



# Rising from the ashes

The role of older workers  
in driving Eurozone recovery

Ben Franklin, Helen Creighton and Brian Beach

| November 2014 |



# Contents

<b>Executive summary</b> .....	4
<b>Introduction: Why should we be interested in older workers?</b> .....	7
<b>1: Economic context: The perilous state of the Eurozone</b> .....	9
<b>2: How might an ageing population affect economic activity?</b> .....	15
<b>3: The importance of older workers to the Eurozone</b> .....	19
<b>4: Why do people in some countries work longer than in others?</b> .....	27
<b>5: Conclusion</b> .....	32
<b>Endnotes</b> .....	33

# Our call

Harnessing the power of older workers must be a critical component of any long-term strategy to rejuvenate economic growth across the Eurozone. Our analysis shows that raising labour force participation rates amongst older age groups could make a significant difference to rates of economic growth over the next 40 years. Supporting longer working lives is therefore not only a necessary measure to help stem the tide of long-run economic stagnation that an ageing population could imply, but must also form part of a package of measures to fully utilise the productive potential of the Eurozone's workforce.

## Executive summary

### ...the Eurozone: on a knife-edge

The Eurozone's economic future is uncertain. A number of Eurozone countries are struggling to generate economic growth, with those situated in the south of Europe (often termed the "periphery") facing a series of headwinds that continue to prevent recovery. For a number of these countries the "credit crunch" that began in the latter half of 2008 remains in full swing with lending to households and businesses shrinking year on year. At the same time, a number of countries are being forced in to painful internal devaluations, where in order to restore their competitiveness on international markets they have to significantly cut wages. In Greece, for instance, since the beginning of 2009, unit labour costs have fallen by close to 20%.

Investment and consumption are severely depressed, yet governments are constrained in their spending. Some countries cannot rely on higher government spending to boost output because they are committed to reducing their public expenditure in wake of the crisis. In this context, a loosening of monetary policy could be used as a lever to stimulate growth. However, because of significant differences across Eurozone countries in terms of inflation and unemployment, the one-size fits all interest rate set by the European Central Bank appears too "tight" for many periphery countries and too "loose" for a number of core countries. The combination of constraints makes it a testing time for many Eurozone economies.

### ...harnessing older workers is part of a long-term solution

In the short term, prospects for a sudden recovery to "normal" rates of economic growth look limited – especially as problems in the Eurozone periphery now appear to be dragging down rates of growth across core countries too. But even in the medium to long-term, the Eurozone faces another big challenge that threatens further economic stagnation – population ageing. Currently 1 in 6 Europeans are over 65, yet by 2060 this figure will be 1 in 3. Moreover, currently only around a half of workers aged 55-64 in the Eurozone are currently in employment. **Unless a higher proportion of older people remain in the workforce, we estimate that total employment could fall by up to 17% over the next 35 years.** As a result, without a substantial rise in workforce productivity to offset the anticipated fall in employment, we estimate that GDP per capita growth rates across the Eurozone may only reach 1% per year over the projected period.

We argue that the solutions to both the short and longer term challenges facing the Eurozone are likely to stem from the same source – delivering sustainable economic growth by harnessing the power of the region's workforce. And as part of this solution, measures are needed to support increased participation of workers aged over 50, who we estimate **contributed around €2.5trn to Eurozone GDP in 2013.** Contrary to popular views, the jury is still out about whether older workers are less productive than younger workers – with several academic studies finding no evidence that productivity declines with age, and some even suggesting that older workers help to support higher

productivity due to their experience and inventiveness. Ultimately, the ability of workers of all ages to generate output will depend on how well their individual skills and experiences evolve over time, and consequently, how well these skills and experiences are utilised by employers.

### ...older workers could significantly drive up output over the long term

To assess the extent to which higher labour force participation amongst older age groups could drive-up economic output over the long term we construct a number of quantitative scenarios. Based on reasonable assumptions regarding; 1) population change, 2) long-run workforce productivity and 3) age-related employment rates, our projections show that **by 2050, higher participation rates amongst the over 50s could deliver 12.6% more economic output per person (in real terms) than if participation rates by age remain constant.** And over the entire period up to 2050, we project the average annual rate of growth in GDP per person could reach 1.3% if a greater proportion of the over 50s stay in employment, by comparison to just 1% if they do not.

Raising workforce participation at older ages in line with our scenarios, could deliver a greater economic boost for the region’s periphery countries than for its core. Relative to our base case, we project GDP per person to be 18.3% higher in the periphery by 2050 if workforce participation rates rise at older ages, by comparison to 8.7% higher in the core. And over the entire period, the average growth rate in GDP per capita rises by more across the periphery than it does across the core in response to gains made in employing older workers. The periphery stands to gain more by utilising the productive potential of the over 50s because it has more catching up to do in terms of raising labour force participation amongst older age groups, and because population ageing is expected to occur more quickly across this part of the Eurozone.

Fig 1: Average annual growth rate in GDP per person across various scenarios 2014-2050 (%)

	No change in labour force participation	Increase in 65+ participation	Increase in 50+ participation
Eurozone	1.0	1.2	1.3
Core	1.1	1.2	1.3
Periphery	0.8	1.1	1.2

### ...but older workers are no “silver bullet” to cure the Eurozone’s ills

Even in our most optimistic scenarios for future labour force participation, our projections imply that future rates of growth in GDP per person are likely to be significantly lower than those experienced in the two decades prior to the 2008 crisis. To illustrate this point, we model possible futures for France and Spain, and estimate that annual growth rates in workforce productivity would have to rise significantly in order to secure GDP growth rates that both countries were accustomed to before the crisis. This is not implausible – technological progress has a habit of surprising us and delivering a more efficient and productive workforce. However, it may well be the case that many Eurozone countries are going to have to get used to lower rates of economic growth and stagnating levels of prosperity in the decades ahead. Any long-term strategy to rejuvenate economic growth over the long-term must therefore also look at how it can harness the power of technological change to drive-up workforce productivity.

### ...”carrots” not just “sticks” needed to support longer working lives

In our analysis of OECD countries, we find a strong association between poverty rates and working longer – with higher poverty rates linked to higher workforce participation at older ages. On a related theme we also find that older worker participation is also higher in countries where pensions are lower relative to pre-retirement earnings. But avoidance of financial ruin and poverty are not the only factors keeping people in work. Our findings suggest that health and education are also important – those countries whose older populations are in better health or who are better educated are also more likely to work longer.

Policy responses must not therefore be limited to reducing social security benefits or raising State Pension ages in order to stimulate longer working lives. They must also invest in the future health and skills base of their older populations. Otherwise we will have an large contingent of people aged 50+ who want to work to avoid poverty but are unable to because they are too ill, or because of mismatches between their skills and the jobs that are available.

**...unless care is taken, population change could mean long-run stagnation**

In summary, while the Eurozone's current economic predicament is clearly at the forefront of policymakers' minds, they should not lose sight of the medium to long-term strategic challenges facing the Eurozone. As part of any programme of structural reform, there should be a focus on how to maximise the productive potential of the Eurozone's workforce over the long-term. This means investment in skills and training at all ages, the development and utilisation of new technologies and, critically in the context of this report, the encouragement of greater workforce participation amongst the over 50s. The findings of this paper are clear. If these measures are not taken, many Eurozone countries are likely to stutter on for many more years to come.

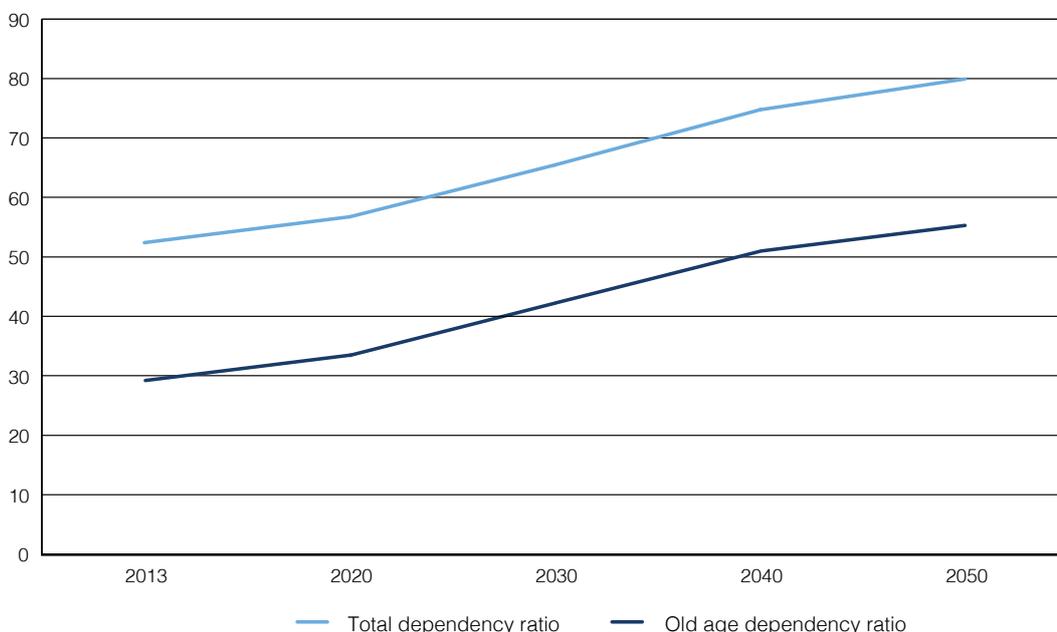
# Introduction: Why should we be interested in older workers?

The Eurozone is in a state of limbo. Having been hit hard by the 2008 global financial crisis it was then embroiled in a series of sovereign debt crises, the full ramifications of which are still being played out. Policymakers in Brussels, national governments across the region and officials at the European Central Bank, face the huge challenge of setting the currency union back on track. However, even if they manage to succeed in this regard, the additional challenge of population ageing could pose a further potential barrier to future prosperity. As this report shows, harnessing the economic potential of older workers will be critical in addressing the risk of long-run economic stagnation.

The Eurozone's population is ageing. When the Eurozone was created, the average age of its population was 38.2 years. By 2013 this had risen to 42.7. By 2030 it is projected that many Eurozone economies will have an average age of over 45<sup>1</sup>. Demographic change not only means an older workforce, it could also mean a smaller workforce, as middle aged and older people currently have lower labour force participation rates than younger workers.

The graph below shows the projected path of the Eurozone's dependency ratio. The total dependency ratio aims to measure how many people there are working to support those who are too old, or too young, to work. It is typically calculated by dividing the number of people who are under 16 or over 65, by the number of people who are between 16 and 64, or of 'working age'. The Eurozone's dependency ratio was just over 52 in 2013. This meant there were roughly 2 working age adults per dependent. By 2050, the Eurozone's dependency ratio is projected to reach 80 – 1.25 working adults per dependent. These basic calculations are based on the assumption that people retire at 65, however in reality people tend to retire much earlier than this in many countries. In 2010, in the Eurozone, the average age of exit from the labour market was 61.4 years. Widespread early exit means that the "real" dependency ratio may actually be higher than that implied above.

Fig 2: Eurozone Dependency Ratio



Source: Eurostat and author's calculations

While there have been a number of attempts to forecast or project Eurozone economic output over the long-run which take into account population change, as far as we are aware, none of these have attempted to isolate the role that older workers could play in its rejuvenation. Against the context of the current economic malaise, this is a really important omission from the debate about the Eurozone's future. For some Eurozone countries, the challenge of ageing is likely to be more immediate than for others, but, as our analysis shows, all stand to gain by supporting longer and fuller working lives. We

do not, therefore, claim that older workers are the “silver bullet” to solve the Eurozone crisis, but merely that they must be an important element in any long-term solution. It is to this end, that this report is dedicated.

The report is structured in five parts:

- **Chapter 1** briefly outlines the current economic situation in the Eurozone and the existing contribution of older workers to economic activity.
- **Chapter 2** reviews the evidence on the effects of ageing on economic output.
- **Chapter 3** highlights the results of our original data analysis and modelling to show how changes to the participation rates amongst older age groups could affect Eurozone economic output over the long run.
- **Chapter 4** utilises cross-country evidence about the key barriers to working longer across OECD and EU countries.
- **Chapter 5** concludes the report and outlines some implications for policymakers.

