While Germany is credited with introducing the first public pension system in the world, Sweden was first to introduce a universal public pension scheme in 1913. The compulsory system had two components: a fully funded component based on individual earnings-related contributions and a

supplementary, means-tested component financed by general taxes. The pension benefit of the first component was a share of the sum of the individual's contributions, and was payable at age 67.

77. Given the low replacement rate and the persistence of old-age poverty the pension level was increased in 1935. The first important reform took place in 1948 and an unfunded PAYG system was implemented with a universal flat rate benefit, covering almost 25% of male workers in the agricultural sector (Hagen, 2013), financed by a contribution of 1% of total taxable income. The system moved from defined contributions to defined benefits, as benefits were awarded based on age and citizenship, with no relation to past earnings or contributions.

78. The basic retirement pension represented a great improvement in terms of generosity, although it still implied a significant drop in income for most retiring workers. In 1960, another important reform was introduced, the national supplementary pension scheme (ATP), adding an earnings-related component to the pension system. ATP was a mandatory PAYG system covering all employees, while the self-employed could choose to stay outside the system. Individuals with at least three years of contributions were eligible for an ATP pension. A full supplementary pension required 30 years of contributions and was 60% of average pensionable income (average of the employee's fifteen highest years of earnings). Higher contributions were levied to build a buffer fund for the National Swedish Pension Fund (AP).

79. The basic retirement pension, together with the supplementary pension (ATP), provided a gross replacement rate of roughly 65% for an average worker. Thus the Swedish pension system was quite generous compared with an OECD replacement rate average of roughly 57% (OECD, 2005).

80. With the increase in the number of old-age pensioners and of life expectancy, combined with lower growth, it became obvious that the pension system was unsustainable. Different simulations demonstrated that without reform, either the reserve fund would have been exhausted by 2015 or the cost of funding pensions would have had to rise to around 36% of the total payroll by 2025.

81. In 1999, a new pension system was implemented. It is composed of an income-related pension, a pre-funded pension (also called the premium pension), and a guaranteed basic pension. It replaces the basic retirement and supplementary pensions completely for persons born after 1953. The major source of pension income in the new system is the notional defined-contribution (NDC) pension scheme. It uses individual non-financial (notional) accounts in a PAYG framework, tying benefits to contributions. A person's pension is based on full life-time earnings and contributions are 16 % of earnings (total contributions amount to 18.5% of earnings, with 2.5% going towards the premium pension plan). Benefits are also linked to demographic changes and are automatically adjusted downwards if the system's financial imbalance grows too large.

82. The prefunded or premium pension scheme is a mandatory, fully-funded pension plan with individual accounts. Individuals are free to select the fund manager, which is under the supervision and management of the Swedish Pension Agency. A means-tested guaranteed pension, payable from the age of 65, is available for individuals who have little or no pension entitlements.

83. Occupational pension plans exist in parallel with the public pensions. The four major occupational pension schemes have been reformed over the last 15 years to be gradually converted from defined benefits to (with a phase in) defined contributions. Around 90% of the total work force is covered by one of the four major occupational pension schemes. They are supplements to the public pension system as they provide pension benefits above the income ceiling in the public pension system. The contributions to occupational plans represent at least 4% of the wage for earnings below the ceiling. Therefore, occupational pensions have become an important source of pension income, representing 31% of pension income for men and 23% for women between 65 and 69 years of age in 2010.

Impact of reforms on sustainability and adequacy

84. Sweden has moved to a sustainable pension system, thanks to the NDC scheme. The reform can be deemed successful with respect to two criteria: the ability to reduce deficits and to moderate the share of pension spending to GDP. The balancing mechanism incorporated in the system assures that liabilities do not exceed assets by automatically reducing current pensions. According to the Annual Report of Swedish Pensions (2013), this mechanism has been at work in 2008, 2009 and 2012. However, in 2010, the government reduced general taxation of retirees to offset the reduction of their pensions. According to European Union projections (2012), public pension spending is expected to remain broadly stable over the next 15 years, increasing only marginally from 9.6% of GDP in 2010 to 9.8% in 2025. One of the strengths of the Swedish pension system is the size of the buffer fund which allows to smooth the effect of aging until 2040 and to cope with short-run fluctuations of contributions. Indeed, for the first time in 2009 the net contribution rate (the difference between contribution revenue and pension disbursements) was negative and will stay negative for many years (Table 1). However, due to the expected increase in the average life span, the pension level at age 65 will decrease from 50% of final earnings for birth cohort 1947 to about 42% for birth cohort 1995 (Swedish Pensions annual report).

Table 1. Accounts of the Swedish public pension system
Six-year review (billion, SEK)

Calculation year	2007	2008	2009	2010	2011	2012
Balancing year	2009	2010	2011	2012	2013	2014
Buffer fund, mean value ¹		821	811	810	865	908
Buffer fund	898	707	827	895	873	958
Contribution assets	6 116	6 477	6 362	6 575	6 828	6 915
Total assets	7 014	7 184	7 189	7 469	7 700	7 873
Pension liability	6 996	7 428	7 512	7 367	7 543	7 952
Surplus/Deficit	18	-243	-323	103	157	-80
Balance ratio	1.00	0.98	0.95	1.00	1.01	0.98

1. Mean value of the fund as of December 31 for the past three years.

Source: Orange Report (2013), *Annual Report of the Swedish Pension System*, Stockholm, Swedish Pensions Agency, available at <http://www.pensionsmyndigheten.se/OrangeReport2012.html>.

Lessons from the German and Swedish reforms

85. The German and Swedish reforms aimed to restore and guarantee the sustainability of their pension systems, limit old age poverty and the vulnerability of the pension system to both short-run fluctuations of revenues and long-run demographic trends. Both combined a reduction of the replacement rate, a partial shift from public to private pensions, an increase in the retirement age and a tighter link between individual pension benefits and contributions. While the German reform consisted of a reduction of the replacement rate from 70% of net earnings to 46% on average (with a floor), the Swedish reform shifted the pension system from defined benefits to defined contributions. However, in both cases the minimum pension guarantees that no pensioner falls below a minimum living standard.

86. These important changes constitute a break in retirement promises, but the reforms ensure sustainability in the long run. Several factors seem to have played an important role in making the reforms possible without damaging the trust of the public:

- Building political consensus played an important role: the reforms were prepared either by bipartisan groups or independent commissions and included a long period of discussion, which favoured acceptance of the reforms by public opinion and political decision makers.

- Country-specific shocks helped the reform process: the reunification in Germany and the financial crisis in Sweden facilitated the reform process.
- The reforms were phased in: for example, in Germany, the new system will be fully phased in by 2050.
- The magnitude of the change: in both countries the reforms are less radical than it appears. The Swedish passage from a defined-benefit to a notional defined-benefit system kept the PAYG principle which is reassuring for many people. Even with the individual accounts and the tightening of the link between contributions and benefits, the system is a partially defined-contribution system. Germany's system is a mixed system with targeted replacement rates and a demographic sustainability factor in the PAYG system, complemented by individual defined-contribution plans. Both systems eliminated the possibility of accumulating deficits with the balancing factor adjustments of pension levels and/or contributions to prevent deficits or unsustainable paths.
- Importance of individual responsibility: the two reforms increased individual responsibility vis-à-vis retirement. The Swedish reform makes individuals responsible for choosing the pension fund, which will manage the part of its contribution devoted to the funded pension.
- Mix of public-private systems: in both countries the role of public and private pension systems in the total replacement rate was modified, with a larger private pillar. This mix helps lessen the vulnerability of retirement income to shocks by combining a public PAYG system more exposed to macroeconomic shocks with privately funded plans more exposed to idiosyncratic shocks (returns, firm collapse).

Health care reform in times of crisis: The example of Finland in the 1990s

87. Over the 1990s, Finland implemented a number of health care reforms that were partly triggered by the crisis at the beginning of the decade. Health care efficiency and cost containment became one of the most pressing policy issues only in the 1990s, later than in other OECD countries (Häkkinen, 2009). Over the 1980s, Finnish public health spending rose – as percentage of GDP – by 1.3 percentage point, the second largest increase in the OECD. The crisis of the early 1990s made health care reforms all the more urgent. In 1991, real GDP declined by 6% and recovered to its pre-crisis peak level only in 1995. The general government balance worsened markedly from a surplus of nearly 4% of GDP over the 1980s on average to a deficit of more than 8% in 1993. The general government budget turned into surplus again in 1998.