# 1: Economic context: the perilous state of the Eurozone

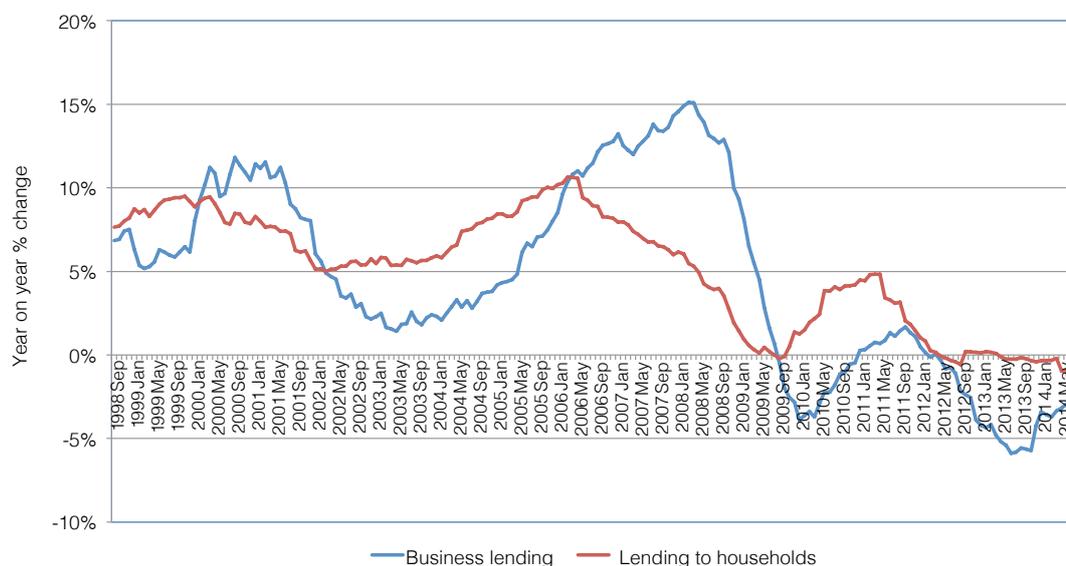
## Key Points

- Since the global financial crisis began in 2008, the Eurozone has experienced significant economic turmoil.
- Economic output, or GDP, fell by 5.8% peak to trough illustrating the severity of the recession. But since then, the region has failed to recover and output still languishes 18% below the level implied by its pre-crisis trend rate of growth.
- There are a lack of adequate policy levers to drive recovery. Differences among European economies means that the 'one size fits all' monetary policy dictated by the European Central Bank cannot adequately smooth consumption and investment across the Eurozone.
- Furthermore, Eurozone economies are all tied to the same Euro exchange rate, removing a natural depreciation of the exchange rate as an alternative way of stimulating depressed economies. This has forced a number of countries into painful internal devaluations.
- Despite these worrying trends, we estimate that the over 50s contributed around €2.5trn to Eurozone GDP in 2013<sup>1</sup>.

## Anatomy of a crisis

The Eurozone has undergone significant economic turmoil since 2008. While the causes of the initial crisis are still debated, for many countries it was triggered by developments in the banking sector. As a result, since 2008, the Eurozone has suffered from a severe drop in the supply of, and demand for, credit across the region and this has been associated with a sharp fall in consumption and investment.

Fig 3: Change in lending by monetary financial institutions to business and household across the Eurozone

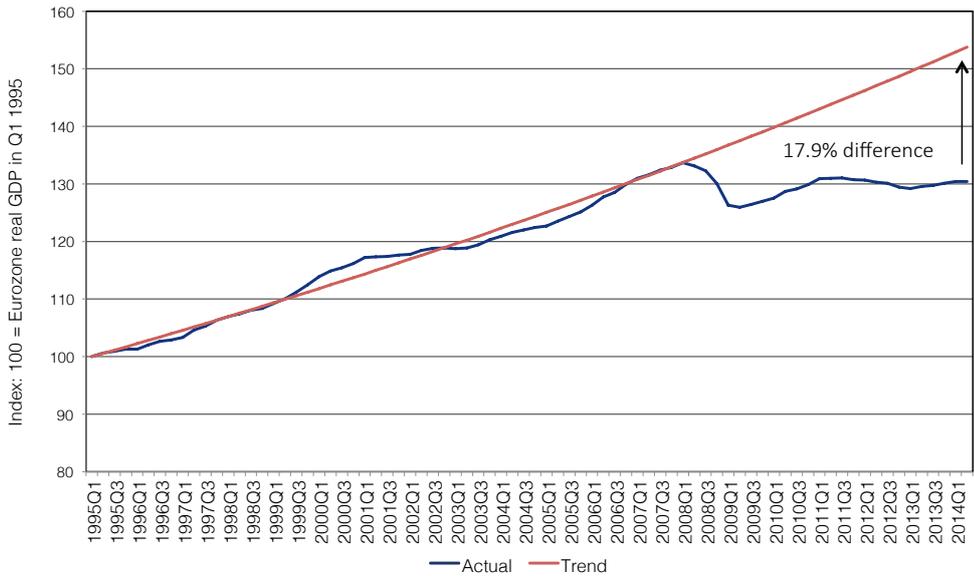


Source: European Central Bank and author's calculations

Economic output, or GDP, fell by 5.8% peak-to-trough illustrating the severity of the subsequent recession. But since then, the region has failed to recover and output still languishes 18% below the level implied by its pre-crisis trend rate of growth.

<sup>1</sup> We have used Eurostat for numbers employed aged 50+ and for total economic output (real). We have then estimated activity per person employed and multiplied this figure by the number of people in work aged 50+. We therefore assume that workforce productivity remains the same with age which, as Chapter 3 will show, is a reasonable assumption.

Fig 4: Eurozone economic output way below trend



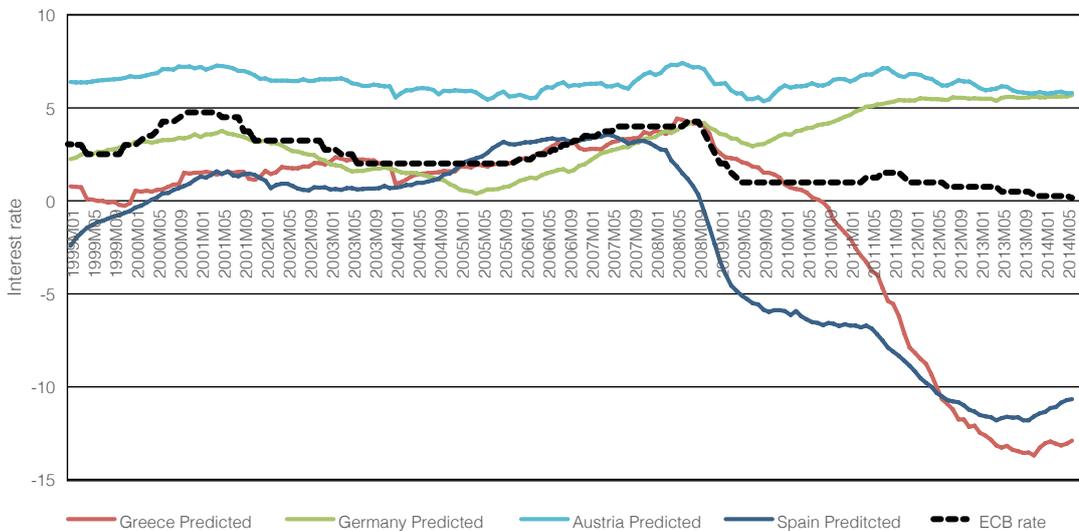
Source: Eurostat and author's calculations

## Lack of adequate levers to drive growth in wake of the crisis

### Monetary policy

In order to stimulate economic activity at a time when a number of Eurozone member states are making cuts to public expenditure, monetary policy can be adjusted to help drive-up consumption and investment. The problem is, however, that different Eurozone countries require different monetary policy responses. This is not possible under current arrangements where there is one base interest rate set by the European Central Bank (ECB) that applies to all countries. For those countries experiencing severe downturns, monetary policy has arguably not gone far enough, while for those that have been less adversely affected, monetary policy has been too loose and gone too far. To demonstrate this problem we have estimated something called a “Taylor Rule” which calculates what the base interest rate should be for each country versus the rate currently applied to all Eurozone countries by the ECB<sup>11</sup>. It implies that the base interest rate should be negative in Greece and Spain because of high unemployment and the threat of deflation, while it should be positive in Germany and Austria, both of which have lower unemployment rates and where inflation is more of a risk.

Fig 5: ECB interest rates vs rates prescribed by the Taylor Rule



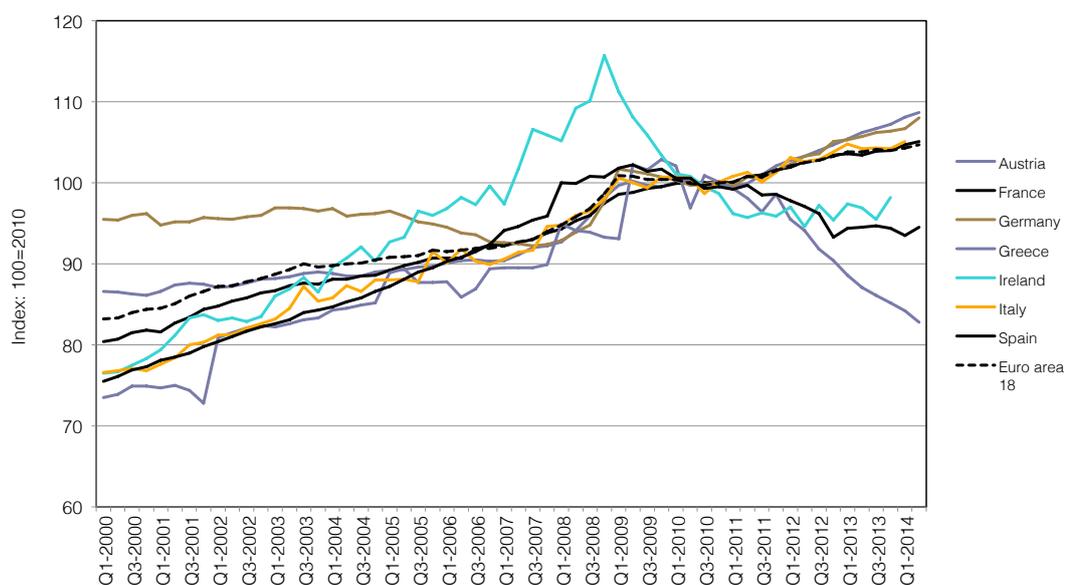
Source: Eurostat, ECB and author's calculations

<sup>11</sup> The Taylor Rule which we apply models the statistical relationship between the ECB base rate, inflation and unemployment across the Eurozone since its fruition. We then apply the subsequent coefficients relating to inflation and unemployment to each individual country to estimate the appropriate base rates for all Eurozone countries.

## Fixed exchange rates

At times of recession, countries with floating exchange rates are able to benefit from falls in their exchange rate relative to competitors making their exports cheaper. This can help to boost trade and GDP. However, all countries within the Eurozone are tied to the Euro's exchange rate meaning that some countries have artificially high exchange rates while others are artificially low. Those Eurozone countries that have experienced severe recessions, have not therefore been able to benefit from the increased competitiveness that a floating exchange rate might have delivered. Instead, they have had to set about going through a painful process of internal devaluation. In practise this means reducing workers' pay for the goods and services that are produced. This is shown in the chart below with unit labour costs falling across key Eurozone periphery countries – with Greece the most dramatic case in point. Internal devaluation can be a drawn out process as it can take a long time to regain competitiveness by reducing wages and prices.

Fig 6: Unit Labour Costs across selected Eurozone countries

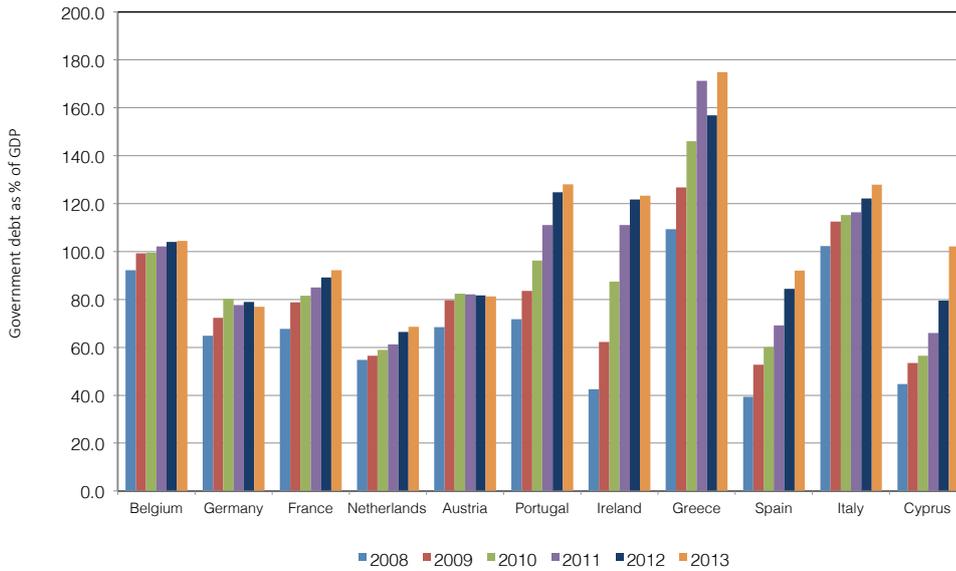


Source: OECD

## Will “normal” rates of economic growth return any time soon?

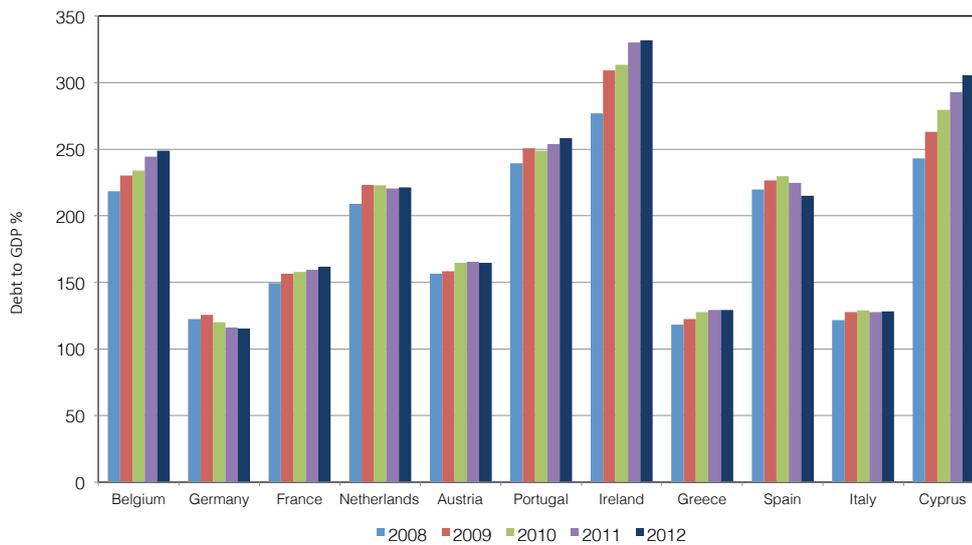
Given the lack of adequate levers to drive economic growth, rates of growth are unlikely to return to “normal” until consumers and businesses feel comfortable about spending more, or Government is able to come in to offset any lack of demand through additional spending. Crucially, both depend on how far the deleveraging process has progressed – in other words, the extent to which countries have managed to reduce their levels of debt to income. Yet evidence suggests that despite a decline in the supply of credit as well as cuts to government expenditure, many Eurozone countries are still saddled with increasing levels of public and private debt (see the charts over the page).

**Fig 7: Despite austerity measures taken by many countries, Government debt burdens are continuing to rise**



Source: Eurostat and author's calculations

**Fig 8: Private debt\* as a proportion of GDP across selected Eurozone countries (2008-2012)**



Source: Eurostat and author's calculations

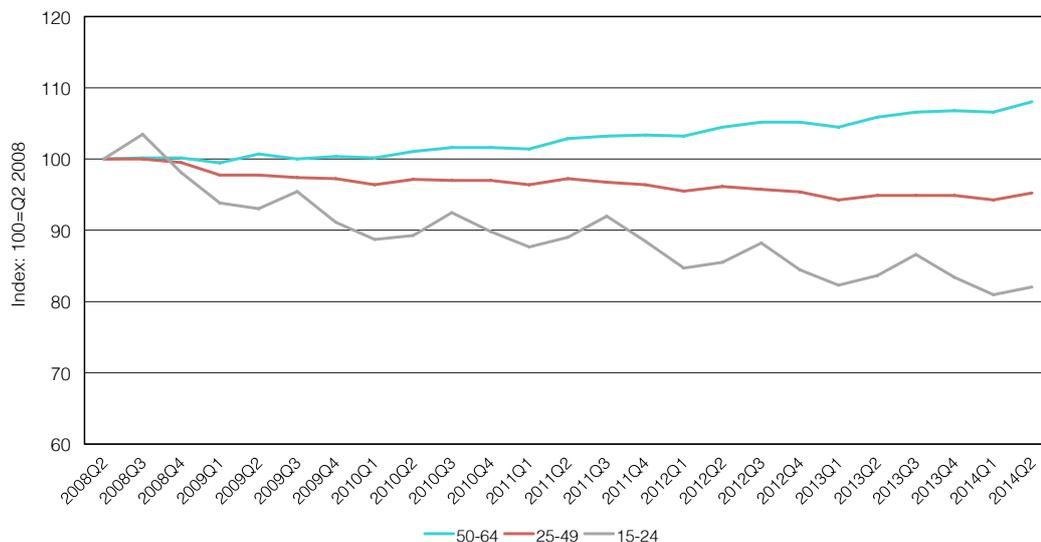
\*Private debt is the stock of liabilities held by households, non-financial corporations and non-profit institutions serving households

## How have older workers been affected by the recession?

In the face of the socioeconomic challenges affecting the Eurozone, the employment rates of older age groups have actually risen, while the employment rates of younger age groups has fallen. This is not to say that older people have necessarily done better than younger people. Indeed, increasing employment rates amongst older workers is likely to be, in part, a response to the economic challenges and subsequent policy responses across Eurozone countries. For instance, falling real wages and reduced government expenditure on pensioner benefits will incentivise longer working lives, as individuals have to work longer than anticipated to receive the level of income in retirement they had previously expected. Income shocks can therefore induce greater workforce participation but they are not necessarily a socially desirable way of boosting the workforce. And it is also important to note that for a number of countries, while employment is up, so is unemployment – while more individuals at older ages want or need to work longer an increasing number and proportion are unable to find employment<sup>III</sup>. But for some countries, rising employment rates at older ages is also part of a longer term trend, as individuals respond to rising life expectancy and better health, both of which enable them to work longer. Whatever the reason for rising employment amongst this age group, their contribution to GDP is significant. We estimate, based on official data for employment and economic output, that the over 50s contributed around €2.5trn to Eurozone GDP in 2013<sup>IV</sup>.



Fig 9: Changes to employment rates by age band



Source: Eurostat and author's calculations

Despite the increase in employment rates amongst older age groups over the last decade, rates remain lower for older age groups than their younger counterparts. In Q2 2014, the employment rate for the 24-49 age group was 76.4% by comparison to 60.5% for the 50-64 age group. In other words, while progress has been made in raising employment rates for older workers, workforce participation at older ages continues to appear artificially low. By supporting further rises in employment across older ages, this should help to boost economic output across the region. But how much of a boost can be delivered by harnessing the power of older workers and how might population ageing more broadly affect economic output? To these critical issues we now turn.

III See Sinclair et al (2013) *Working Longer: An EU Perspective*, Report by ILC-UK for more details about participation rates amongst older workers.

IV We have used Eurostat for numbers employed aged 50+ and for total economic output (real). We have then estimated activity per person employed and multiplied this figure by the number of people in work aged 50+. We therefore assume that workforce productivity remains the same with age which, as Chapter 3 will show, is a reasonable assumption.

## Why do we care about economic growth?

Throughout this report we discuss the effects of changes in the labour force participation of older workers on economic growth. Growth is often seen as the economic and political Holy Grail, but what are the actual benefits of high rates of economic growth?



### Poverty

Sustained economic growth helps raise the incomes of the poorest in a society with research showing that an economy's overall rate of growth is mirrored in the income growth of the poorest 40% of the population.<sup>2</sup>



### Unemployment

Higher levels of economic growth lead to lower levels of unemployment. Unemployment is considered bad, not only because it represents the waste of an economic resource, but also because of the ill effects of unemployment on the individuals concerned. In the short term unemployment has been shown to damage mental health, with the unemployed displaying 'symptoms of distress, depression, [and] anxiety'<sup>3</sup>, as well as low self-esteem. In the longer term unemployment can lead to a loss of skills and erodes human capital.



### Public Debt and Fiscal Sustainability

As discussed in Chapter 1, many European governments have high levels of public debt. Even with austerity measures, economic growth will be essential in helping governments to pay this debt off. Rising incomes would also help households pay off the high levels of private debt still in existence around Europe.



### Society as a whole

Maintained economic growth delivers a steady rise in living standards. In developing countries the benefits of this are clear; lower absolute poverty, better nutrition and health, and improvements to infrastructure and education. In the advanced economies of the Eurozone, societies have already enjoyed these developments. However, continuing rises in living standards would still provide benefits. In his paper, *'The Moral Consequences of Economic Growth'*, Benjamin Friedman argues that economic growth 'more often than not fosters greater opportunity, tolerances of diversity, social mobility, commitment to fairness and dedications to democracy.'<sup>4</sup> He also states that 'when living standards stagnate or decline, most societies make little if any progress towards any of these goals, and in all too many instances they plainly regress.'

Every generation compares itself to the generations before, and it is immensely disheartening for a population to feel that their living standards are stagnating, or even falling behind that of their forebears. Economic growth is therefore essential for maintaining social cohesion and a positive public discourse.

## 2: How might an ageing population affect economic activity?

### Key Points

- As the average age of the population increases, the relative size of the core working population (those aged 15-64) decreases. This decrease in the labour supply is likely to have a negative effect on economic output.
- Older people are less likely to be in employment due to ill-health, caring responsibilities and incentives to retire early.
- The evidence is mixed on what happens to individual workers' productivity as they age. Some studies highlight age related declines in cognitive ability, while others find that older workers are just as productive as their younger counterparts, if not more so.
- Ageing has implications for rates of saving, innovation and investment in an economy, with some authors arguing we may see a 'second demographic dividend'.

### Population ageing and economic growth: the evidence

Population ageing has implications for both absolute economic output and income per capita through a number of channels. First, it will affect labour supply via changes in labour force participation rates due to illness and or retirement. Second, it will affect the productivity of individual workers as they grow older and third, it will affect the efficiency and productivity of the economy as a whole. We briefly discuss each in turn.

### Labour Supply

As the average age of the population increases, the relative size of the core working population (those aged 15-64) decreases. 'The working age cohort produces the lion's share of a country's economic output. When that share is smaller and there are relatively more people (young or old) who are economically dependent on working age groups, a country's output per capita may grow more slowly or even decrease'<sup>5</sup>.

The problem may be exacerbated by individuals choosing to take early retirement, which further reduces the pool of workers. Although in a number of European countries, the age of entitlement to a State pension is around 65, the average age of exit from the labour force is below this. The literature explores a variety of reasons for low levels of labour force participation rates among older people.

### Health

A number of studies show that ill health is a prime reason for labour force exit among early retirees. Bound et al (1999) show that it is 'not just poor health' per se which explains retirement choices, but 'declines in health'<sup>6</sup>. Using the British Household Panel Survey, Disney et al (2006) also show that it is *changes* in health status which matter, concluding that 'adverse shocks to individual health stocks predict individual retirement behaviour'<sup>7</sup>. These findings imply that developments in health and healthcare will have substantial role to play in determining the economic effects of our ageing population.

### Employment flexibility

Using a data set on workers over 50 across 11 EU countries, Robroek et al (2012) found that between 2004 and 2005 22% left the workforce<sup>8</sup>. Over half of those that left of the workforce took early retirement while close to 1/5 became unemployed. 9% of those leaving the workforce took a disability pension. Unsurprisingly, of those taking a disability pension, most cited ill health as their reason for exiting the

labour force. However ill health was not associated with those taking voluntary early retirement, with such people more likely to cite a lack of job control as an important factor in their decision.

Older workers often choose to take early retirement because their employer doesn't offer flexible working hours or other workplace changes that would facilitate longer working lives. Reduced, or more flexible working hours, and support for transitional employment has been highlighted as one way to improve older workers participation rates<sup>9</sup>.

### ***Incentives***

OECD research in the early 2000s showed that incentives to retire early were embedded in public pension and social transfer schemes across continental Europe<sup>10</sup>. In fact they estimated the employment rate amongst older age groups could be increased by 15 percentage points. However, since 2007 there have been changes to pensions and retirement legislation as well as employment laws across Europe in a bid to reduce these incentives.

### ***Informal work***

However, simply being absent from the formal labour market does not mean that older people are no longer contributing to economic output. Many retirees care for their grandchildren, thereby allowing their parents to work. With regards to the UK, Grandparents Plus estimate that 1.6 million children received informal childcare from their grandparents in 2010/11<sup>11</sup>. Although such care is estimated to be worth £7.3 billion, it is not formally included in statistics on GDP. Retirees may take part in other activities in the shadow economy, such as domestic help for employed relatives or work that is paid cash in hand. Therefore merely looking at the number of older people dropping out of the formal workforce will not accurately show the impact of ageing on economic output and living standards.