The reform: Decentralising the provision of health care

88. The broad thrust of the reforms involved increasing the freedom of municipalities as providers and purchasers of health services, while reducing central government control (Häkkinen, 2005). Changes to the national health care financing scheme - the National Health Insurance (NHI) - were minor, aiming mainly at containing expenditure through cost sharing schemes and price controls. The reforms included the following major changes (Tyson and Karpowicz, 2012).

89. *Public management and coordination:* Municipalities acquired greater responsibilities as purchasers of health care services. They were given the freedom to purchase services from public, not-for-profit, for-profit and informal care providers, and to contract out existing public services. Hospital revenues were made dependent on the type and number of services that municipalities purchased from them. Overall, this moved the health care system away from an integrated towards a public contract model

(i.e. involving a purchaser-provider split). To improve coordination and reduce the duplication of services, the ownership and management of all municipal hospitals was assigned to 21 health care districts. As purchasers of health care services, municipalities started to negotiate annually the provision of services with their hospital district. However, in the absence of nationally set regulations and guidelines, the payment methods used to reimburse hospitals varied across hospitals and districts, and still do (Häkkinen, 2010).

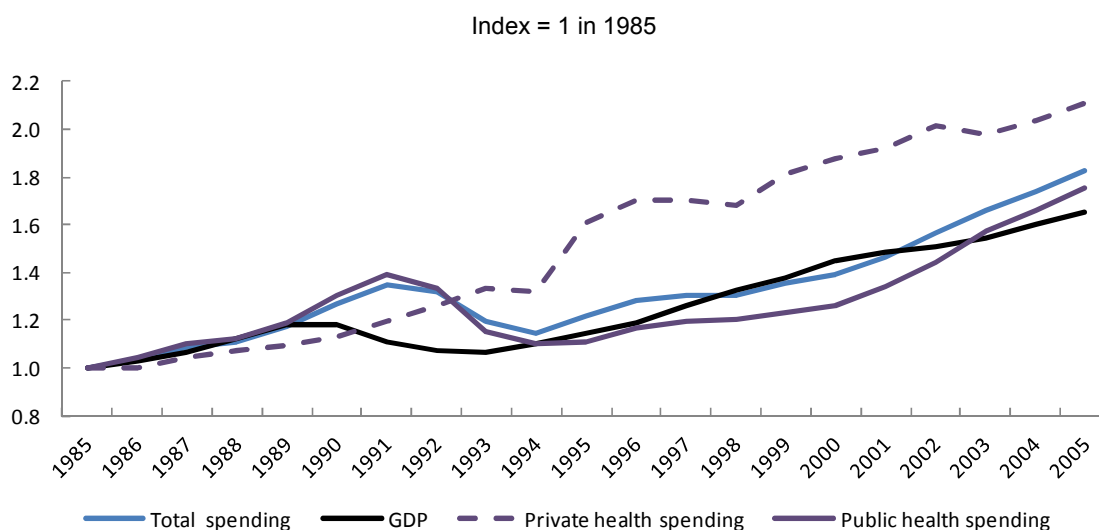
90. *Budget caps:* No formal budget caps and expenditure ceilings were adopted. However, central government transfers to municipalities or federations of municipalities were reformed. They started to be calculated prospectively, according to a needs-based capitation formula, instead of being based on actual costs incurred, thus becoming block grants. The main reason for reforming state transfers was the large increase in government borrowing. In the wake of the reduction in transfers, the share of municipal taxes used to finance health care spending rose from about 36% in 1991 to 42% in 2000 (Häkkinen, 2005).

91. *Pharmaceutical cost sharing.* Cost sharing was raised through the abolition of a tax deduction for medical expenses in 1992 and the increase of user charges for municipal health services in 1993. Also, new regulations allowed pharmacists to substitute generic for prescribed drugs.

92. *Supply constraints and price controls.* In the early 1990s the number of hospital beds and the health workforce were cut. From the late 1990s, diagnosis related-group (DRG) pricing was applied in some hospital districts (Häkkinen, 2010).