### ***The participation rates of older workers may rise***

Research by Kluge et al (2014) predicts that the participation rates amongst older age groups are likely to increase in coming years, thereby mitigating the fall in labour supply due to population ageing. They cite evidence that the share of the German population over 50 with a tertiary degree is likely to increase in the coming years, from 21% in 2008 to 34% by 2053<sup>12</sup>. Since those with higher levels of educational attainment are more likely to remain in the labour force as they age, the authors forecast that the fall in the German labour force as a result of population ageing will be 10 percentage points lower than if education levels were to remain constant.

## **Productivity**

As older workers make up a growing proportion of the workforce, the productivity levels of workers as they age are an important determinant of economic output. Economic output depends on the number of workers employed. However, the productivity of those workers is also of huge importance for determining output. The effect of ageing on both an individual's productivity and economy wide productivity is of huge significance for determining living standards.

### ***Individual Productivity and age***

The literature addressing the effect of age on an individuals' productivity is large and conflicting, with some arguing that older workers are actually more productive than younger workers and others pointing out declines in cognitive ability.

### ***Age is no barrier to productivity***

With age comes experience. If workers' wages accurately reflect the value they add, then the fact that older workers tend to earn more implies they are actually more productive than their younger counterparts<sup>13</sup>. Paul and Townsend (1993) state: 'research indicates that workers aged sixty-five to seventy-five generally perform as well as younger workers when jobs do not require heavy physical

labour. Most of the 'handicaps' of older workers are social, conventional and imaginary'<sup>14</sup>. A number of studies confirm this assertion.

In Austria, Mahlberg et al. (2013) find that firms with a greater share of workers under 30 years of age have, *ceteris paribus*, lower levels of productivity. However, firms with a greater share of workers over 50 do not exhibit lower productivity<sup>15</sup>.

Using an employer-employee dataset spread over 22 years, Cardoso et al (2011) find that while 'at younger ages, wages increase in line with productivity gains...as prime-age approaches, wage increases lag behind productivity gains'<sup>16</sup>. They use this to argue that older workers are indeed worthy of their higher rates of pay.

Lallemand and Rycx (2009) point out that 'during the last decade the demand for interactive skills on the US labour market (i.e. abilities which do not generally vary with age) has increased more than the demand for problem-solving and mathematical abilities (i.e. skills that are supposed to be declining with age)'. Thus the average level of productivity among older people should have improved in response to this, so long as they as they are in appropriate jobs.

While older workers can be less productive, if they are managed effectively this doesn't have to be the case. Using panel data on German organisations between 1997 and 2005, Zwick and Göbel (2013) show that human resource policies can make a significant difference. They 'find that the relative productivity contributions of older workers are significantly higher in establishments that provide either specific equipment of work places or age-specific jobs for old workers.'<sup>17</sup> In addition they find that the productivity of all workers is higher 'in establishments that apply mixed-age working teams'.

### **Worker productivity falls with age**

In a review of 19 selection procedures, Schmidt and Hunter (1998) found that tests of general cognitive ability were the best predictor for the productivity and learning abilities of workers<sup>18</sup>. While some cognitive abilities, such as vocabulary<sup>19</sup>, remain constant throughout life, others have been shown to decline with age. Based on psychometric tests, Schwartzman et al (1987) show that reasoning and speed decline throughout adulthood<sup>20</sup>, thereby implying older workers are likely to be less productive.

Lovasz and Rigo (2013) use Hungarian data from 1986 to 2008 to show that older workers suffer from skills obsolescence, with employees in foreign owned companies and employees with the highest skill levels being worst affected<sup>21</sup>. Older workers experience becomes much less useful when it is concentrated in an area which is no longer relevant.

Lallemand and Rycx (2009) use matched employer-employee data sets in Belgium firms to show that 'young workers are significantly more productive than older workers'<sup>22</sup>. Unsurprisingly their results hold more strongly in firms with high levels of ICT usage. Therefore as older workers gain computer literacy we might expect their difference in productivity to narrow. Indeed, Lallemand and Rycx show that 'age structure effects on productivity...have decreased substantially over time'.

As workers' overall health is likely to decline with age we might expect their productivity to decline as a result. According to the Office for National Statistics, in the UK in 2013 1.2% of hours were lost due to sickness among workers age 16-24. For those aged 25 to 34 the figure was 1.5%. Among those age 50-64 however, 2.8% of hours were lost to sickness<sup>23</sup>. Furthermore, research in the USA indicates that older workers 'sustain more severe injuries' in the workplace and that they 'require more days away from work to recover'<sup>24</sup>.

## **Economy-wide productivity and output**

Population ageing has implications for economy-wide productivity and output through channels that extend beyond the productivity levels of individual workers as they age.

### **Innovation and management**

Feyrer (2007) finds that the impact of ageing on the productivity of the entire economy is greater than the impact on the wage of an individual. He shows that 'a five percentage point shift from the thirty

year age group to the forty year age group... over a 10 year period... would add approximately 1.6 percentage points to output growth in each year.<sup>25</sup> However, he calculates that while this same shift implies 'a 16% increase in per worker output' it would only increase wages by at most 2%.

He argues that the societal gain from population ageing is greater than the private gain, through wages, due to two externality channels; innovation and management.

First, Feyrer cites evidence that inventiveness is associated with age. For example, that the median age of a new patent holder in the US remained stable at 48 between 1975 and 1995, despite a large change in the median age of the population in the same period. He then explains that 'if a country has an age structure which increases the likelihood of Google being invented, productivity will be higher for all workers.' Yet, 'only a very small fraction of these productivity gains will be captured by the original inventors' of Google. Hence economy-wide productivity can substantially increase without wages rising.

Second, he notes that managers need experience, and often social seniority, to manage effectively. This means that managers are often drawn from older cohorts. He argues that as the relative size of older cohorts expands through population ageing, the pool of talent from which management can be drawn also expands, thereby improving the quality of managers and thus aggregate productivity.

### **Savings and investment**

A 2007 report entitled 'The Relationship Between Demographic Change and Economic Growth in the EU' forecasts a negative effect on growth rates in per capita incomes as a result of a rising proportion of older people in European populations. This is a result of a dwindling ratio of producers to consumers as a greater proportion of the population retires<sup>26</sup>.

These results were based on the assumption that individuals' behaviour did not change in light of population ageing. However it seems likely that governments will change their policies and people will adapt their choices in response to demographic changes. Mason (2005) proposes that advanced economies may experience a 'second demographic dividend' as their baby boom generations age. He argues that awareness of increases in life expectancy will lead to higher levels of saving, in preparation for longer periods of retirement, and that this will increase the wealth to output ratio. As a result, economies will see increases in investment and productivity, capital deepening and increased rates of economic growth<sup>27</sup>. Nevertheless, such changes are not guaranteed and are likely to be policy dependent.

### **Education**

Prettner et al (2013) argue that 'the effect of falling fertility on effective labor supply can be offset by associated behavioral changes'<sup>28</sup>. Using 'panel data for 118 countries over the period 1980 to 2005' they show that 'higher education and health investments... are able to compensate for declining fertility under certain circumstances'. Thus, through human capital investments, nations may be able to increase workers' productivity to offset the potentially negative effects on economic output of population ageing.

The literature reviewed in this chapter shows that ageing need not necessarily mean a decline in workforce productivity. However it does highlight that an ageing population is likely to see the proportion of its population in employment fall. This could have a substantial effect on economic output. Just how substantial this effect is will depend on how the participation rates amongst older age groups change over time. In the next section, we try to quantify this effect based on a number of different scenarios for future workforce participation.

# 3: The importance of older workers to the Eurozone

## Key points

- For many Eurozone countries, the economic implications of population ageing are not just threatening their long-run prosperity but are highly relevant for the short to medium term too. Take Spain and Germany for example – if they do not raise workforce participation rates, we estimate that total employment could fall by nearly 10% over the next decade.
- Encouraging greater participation in the workforce for the over 50s can therefore make a substantial difference to prosperity across the region. In this chapter, we build scenarios to demonstrate the impact that older workers can have on GDP per person.
- Our projections show that by 2050, higher participation rates amongst the over 50s could deliver 12.6% more economic output per person than if participation rates stagnate. And over the entire period, we project the annual growth rate in output per person to be just 1% if participation rates by age do not rise, compared to 1.3% if a greater proportion of the over 50s stay in the labour market.
- We estimate that raising participation at older ages delivers a greater economic boost for the region's periphery countries than it does for core countries. Relative to our base case, we project GDP per person to be 18.3% higher in the periphery by 2050 if workforce participation rates rise, by comparison to 8.7% higher in the core.
- While raising labour force participation at older ages can help to boost economic output, Eurozone countries will struggle to deliver the rates of per person growth they were used to in the 1980s and 1990s. With reference to Spain and France, we argue that in the absence of any substantial advances in the development and application of technology, many Eurozone countries may have to get used to lower rates of economic growth and stagnating levels of prosperity.

This report has outlined some of the underlying social and economic challenges facing the Eurozone and discussed the relationship between population ageing and economic growth based on an analysis of past literature and evidence. It is now time to join the dots and ask – how might economic output change across the Eurozone over the coming decades as its population gets older, and to what extent can raising workforce participation rates at older ages help mitigate demographic headwinds.

Understanding what the future of the Eurozone might look like in two years is challenging enough – especially given the current level of uncertainty about if and when economic recovery will take hold, and the associated issues regarding its long-run sustainability as a monetary union. In addition, there are uncertainties regarding the future path of population change across constituent countries, what a “normal” rate of productivity growth might look like over the long-term and how labour force participation rates by age might change. None of these issues are trivial and we can only make rough guesses for each, rather than firm predictions.

## Approach

In respond to these challenges, we construct a number of scenarios about future long-run economic output across the Eurozone based on plausible assumptions. These scenarios seek to identify the extent to which improving participation at older ages could support higher levels of economic output – they are not an explicit forecast of the future. We have favoured simplicity and transparency over complexity when building these scenarios and take the following approach to modelling each of the different elements underpinning our long-run projections:

1. **Future population structure:** We use Eurostat and UN Population Projections to estimate the future age structure and population of the Eurozone<sup>V</sup>.

---

<sup>V</sup> Numbers are obtained via the OECD's statistical databases. Population projections are central variants from Eurostat or UN.

2. **Workforce productivity growth:** We assume that the productivity of the workforce rises in line with the long-run developed country average of around 1.5% per annum<sup>VI</sup>.
3. **Labour force participation:** The participation of older workers is the only element of the projections that we modify to create the different scenarios. We treat participation at older age ranges in three different ways:
  - Scenario 1. No change:** We assume all age-related employment rates remain as they were in 2013.
  - Scenario 2. 65+ catch up with Sweden:** We assume that recent progress in raising the labour force participation rates for the **over 65s** continues until catch-up with Sweden's high participation rate is achieved.
  - Scenario 3. 50+ catch-up with Sweden:** The final scenario assumes that recent progress in raising the labour force participation rates for the **over 50s** continues until catch-up with Sweden's high participation rate is achieved.

## Why Sweden?

When modelling our scenarios, we have used Sweden as the benchmark for labour force participation at older ages. Sweden has the highest labour force participation rates for older workers of anywhere in the EU. 73.5% of people aged 50-64 in Sweden are employed by comparison to an EU average of just 50.2%. Arguably, the higher employment rates for older workers in Sweden, is not simply the result of factors that make working longer a financial necessity with people forced to work until they drop. Rather, the success of Sweden appears to have hinged upon its ability to encourage life-long learning, whereby adult learning and on the job training courses are encouraged which can help to keep older workers productive. For these reasons we would argue that Sweden is a reasonable benchmark to which other countries can aspire to<sup>VII</sup>. Note that we do not assume catch-up with Sweden's current participation rates for older people is immediate but a gradual process based on progress that the Eurozone as a whole has been making regarding employment rates at older ages over the last decade. Once employment rates catch up with those currently being experienced in Sweden we assume they remain constant for the remainder of the projected period. This, we would argue, is a good basis for modelling future labour force participation – neither overtly optimistic nor pessimistic - but the eventual reality may, of course, be quite different.

## Employment across the Eurozone will fall without older workers

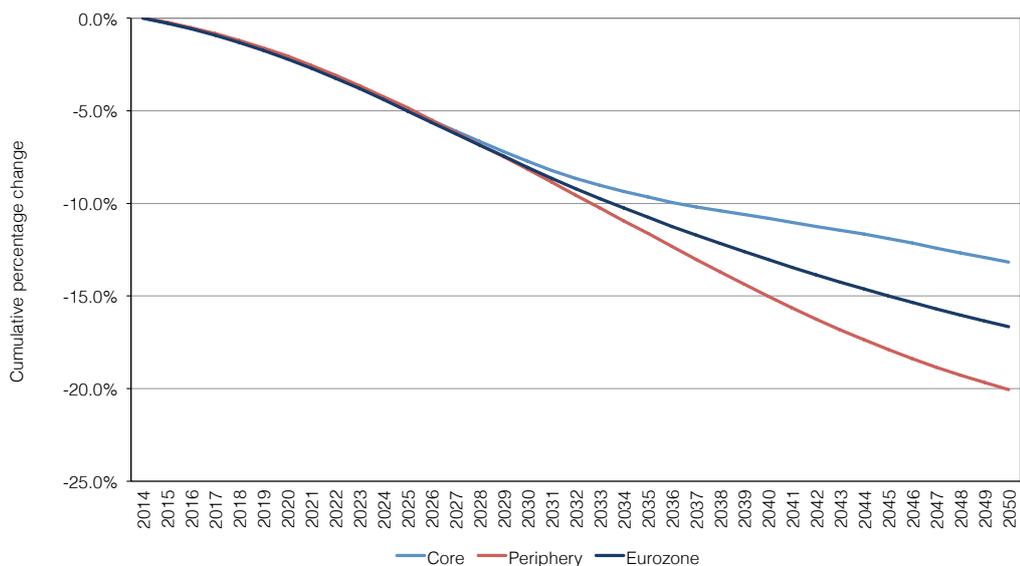
As a consequence of population change, if there is no increase in labour force participation rates, total employment in the Eurozone will fall from over 140 million in 2014, to 117 million by 2050. That is equivalent to a 17% fall in employment over the next 36 years. There is a significant difference between the core and the periphery in this regard, with total employment across the periphery projected to fall further (by 20%) than it is across the core (13%)<sup>VIII</sup>. This would imply that while it is important for all Eurozone countries to encourage higher labour force participation rates as well as to secure strong growth in workforce productivity, achieving both of these will be particularly important for periphery countries which are set to age faster. It is important to note that the fall in total employment is projected to start immediately, with Eurozone employment projected to fall by 5.5% between 2014 and 2026. The issue of a shrinking workforce is therefore not only relevant over the long-term but something that could have a detrimental effect on economic output over the short to medium term as well.

<sup>VI</sup> This assumption is also used by Jackson et al (2013).

<sup>VII</sup> See Sinclair et al (2013) for more details about country specific profiles.

<sup>VIII</sup> We define core countries as Austria, Germany, France, Netherlands, Belgium and Luxembourg while periphery countries are all other Eurozone countries making up the 18 members.

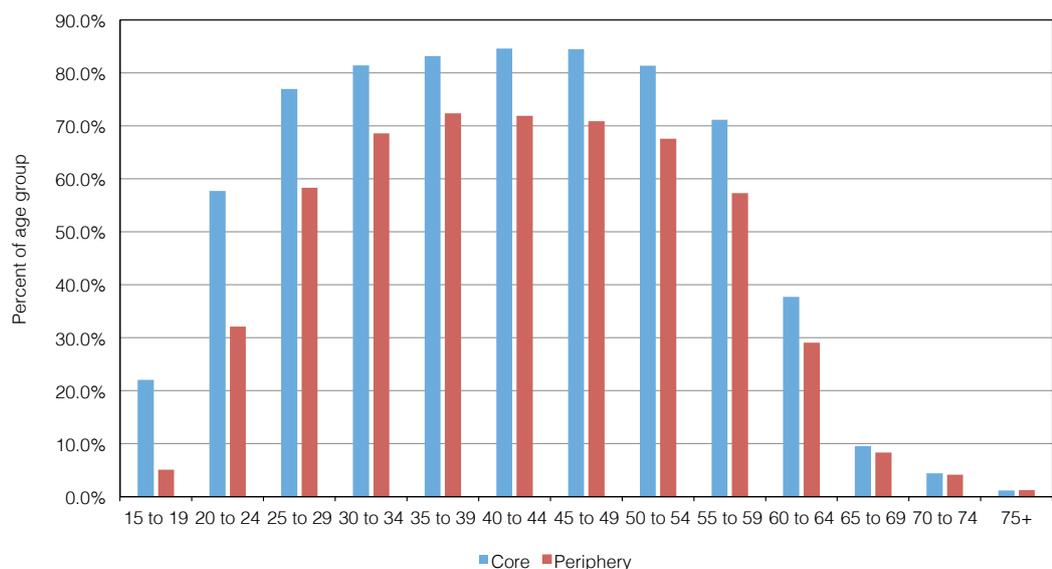
**Fig 10: Percentage change in number employed according to “No change” scenario**



Source: OECD and author's calculations

The periphery's challenges are compounded by low labour force participation rates. Across all ages, the periphery has significantly lower employment rates than the core. While this report is particularly interested in participation rates amongst older age groups, the Eurozone periphery suffers from particularly low participation rates at younger ages too. For example, the employment rate for 15-19 year olds is just 5.1% in the periphery versus 22.1% in the core, while for 20-24 year olds it is just 32.1% in the periphery versus 57.7% in the core (figures at 2013). A number of Eurozone countries are suffering from cripplingly high levels of youth unemployment - more than half of people aged 15-24 in Spain and Greece are currently unemployed. Needless to say, those who are unemployed at younger ages are more likely to be unemployed in future years<sup>29</sup> as well as earn lower wages<sup>30</sup>. For these reasons, the desperately high youth unemployment rates currently affecting some Eurozone countries, may result in lower participation rates at older ages over the coming decades. The Eurozone should not, therefore, just focus on raising employment prospects for the oldest but for all age groups.

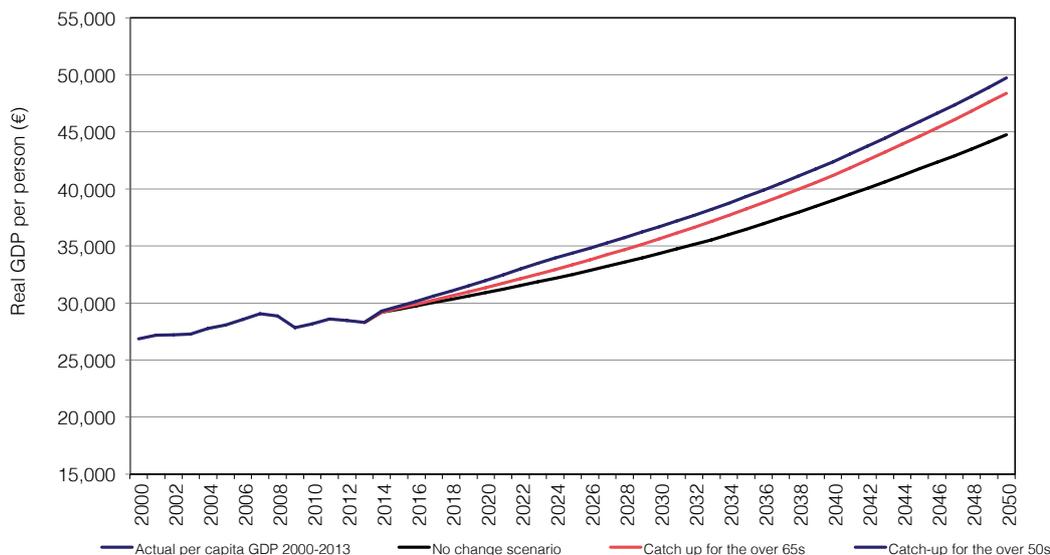
**Fig 11: Employment rates by age, Eurozone core and periphery**



Source: OECD and author's calculations



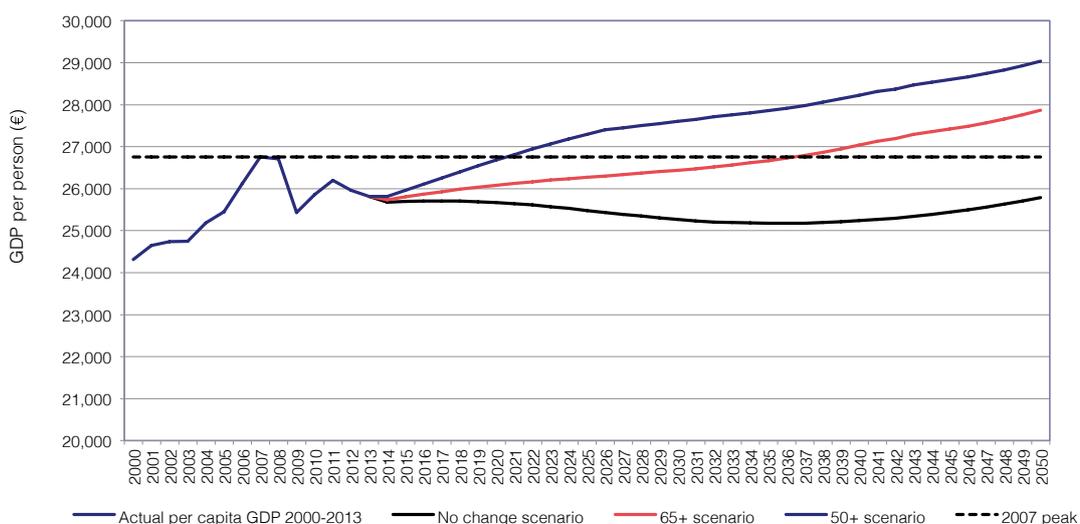
Fig 13: Eurozone economic output per person across various scenarios



Source: Eurostat, OECD and author's calculations

It is worth noting the central role that workforce productivity plays in generating this picture of long-run output. If, for example, we assume that the productivity of labour rises in line with the average since 1999 – the point at which monetary union began – then output across all three scenarios would be significantly lower<sup>ix</sup>. In our most pessimistic, “No change” scenario, output per person does not grow at all from 2014 until 2050. This means that the Eurozone would not return to its peak 2007 level of GDP per person over the projected period. Even in our most optimistic scenario for labour force participation, growth would average just 0.3% per annum. Growth in the employment rates of older people would therefore help to reduce the extent of economic stagnation across the region, but would not be able to prevent it altogether, without being accompanied by a rise in the productivity of the Eurozone’s workers. Even under our most aggressive scenario for future workforce participation, this remains the case.

Fig 14: Future scenarios for future Eurozone economic output (assumes 0.5% per annum productivity growth)



Source: Eurostat, OECD and author's calculations

<sup>ix</sup> Average annual growth in output per worker since 1999 is approximately 0.5%. Eurostat and author's calculations.

## The core and the periphery

While many countries across the Eurozone face significant challenges as a result of population change, some face starker challenges than others. For those countries that are ageing faster it will be even more important to improve participation rates at older ages. To illustrate this point, we narrow down our focus to two groups of countries – the “core” and the “periphery”. To model future output for these sets of countries, we use the same assumptions regarding long-run productivity growth as well as future population and age structure. We also develop the same three scenarios regarding labour force participation rates for older age groups.

### Results of the three scenarios

Under the “no change” scenario, there is a significant difference between the core and the periphery in terms of annual economic growth per person over the projected period. The core is projected to grow by 1.1% per annum, while the periphery is projected to grow by just 0.8%. However, under the alternative scenarios, which assume a higher proportion of older people in the labour market, the difference between the results of the core and the periphery are narrower (see the table below for a breakdown of results).

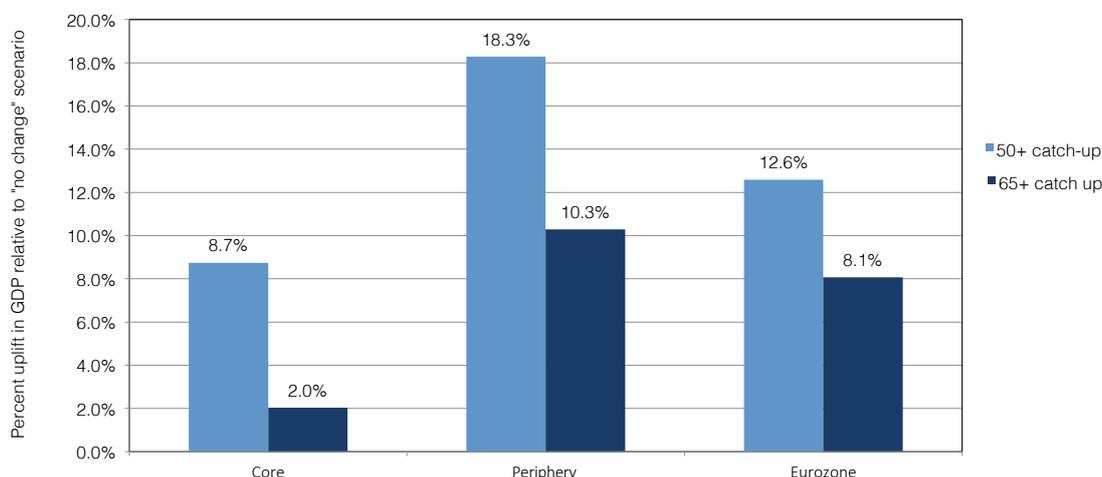
Fig 15: Average annual growth rate in GDP per capita 2014-2050 (%)

	No change	65+ catch-up	50+ catch-up
Eurozone	1.0	1.2	1.3
Core	1.1	1.2	1.3
Periphery	0.8	1.1	1.2

While the differences in projected economic growth rates are similar for core and periphery countries, raising participation at older ages boosts projected output to a far greater extent for the periphery than it does for the core. Under the scenario where labour force participation amongst the over 50s catches up with Sweden, GDP per person is 18.3% higher in the periphery in the year 2050 than it would be if there was no increase in labour force participation. By comparison, across the Eurozone’s core, output per person is just 8.7% higher. The core is also likely to experience far less benefit from raising participation amongst the over 65s, projected to achieve a 2% boost in GDP per person, by comparison to a 10.3% boost for the periphery.