Impact of the reforms on sustainability and adequacy

93. Overall, the reforms succeeded in containing health spending. Over the 1990s, total and public health spending grew less than GDP (Figure 36). The ratio of total and public health expenditure to GDP declined to 7.2% and 5.1% in 2000 from 9% and 7.2% in 1991, respectively. However, over the same period private spending rose from 1.7% of GDP to 2% as a result of higher out-of-pocket spending. Private insurance spending – as a share of GDP – did not change much. Over the period 1991-1994, health care volumes fell drastically. Real total and public *per capita* spending declined by 15 and 20%, whereas private spending rose by 10% and the share of public in total health spending fell from more than 80% in 1991 to 71% in 2000. Since the turn of the century, total health spending – driven largely by the public sector – has grown faster than GDP. In 2010, public spending accounted for 75% of total spending (6.6% of GDP).

Figure 36. Per capita health spending in real terms in Finland

Source: Economic Outlook and National Health Accounts.

94. There is evidence that reforms increased the health-care system's efficiency (Linna, 2000; Järviö and Luoma, 2000). One explanation put forward is that cost control by municipalities might be more effective than that by the central government. However, efficiency gains took place during the first half of the 1990s when municipalities faced severe budget constraints. This suggests that efficiency improvements may be more closely associated with hard budget constraints rather than with decentralisation *per se*.

95. As a result of the cuts in the health workforce in the early 1990s, unemployment among physicians grew. This contributed to a marked drop in the number of medical students. Subsequently this led to shortages of doctors, which are slowly tapering off. The overall shortage of doctors in municipal health centres was estimated at 6% in 2010, but as high as 17% in some regions (OECD, 2012c).

96. The two-tier financing system (state transfers coupled with municipal financing) has led to cost shifting from municipal to non-municipal institutions. For example, municipalities (public hospitals and nursing homes) cover drug expenditure of in-patient care, whereas the NHI and patients – through cost sharing – contribute to the drug expenditure of out-patient care. Municipalities and hospitals then have an incentive to use out-patient drug therapy more frequently than warranted. The expenditure on out-patient pharmaceuticals has indeed increased more rapidly up to 2005 than other types of health expenditure (Häkkinen, 2005).

97. Overall, cost containment was achieved without jeopardising average health outcomes although there is evidence that health inequalities have increased. Longevity kept rising during and after the reform period, but health disparities became more pronounced. For instance, in 2000 the difference in life expectancy at age 35 between people with upper white collar jobs and those with manual jobs was 6 and 3.2 years – for males and females – against 4.7 and 2.2 in the early 1980s.

98. In an international context, Finland's differences in morbidity and mortality rates between socio-economic groups and regions are large (Koskinen et al., 2006). In the mid and end-2000s, access to GP and specialist consultations favoured the highest income groups more than in other OECD countries (Devaux and de Looper, 2009). The health care reforms of the 1990s set back the achievement of one of Finland's key health policy objectives: lowering health disparities between population groups and regions. Many

factors help determine health inequalities. One is different life styles across socio-economic groups, but others are more directly related to health-care policies.¹⁴ For instance, Finland's differences in *per capita* health expenditure among municipalities (Häkkinen, 2009) and large variation in administrative capacity at the local level (Koivusalo, 1999; OECD, 2011b) are likely to explain partly the large regional gaps in health outcomes.

Lessons from Finland's health care reform

99. The decentralisation of health care services, transfer reform and the resulting harder budget constraint for municipalities contributed to a sharp decline in public health spending and improved efficiency. However, part of public spending was shifted back to individuals through higher out-of-pocket expenses. These are generally regressive, reduce the degree of risk pooling and counter efforts to lower socio-economic health inequalities.

100. Furthermore, decentralisation and the ensuing large regional variation in per capita health spending, along with local administrative deficiencies, lack of economies of scales – especially in small municipalities –, absence of nationally set guidelines at the time of reforms and the shortage of doctors – which were pronounced in some regions – may have exacerbated regional inequalities. Abrupt cuts in the health care workforce can have long-standing effects on educational choices, resulting in a protracted shortage of medical personnel that may take years to redress.