The Eurozone periphery reaps more benefit by raising participation at older ages for two reasons. First, the periphery currently has lower employment rates at older ages so has more catching up to do relative to Sweden’s high participation rate which provides a boost to economic output. Second, the periphery is growing older faster than the core, meaning that raising participation rates at older ages has a larger effect overall effect on output.

Fig 16: Uplift in GDP per person from different scenarios by 2050



Source: Eurostat, OECD and author’s calculations

## Polar opposites: France and Spain

Earlier in this chapter, we discussed the different possible trajectories for employment across the Eurozone and its constituent countries.

In particular, we singled out France and Spain as being polar opposites with Spain set for a rapid and substantial fall in total employment due to its falling working age population while employment in France is expected to flat-line. Both countries face substantial economic challenges in the short to medium term.

Spain was particularly exposed to the financial crisis with a number of its banks having to be bailed out and has since experienced soaring youth unemployment and rapidly rising government debt as a proportion of its GDP. France was relatively more insulated from the financial crisis, but, like other “core” Eurozone countries, has fallen back into recession – in part, dragged down by the weak demand environment across the rest of the region. Reversing the current economic predicaments facing both of these countries will be challenging and is likely to be exacerbated by demographic forces. According to projections stemming from our “no change” scenario, GDP per person could grow by just 0.7% per annum in Spain by comparison to just 1.2% in France during the period 2014 to 2050.

As with the wider results regarding the “core” and the “periphery”, raising workforce participation rates in Spain makes a greater difference to GDP per person because Spain’s working age population is expected to shrink faster and because of its lower workforce participation rates. In our most optimistic scenario, where both countries make progress in raising the participation rates of the over 50s, GDP per person rises to 1.2% per annum over the projected period in Spain and to 1.5% in France.



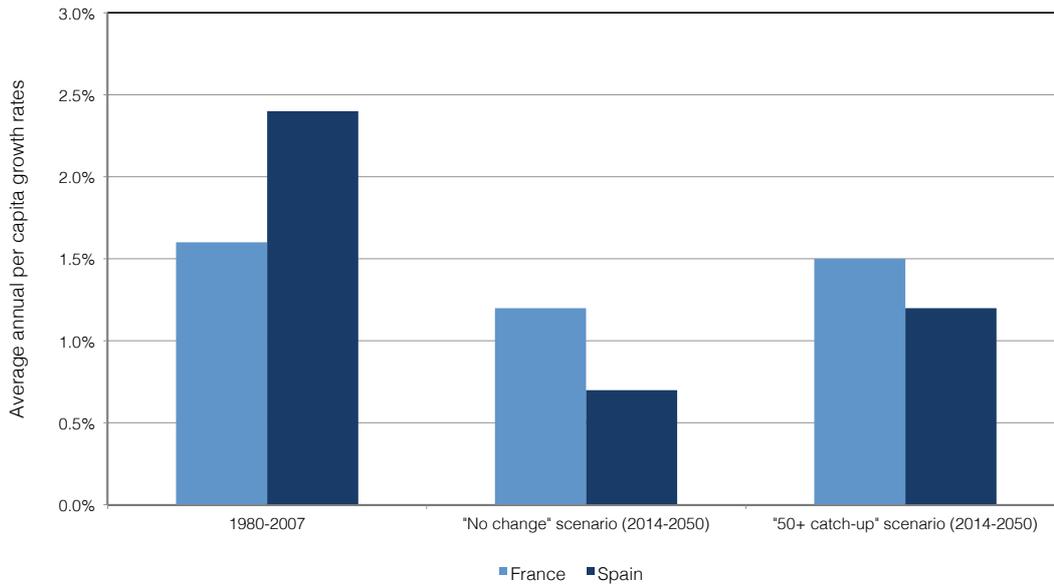
## How do figures for Spain and France compare to the historical trend?

Average annual growth in output per person is projected to be below that of the long-term trend rate of per capita growth<sup>x</sup>. This is particularly evident with regard to Spain though it is also relevant for France. We estimate that for Spain to return to its pre-crisis rate of per capita growth, it would require a substantial increase in the productivity of its workforce to around 2.7% per annum up to 2050. While such an acceleration of workforce productivity is not out of the question especially given uncertainties about what the development and application of new technologies might bring over the coming decades, it is certainly well out of sync with its historic trend rate of productivity growth (1.2% per annum between 1980 and 2013).<sup>xi</sup> We estimate that for France to return to its pre-crisis rate of per capita growth, workforce productivity would have to increase to 1.7% per annum which is also higher than its historic trend rate of productivity growth (1.3% per annum between 1980 and 2013). In other words, unless innovation delivers substantial upside surprises, both core and periphery countries are going to have to get used to lower rates of economic growth and stagnating levels of prosperity even if they are successful in encouraging a greater proportion of older people to work longer.

<sup>x</sup> We use Eurostat and IMF data to estimate average annualised per capita growth for France and Spain during the years 1980-2013.

<sup>xi</sup> We, use Eurostat and IMF data to estimate average annualised growth in workforce productivity during the years 1980-2013.

Fig 17: Economic growth rates across various scenarios (actual and projected)



Sources: Eurostat, OECD and author's calculations

In summary, our analysis suggests that the Eurozone can benefit from harnessing the productive potential of older workers. In our optimistic scenarios, we only envisage modest growth in labour force participation, but even this results in a significant boost to economic output across the region. The simple message here then is that older workers can make a material difference to the economic wellbeing of the Eurozone, but there is an important caveat. Unless there is a significant rise in the productivity of the Eurozone's workforce, the Eurozone is likely to suffer from long-run stagnation even if it does harness the potential of older age groups. Investing in the skills and training necessary as well as capitalising on the development of new technologies will also be critical for the Eurozone to drive growth over the long term by raising workforce productivity.

# 4: Why do people in some countries work longer than in others?

## Key Points

- In this chapter, we explore the reasons why different countries are more successful at securing longer working lives than others.
- Past evidence looking into the reasons why older workers leave the labour market, split possible reasons into two categories. “Pull” factors are financial incentives which pull people out of the workforce and include public and private pensions. “Push” factors are shocks that unexpectedly push people out of the workforce – such as sudden ill health or redundancy.
- In our high-level analysis of OECD countries, we find a strong association between poverty rates and working longer – with higher poverty rates linked to higher workforce participation. On a related theme we also find that lower replacement rates are associated with higher workforce participation at older ages too.
- But avoidance of financial ruin and poverty are not the only factors keeping people in work. Our findings suggest that health and education are also important – those countries whose older populations are in better health or who are better educated are also more likely to work longer.
- Policy responses must not therefore be limited to reducing social security benefits or raising State Pension ages in order to stimulate longer working lives. They must also invest in the future health and skills base of their older populations. Otherwise we will have an army of people aged 50+ who want to work to avoid poverty but are unable to because they are too ill or because of mismatches between jobs and skills.

## Past evidence explaining labour market exit

A number of theoretical perspectives have been developed to explain the timing of retirement and economic inactivity among older people. Most prominent of these, is a debate over *pull* and *push* factors.

*Pull* factors can be thought of as economic incentives in the form of public or private pensions or implicit taxes on work, which make labour market exit an attractive option as older workers weigh the costs and benefits between staying in work to earn money and leaving to enjoy leisure time in retirement.<sup>31</sup>

Much of the decline in employment rates of older workers that began in the 1970s has been attributed to this perspective, as a number of countries started providing early retirement schemes – either explicitly or as de facto early retirement via disability, with generally high benefit levels.<sup>32</sup> Unemployment benefits can also create a bridge to retirement, especially when the benefit outweighs perceived potential gains by re-entering the labour market.<sup>33</sup>

On the other hand, *push* factors are constraints that limit the demand for labour. Some of these are driven by firms, whose personnel policy will affect retention, training, and dismissal of older workers.<sup>34</sup> The degree to which technology is integral to production will also impact the age structure of the workforce<sup>35</sup>.

Ill health and informal care responsibilities can also constrain older people’s ability to stay in work.<sup>36</sup> Moreover, previous evidence suggests that much of the economic inactivity among older people is involuntary, driven by disabilities or redundancies.<sup>37</sup> In this regard, older people are forced out of the labour market due to a lack of viable alternatives, rather than having made a decision based on favourable financial incentives.<sup>38</sup>

There are other arguments that go beyond this duality of push and pull factors. Collective bargaining arrangements can also influence early exit decisions.<sup>39</sup> The relations between government, employers, and trade unions continuously shape policy related to labour markets and social benefits. These partnership arrangements direct the reactions to the other push and pull factors, given the constraints

and opportunities they establish. This occurs not only at the national level, but also at a firm level between management, workers, and their representatives.

Clearly all older workers are different with different socioeconomic backgrounds. People in different socioeconomic positions may therefore experience a different set of factors that impact the labour market opportunities available to them.<sup>40</sup> For example, only healthy workers with a job (or clear opportunity to get one) have the option to stay in work, while only people with sufficient financial circumstances can afford to retire early. As social class affects health, job characteristics, and the risk of job loss, it also plays a role in framing labour market exit among older workers.

There is also an important gender dimension to labour market exit. The intersection of gender, class, and age is an important component for employment in later life.<sup>41</sup> As women have historically had more fragmented work histories than men, sometimes driven by a history of informal caring for children and then parents, this could impact savings, pension accrual, and consequently retirement opportunities.<sup>42</sup>

These different strands explaining labour market exit among older workers demonstrates the complexity in understanding labour market engagement in later life. Retirement is often considered a choice or decision that people make but exits from the labour market among older workers are often involuntary, as workers are pushed out by the onset of poor health or disability, or by specific measures taken by employers to shed workers.

### **The factors determining longer working lives: Cross-country evidence**

We use OECD data to assess the statistical association between different factors on the labour force participation of older workers across a number of countries. The OECD collects cross-country data on many of the factors likely to be relevant in explaining cross-country variation. This includes data on employment rates for the over 65s, self-rated health, the prevalence of care giving, level of educational attainment, the level of pensioner poverty and the extent to which, on average, incomes in retirement replace pre-retirement income.

#### **Health warning**

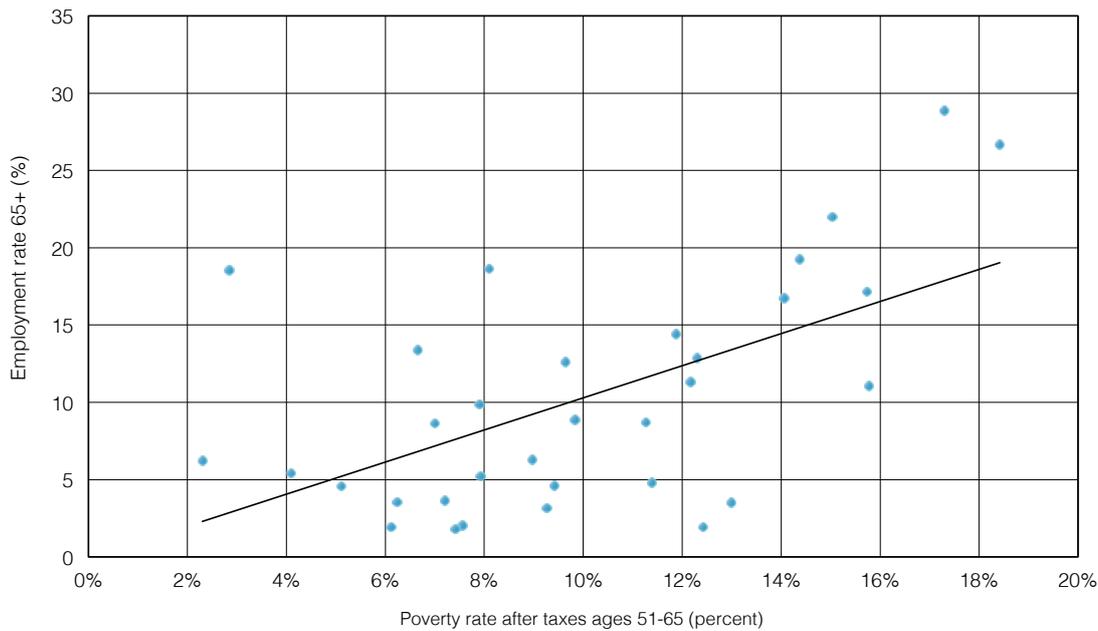
Before we discuss the results, two quick, but important caveats are worth noting. First, the analysis that follows is cross sectional – in other words it only looks at one point in time where the latest data is available. For this reason the sample size is small and results may be affected by outliers and specific conditions related to the year in question. Second, due to the small sample sizes we make no allowances for the influence of other factors. It may be the case then that the relationships we describe are actually the result of factors that have not been accounted for. Omitted variable bias as it is called, can lead to spurious results and incorrect conclusions. We would still argue however, that the analysis that follows provides us with additional knowledge about the likely direction of relationships between a number of key explanatory factors and labour market participation at older ages across various countries.

#### **Eurozone results**

##### **...working longer as a financial necessity**

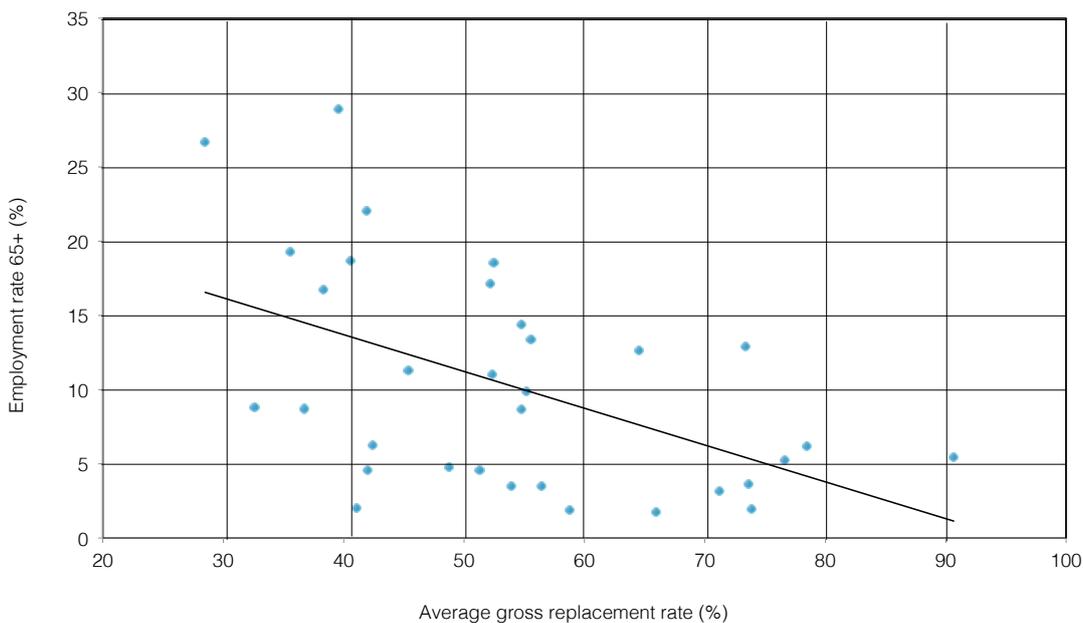
According to our analysis the two factors that have the strongest association with 65+ employment rates across OECD countries are pensioner poverty and the extent to which people are able to replace their pre-retirement incomes after they have retired. More specifically, we find, that the higher the poverty rate, the greater the employment rate of the over 65s and, separately, that the higher the replacement rate, the lower the employment rate of the over 65s (see charts). In other words, the charts imply that those countries with a higher proportion of people working beyond 65 are doing so out of financial necessity – unable to rely on private savings or social security to support their income needs in later life, they decide to continue working.

**Fig 18: Association between poverty and working longer across OECD countries**



Source: OECD and author's calculations

**Fig 19: Association between replacement rate and working longer across OECD countries**

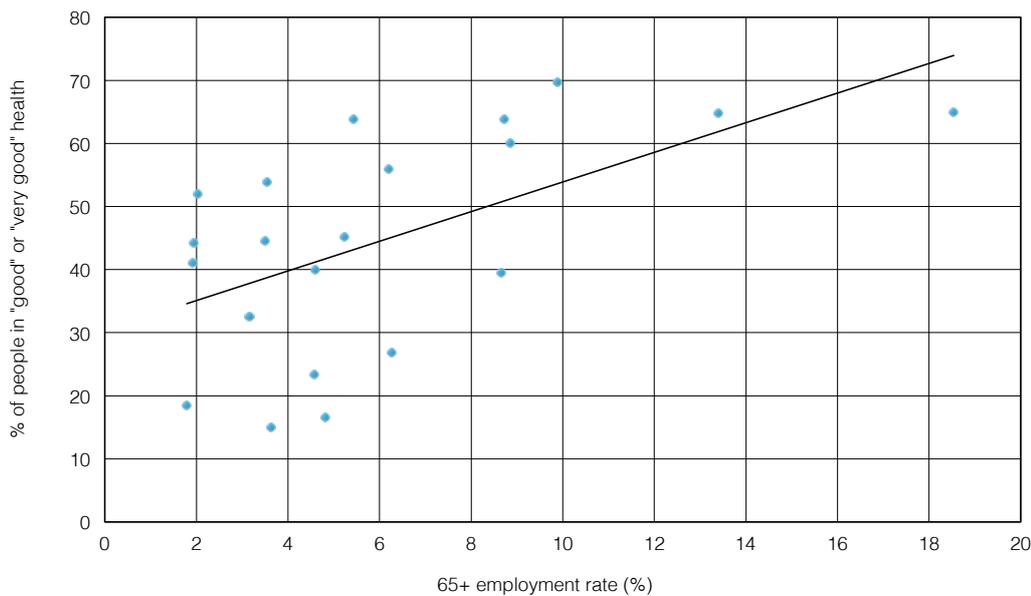


Source: OECD and author's calculations

**...having the health and skills to work longer**

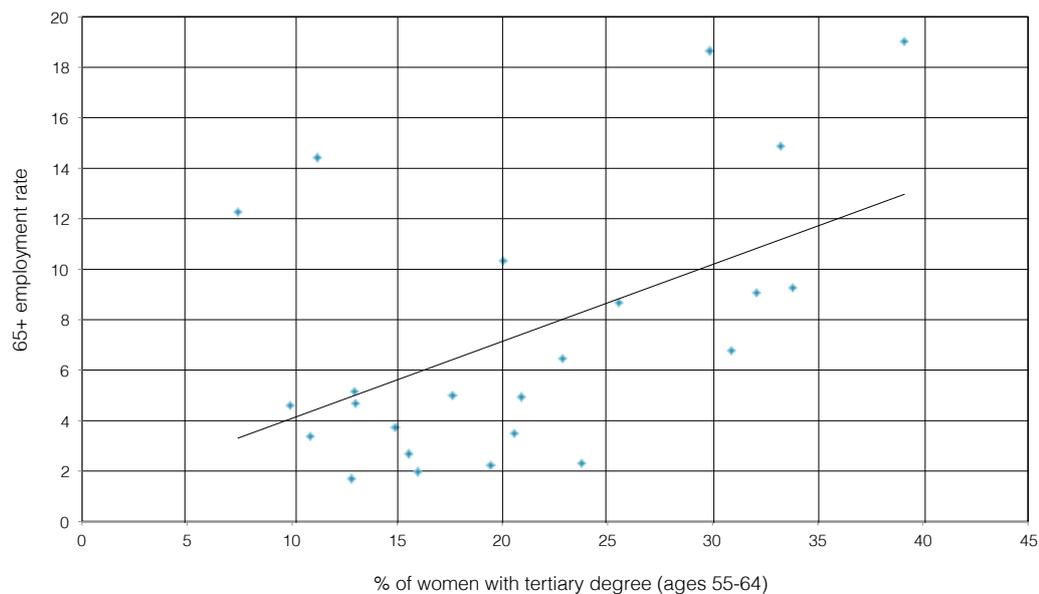
There are, however, a number of countries that do not fit this trend. Norway and Sweden for example, have low poverty rates and high replacement rates, yet both still have high employment rates at older ages. In this regard, good health and education are key additional factors that help to support longer working lives irrespective of the level of replacement income in retirement. While our analysis implies that these additional factors do not have such a strong association with working longer across all OECD countries, we still find associations at the European level. Our results suggest that those countries whose older populations are in better health, or whose older populations are more educated are likely to experience higher 65+ employment rates.

**Fig 20: Association between self-rated health and working longer across European countries**



Source: OECD and author's calculations

**Fig 21: Association between level of female education and working longer across European countries**

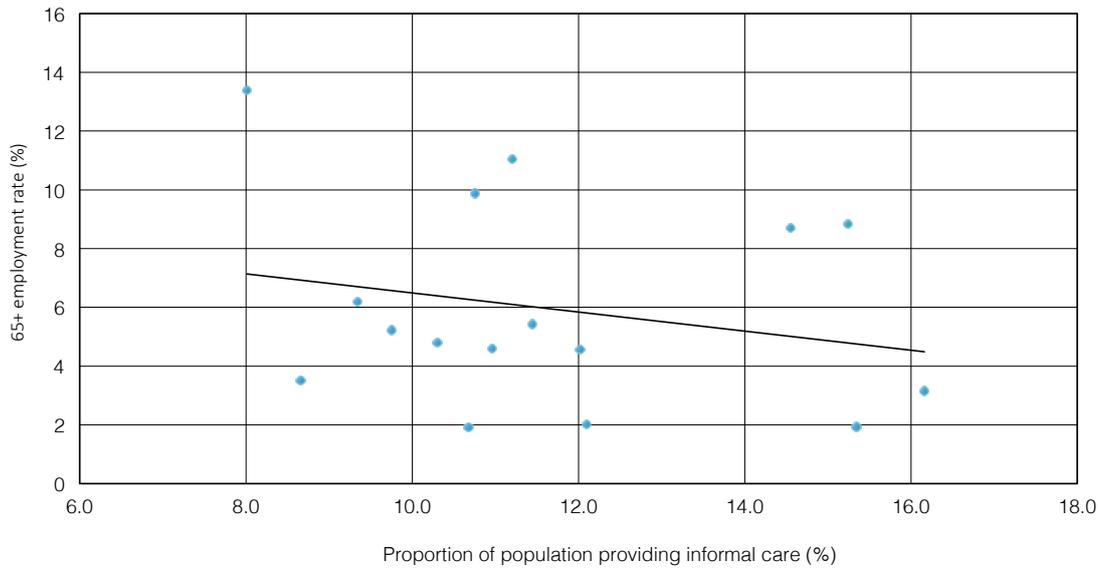


Source: OECD and author's calculations

### ...informal care provision

As part of our analysis we also looked at the provision of informal adult social care - in other words the provision of care by a friend or family member rather than via a paid professional. Within the literature, this is seen to be a significant barrier preventing people from working longer and typically affects women more than men as women are more likely to be caregivers. OECD data on caring is somewhat more limited than that regarding the other factors of interest, so we have had to restrict our analysis to 16 European countries. Nevertheless, the results show a statistical association (albeit a relatively limited one in this case) between care giving and employment amongst the over 65s. It implies that, on average, the higher the proportion of people providing informal care, the lower the employment rate of people over 65. Though it must be noted that this association appears to be the weakest of the relationships we looked at using the OECD data. In truth, we think that the relationship between care and working longer is likely to be much stronger across a larger dataset and where other factors are controlled for, but this still gives an indication of the negative impact that care can have on the labour market for older people.

Fig 22: Association between care giving and working longer across European countries



Source: OECD and author's calculations

In summary, these findings provide support for the notion that people leave the labour force at older ages due to a mixture of push and pull factors. In particular, it has revealed the power that financial incentives play. People in countries where the replacement rate is higher and where poverty rates are lower are likely to leave the workforce earlier. In this regard, staying on in work is about the financial imperative - where private savings and social security fails to deliver adequate income in retirement, individuals are likely to stay in the workforce, health permitting. But avoidance of financial ruin and poverty are not the only factors keeping people in work. Our findings suggest that health and education are also important – those countries whose older populations are in better health or who are better educated are also more likely to work longer. These factors appear to be particularly relevant with regard to the high employment rates experienced across Nordic countries. For individuals in these countries, working longer is likely to be less about avoiding poverty and more about making the most of their working years – possibly to maximise lifetime income and possibly because they actually enjoy work. Evidence from a recent ILC-UK report found that, with regard to the UK at least, working after State Pension age was strongly linked to whether or not someone enjoyed their job and less about the financial incentive to continue working<sup>43</sup>.