Reforms of the UK's and Belgian unemployment insurance system during the Great Depression

101. In its National Insurance Act passed by Parliament in 1911, Great Britain was the first country in the world to establish compulsory unemployment insurance. By the end of 1928 several countries had followed in Britain's footsteps, while others had done like Belgium and implemented subsidised voluntary unemployment insurance schemes. Sweden, Canada and the United States implemented unemployment insurance in the 1930s. The mass unemployment during the Great Depression put existing unemployment insurance schemes under tremendous strain. In countries that already had systems in place, mass unemployment led to financial hardship and the collapse of private, union based and local systems. Central governments had to step in and assume liabilities, and this led to a strong drive towards centralisation in most countries.

The unemployment insurance reform in the United Kingdom in the 1930s

102. The British Liberal Party implemented a suite of sweeping social and labour market reforms inspired by the German welfare state after its victory in the 1906 election. Among the reforms was a national mandatory unemployment insurance scheme for strongly cyclical and seasonal industries.

103. The British unemployment insurance scheme of 1911 was planned to be actuarial, with an underlying unemployment rate of 8.6% of the covered workers. By 1913, 2.3 million workers were insured. In 1920, the coverage was extended to most workers so that 11 million extra workers were covered by the act. The actuarial unemployment rate assumption was lowered to 5.3% to take into account the lower unemployment of the new groups covered. Benefits were also increased, and no further provisions were made for an accumulation of reserves during good times. As the United Kingdom entered into a depression shortly after the 1920 amendments, the unemployment rate hovered between 10% and 20% from 1921 to 1934. By 1921, the surplus accumulated from 1911 to 1920 had been exhausted.

14. Variation in alcohol and tobacco consumption explained about half the mortality differences between socio-economic groups in Finland in the 1990s have (Palosuo et al., 2009).

Reform: risks were shifted to workers and unemployment assistance was institutionalised

104. Local council (i.e. municipal) relief was the only available alternative to unemployment insurance. With a duration limit of 15 weeks, many of the unemployed exhausted their insurance benefits and were unable to re-qualify, but local governments were unable to finance alternative programmes. The unemployment insurance fund continued to accumulate deficits until 1934, when the borrowing power of the fund was repealed, insurance contributions were increased, benefits decreased, the duration was shortened and re-qualifying requirements were introduced. Unemployment risks were thus shifted from the system to individuals, making them more vulnerable to the financial risks of unemployment. A permanent national unemployment assistance system was also established to provide support for those who did not qualify for unemployment insurance, but were still in need.

The Belgian unemployment insurance reform

105. Voluntary systems of unemployment insurance were pioneered at the local level in Liege (1897) and Ghent (1901) and were the models for unemployment insurance before the Great Depression. Trade unions organised voluntary unemployment insurance societies for their members, and these schemes received a municipal subsidy through communal funds. As the system evolved, also provincial and central governments provided subsidies.

106. Before the first World War about 10% of the working population was insured, mainly by trade-union schemes. Industrial conditions were favourable and unemployment rarely exceeded 4%. The low rates of benefit paid for short periods were well within the financial limits of the systems.

107. With a steep rise in unemployment following the outbreak of the war, both trade unions and municipalities went bankrupt and the national government financed a national relief committee that provided for unemployed wage earners regardless of their affiliation with an unemployment insurance scheme.

108. In 1920, insurance societies were revived by royal decree. A national emergency fund was also established to provide subsidies and act as a backstop for societies that had exhausted their resources. The emergency fund was financed by contributions from members of solvent insurance societies and co-payments by municipalities. The rest of the bill was picked up by a grant from the central government. By 1929, four fifths of the population lived in a municipality affiliated with a communal fund for subsidising private societies.

Reform: From decentralised to national unemployment insurance

109. By December 1930, unemployment had reached 26% of the insured population and a law was passed requiring all municipalities to affiliate with a communal fund, thereby creating a *de facto* national unemployment insurance scheme. Both the municipalities and provincial governments had strained finances, and the municipal co-payments were funded by the national government through advances and loans. By 1934, nearly all of the insurance societies were bankrupt and the national emergency fund assumed their obligations.