## 5: Conclusion

Harnessing the power of older workers must be a critical component of any long-term strategy to rejuvenate economic growth across the Eurozone. Our analysis shows that raising labour force participation rates amongst older age groups could make a significant difference to rates of economic growth over the next 40 years. Supporting longer working lives is therefore not only a necessary measure to help stem the tide of long-run economic stagnation that an ageing population implies, but also form part of a package of measures to fully utilise the productive potential of the Eurozone's workforce.

There is cross-country evidence to show that pensioner poverty can drive up labour force participation at older ages as working longer is a financial necessity. But skills and health are also associated with longer working lives and are particularly important in explaining the position of Nordic countries which have some of the highest participation rates at older ages and lowest pensioner poverty rates of any OECD country. Policy responses must not therefore be limited to reducing social security benefits or raising State Pension ages in order to stimulate longer working lives but also invest in the future health and skills base of their older populations.

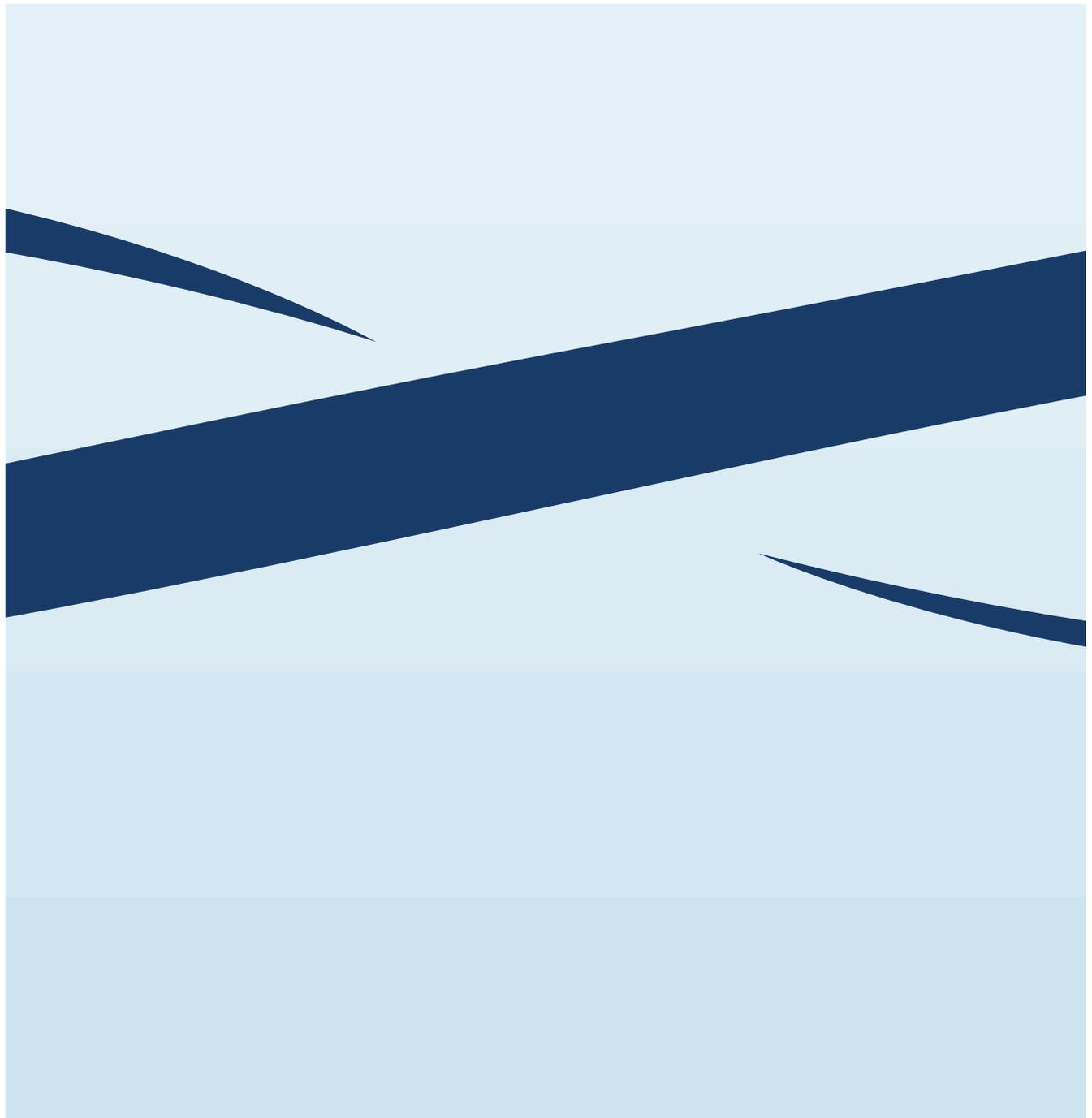
While the Eurozone's current economic predicament is clearly at the forefront of policymaker's minds, they should not lose sight of the medium to long-term strategic challenges facing the Eurozone. As part of any programme of structural reform, there should be a focus on how to maximise the productive potential of the Eurozone's workforce over the long-term. This means investment in skills and training at all ages, the development and utilisation of new technologies and, critically in the context of this report, the encouragement of greater workforce participation amongst the over 50s. The findings of this paper are clear. If these measures are not taken, many Eurozone countries are likely to stutter on for years to come.

## Endnotes

- 1 Eurostat, Median Ages
- 2 M. Roemer and M. Gugerty (1997) Does Economic Growth Reduce Poverty? Harvard Institute for International Development.
- 3 K. Paul and K. Moser (2009) Unemployment impairs mental health: Meta-analyses, *Journal of Vocational Behavior* Volume 74, Issue 3, June 2009, pp 264–282
- 4 B. M. Friedman (2006) The moral consequences of economic growth. *Society*, Volume 43, Issue 2, pp15-22
- 5 D. Bloom and A. Sousa-Poza (2013) Ageing and Productivity: Introduction. Harvard Program on the Global Demography of Aging, Working Paper No. 98
- 6 J. Bound, M. Schoenbaum, T. Stinebrickner, T. Waidmann (1999) The dynamic effects of health on the labor force transitions of older workers. *Labour Economics*, Volume 6, Issue 2
- 7 R. Disney, C. Emmerson, M. Wakefield (2006) Ill health and retirement in Britain: A panel data-based analysis. *Journal of Health Economics*, Volume 25, Issue 4
- 8 S. Robroek, M. Schuring, S. Croezen, M. Stattin, A. Burdorf (2013) Poor health, unhealthy behaviors, and unfavorable work characteristics influence pathways of exit from paid employment among older workers in Europe: a four year follow-up study. *Scandinavian Journal of Work Environment and Health*
- 9 H. Pillay, K. Kelly and M. Tones (2008) Exploring work and development options to reduce early labour force exit of mature aged Australians. *International Journal of Training Research*
- 10 OECD Economics Department (2004) The Labour Force Participation of Older Workers: The effects of pension and early retirement schemes
- 11 Grandparents Plus (2013) Policy Briefing 04, Grandparents and childcare
- 12 F. Kluge, E. Zagheni, E. Loichinger, T. Vogt (2014) The Advantages of Demographic Change after the Wave: Fewer and Older, but Healthier, Greener, and More Productive? *PLOS ONE*
- 13 J. Feyrer (2007) Demography and Productivity. *The Review of Economics and Statistics*, MIT Press
- 14 R. Paul and J. Townsend (1993), Managing the Older Worker: Don't Just Rinse Away the Gray, *The Academy of Management Executive*, Vol. 7.
- 15 B. Mahlberg, I. Freund, J. Cuaresma, A. Prskawetz, (2013). Ageing, productivity and wages in Austria. *Labour Economics* Volume 22.
- 16 A. Cardoso et al (2011) Are Older Workers Worthy of Their Pay? An Empirical Investigation of Age-Productivity and Age-Wage Nexuses. *De Economist*, Volume 159
- 17 T. Zwick, C. Göbel, (2013). Are Personnel Measures Effective in Increasing Productivity of Old Workers? *Labour Economics*, Volume 22
- 18 F. Schmidt, & J. Hunter, (1998). The validity and utility of selection methods in personnel psychology: Practical and Theoretical Implications of 85 years of research findings.
- 19 Schwartzman et al (1987) Stability of intelligence. A 40 year follow-up. *Canadian Journal of Psychology*, 41, pp. 244–256
- 20 Ibid
- 21 A. Lovasz, M. Rigo, (2013) Vintage Effects, Ageing and Productivity. *Labour Economics*, Volume 22
- 22 T. Lallemand and F. Rycx (2009) Are Older Workers Harmful for Firm Productivity? *De Economist* Volume 157, Issue 3, pp 273-292
- 23 ONS Full Report: Sickness Absence in the Labour Market, February 2014
- 24 E. Rogers, W. Wiatrowski (2005) Injuries, Illnesses, and Fatalities among Older Workers. *Monthly Labour Review*
- 25 J. Feyrer (2007) Demography and Productivity. *The Review of Economics and Statistics*, MIT Press
- 26 A. Prskawetz, and T. Lindh (eds.) (2007). *The Relationship between Demographic Change and Economic Growth in the EU. Forschungsbericht Nr. 32*. Vienna: Verlag der Österreichischen

Akademie der Wissenschaften.

- 27 A. Mason, (2005) Demographic transition and demographic dividends in developed and developing countries. United Nations expert group meeting on social and economic implications of changing population age structure.
- 28 K. Prettner, D. Bloom, H. Strulik, (2013). "Declining fertility and economic well-being: Do education and health ride to the rescue?," *Labour Economics*, Elsevier, Elsevier, vol. 22(C), pages 70-79
- 29 Gregg, P. (2001), The impact of youth unemployment on adult unemployment in the NCDS, *The Economic Journal*, Vol. 111, No. 475, Features, pp. F626-F653.
- 30 Gregg, P. & E. Tominey (2005), The wage scar from male youth unemployment, *Labour Economics*, Vol. 12, pp. 487-509.
- 31 Radl (2013) 'Labour Market Exit and Social Stratification in Western Europe: The Effects of Social Class and Gender on the Timing of Retirement.' *European Sociological Review*, 29(3): 654-668.
- 32 Blöndal & Scarpetta (1999) 'The Retirement Decision in OECD Countries.' OECD Economics Department Working Papers, No. 202.
- 33 cf. Guillemard & van Gunsteren (1991) 'Pathways and their prospects: A comparative interpretation of the meaning of early exit,' in M. Kohli, M. Rein, A-M. Guillemard, & H. van Gunsteren (eds.) *Time for Retirement: Comparative Studies of Early Exit from the Labor Force*. Cambridge: Cambridge University Press, pp. 362-387.
- 34 Ebbinghaus (2006) *Reforming Early Retirement in Europe, Japan and the USA*. Oxford: Oxford University Press.
- 35 Blau & Shvydko (2007) 'Labour market rigidities and the employment behavior of older workers.' IZA Discussion Paper, No. 2996.
- 36 cf. Bound et al. (1999); Evandrou & Glaser (2003); Vickerstaff & Cox (2005) 'The dynamic effects of health on the labor force transitions of older workers.' *Labour Economics*, 6: 179-202.
- 37 cf. Szinovacz & Davey (2005); Riach & Loretto (2009) 'Predictors of Perceptions of Involuntary Retirement.' *The Gerontologist*, 45(1): 36-47.
- 38 Radl (2013) 'Labour Market Exit and Social Stratification in Western Europe: The Effects of Social Class and Gender on the Timing of Retirement.' *European Sociological Review*, 29(3): 654-668.
- 39 Ebbinghaus (2006) *Reforming Early Retirement in Europe, Japan and the USA*. Oxford: Oxford University Press
- 40 Radl (2013) 'Labour Market Exit and Social Stratification in Western Europe: The Effects of Social Class and Gender on the Timing of Retirement.' *European Sociological Review*, 29(3): 654-668.
- 41 cf. Duncan & Loretto (2004) 'Never the Right Age? Age-Based Discrimination in Employment.' *Gender, Work & Organisation*, 11(1): 95-115.
- 42 cf. Noone et al. (2010) 'Do Men and Women Differ in Their Retirement Planning? Testing a Theoretical Model of Gendered Pathways to Retirement Preparation.' *Research on Aging*, 32(6): 715-738.
- 43 Ben Franklin et al (2014) *The Missing Million: Illuminating the employment challenges of the over 50s*, Report by ILC-UK



---

ILC-UK  
11 Tufon Street  
London  
SW1P 3QB  
Tel : +44 (0) 20 7340 0440

**[www.ilcuk.org.uk](http://www.ilcuk.org.uk)**

Published in November 2014 © ILC-UK 2014

Registered Charity Number: 1080496.