110. The initial framework and subsequent events led to a situation where unemployment insurance was financed centrally, but run almost exclusively under local political control. Local insurance societies and politicians took advantage and squandered public resources, for instance, by controlling the unemployment status of those receiving benefits poorly.

111. In 1933, two decrees were passed to reorganise the system. Uniform national rules were issued defining membership, contributions and requirements for receiving benefits. Rigorous control of the

unemployed was implemented, and the powers of the central government were greatly increased. Local administrations, on the other hand, lost their autonomy in the distribution of benefits, while they became at the same time obliged to cover more of the expenditure. The existing framework with trade unions and municipal subsidies was kept, while reporting, supervisory, inspecting and control procedures became as centralised as in countries where the system was national and public at the outset.

Lessons from the UK and Belgian experience

112. Unemployment insurance in both Belgium and the United Kingdom were set up and worked well in normal times when fluctuations in unemployment were small. Rising unemployment led to the underfunding of the unemployment insurance systems. Implicit and explicit public guarantees to cater for the unemployed were therefore drawn on. In the United Kingdom, the actuarial basis of the scheme was flawed, a feature that was exaggerated by mixing together social assistance and unemployment insurance. The experiences from the Great Depression led to reforms to ensure more robust financing, the public guarantees became explicit, and unemployment insurance became separated from social assistance. In the case of Belgium the disconnect between the central government funding of the system and municipalities and unions ruling the system created principal-agent problems that amplified the impact of the crisis on unemployment insurance spending. In Belgium, the result of the crisis was a large-scale national harmonisation of the unemployment insurance scheme, where national control was increased to a level where it matched national guarantees for the funding of the unemployment insurance schemes.

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APPENDIX

Table A1. Regression results of social protection spending

Panel A: Expenditure elasticities with respect to changes in GDP

	Total social expenditure	Pensions	Health	Unemployment
GDP, positive change	0.404 (0.083)***	0.308 (0.163)	0.747 (0.108)***	-1.813 (0.463)***
GDP, negative change	-0.084 (0.326)	-0.537 (0.417)	0.455 (0.259)	-5.563 (1.503)***
Population aged below 15	0.327 (0.116)**	0.150 (0.234)	0.256 (0.146)	-0.044 (0.691)
Population aged above 64	0.863 (0.218)***	1.096 (0.479)*	0.538 (0.226)*	-0.112 (0.954)
Trade openness	-0.062 (0.042)	-0.047 (0.058)	-0.146 (0.039)***	0.023 (0.221)
Female participation	-0.288 (0.093)**	-0.484 (0.175)**	0.151 (0.125)	-0.849 (0.406)*
Constant	0.040 (0.005)***	0.042 (0.010)***	0.052 (0.005)***	0.395 (0.025)***
R^2	0.30	0.16	0.24	0.33
N	843	812	816	778

Panel B: Expenditure elasticities with respect to changes in unemployment

	Total social expenditure	Pensions	Health	Unemployment
Unemployment, positive change	0.057 (0.025)*	0.019 (0.043)	-0.018 (0.023)	0.957 (0.102)***
Unemployment, negative change	0.012 (0.029)	0.074 (0.068)	-0.073 (0.031)*	0.593 (0.119)***
GDP per capita	0.070 (0.049)	0.093 (0.066)	0.035 (0.062)	0.118 (0.197)
Population aged below 15	0.295 (0.126)*	0.195 (0.239)	0.211 (0.163)	-0.369 (0.661)
Population aged above 64	0.851 (0.221)***	1.099 (0.478)*	0.551 (0.243)*	0.011 (0.917)
Trade openness	-0.090 (0.049)	-0.054 (0.058)	-0.166 (0.044)***	-0.065 (0.178)
Female participation	-0.194 (0.090)*	-0.433 (0.176)*	0.224 (0.132)	-0.246 (0.371)
Constant	0.035 (0.007)***	0.070 (0.014)***	0.072 (0.008)***	-0.217 (0.030)***
R^2	0.29	0.15	0.19	0.48
N	843	812	816	778

Note: All variables are in logs; the dependent variables, GDP per capita, population aged below 15 and above 64, trade openness and female participation are in first difference; standard errors are robust to heteroskedasticity; the specification includes a complete set of time fixed effects; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

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