

## Chapter 5

### A closer look at the over-50s

*This chapter documents labour market and retirement patterns among the over-50s. It first shows that employment of older adults varies substantially across socio-economic groups. Lifelong learning opportunities and inclusive labour markets are essential to ensuring that workers of all educational backgrounds have the possibility of extending their careers until older ages. The chapter then demonstrates that there is a large scope for higher labour force participation rates among the over-50s from a health perspective. Beyond health, other factors, including pension system parameters and difficult working conditions, contribute to the strong drop in employment rates in people's 50s and early 60s. Pension systems need to be well-designed and inclusive to fight old-age poverty effectively. The level of safety net provision in pension systems varies considerably across OECD countries.*

### Key findings

- Employment patterns among older adults and pathways into retirement differ considerably across socioeconomic groups. Low-educated people are more likely to retire when reaching retirement age.
- Many older workers do not possess the skills needed to use new technologies. Lifelong learning opportunities are essential to reducing labour market disparities.
- Poor health is an important factor pushing older workers into early retirement, but it explains the sharp decline of employment rates from age 55 to a limited extent only. Beyond health, pension system parameters, working conditions and family characteristics are among the factors that determine at what age workers retire.
- There is significant scope for a number of countries that combine relatively high old-age poverty rates and low safety-net benefits to increase the value of their safety-net. Poverty levels are further increased as most countries index their old-age safety nets to prices.
- Wide pension coverage is needed to fight old-age poverty. Low coverage from voluntary pensions in the lower income brackets has a variety of reasons: higher replacement rates from mandatory schemes, limited capacity to save, myopic behaviour driven in part by insufficient financial literacy, tax incentives benefiting those with higher incomes, and sub-optimal design of voluntary schemes.

### Introduction

While income poverty rates among the over-50s have fallen since the mid-1980s in many OECD countries, inequality at older ages remains a major challenge to which there is no simple, one-size-fits-all solution. Among people in the second half of their lives, health, labour market and income disparities are already deeply entrenched. Efficient employment policies for older workers and equitable pension rules are needed to reduce such inequalities and fight unequal ageing. Policy makers should seek to ensure that older people of all educational backgrounds have access to inclusive labour markets, possess the skills to pursue high-quality jobs and are in sufficiently good health to extend their working lives. Pension systems should provide adequate retirement income and prevent old-age poverty.

This chapter first examines the extent of employment-related disparities between groups from different educational backgrounds. Section 2 then goes on to address the effects of the digital economy, particularly on older workers, while the following section discusses how labour markets can be made more inclusive. Section 4 looks at estimates of older workers' health-related work-capacity, Section 5 identifies and quantifies determinants of the retirement decision. Section 6 addresses issues relating to adequate retirement income.

#### 1. Education-related employment gaps among the elderly

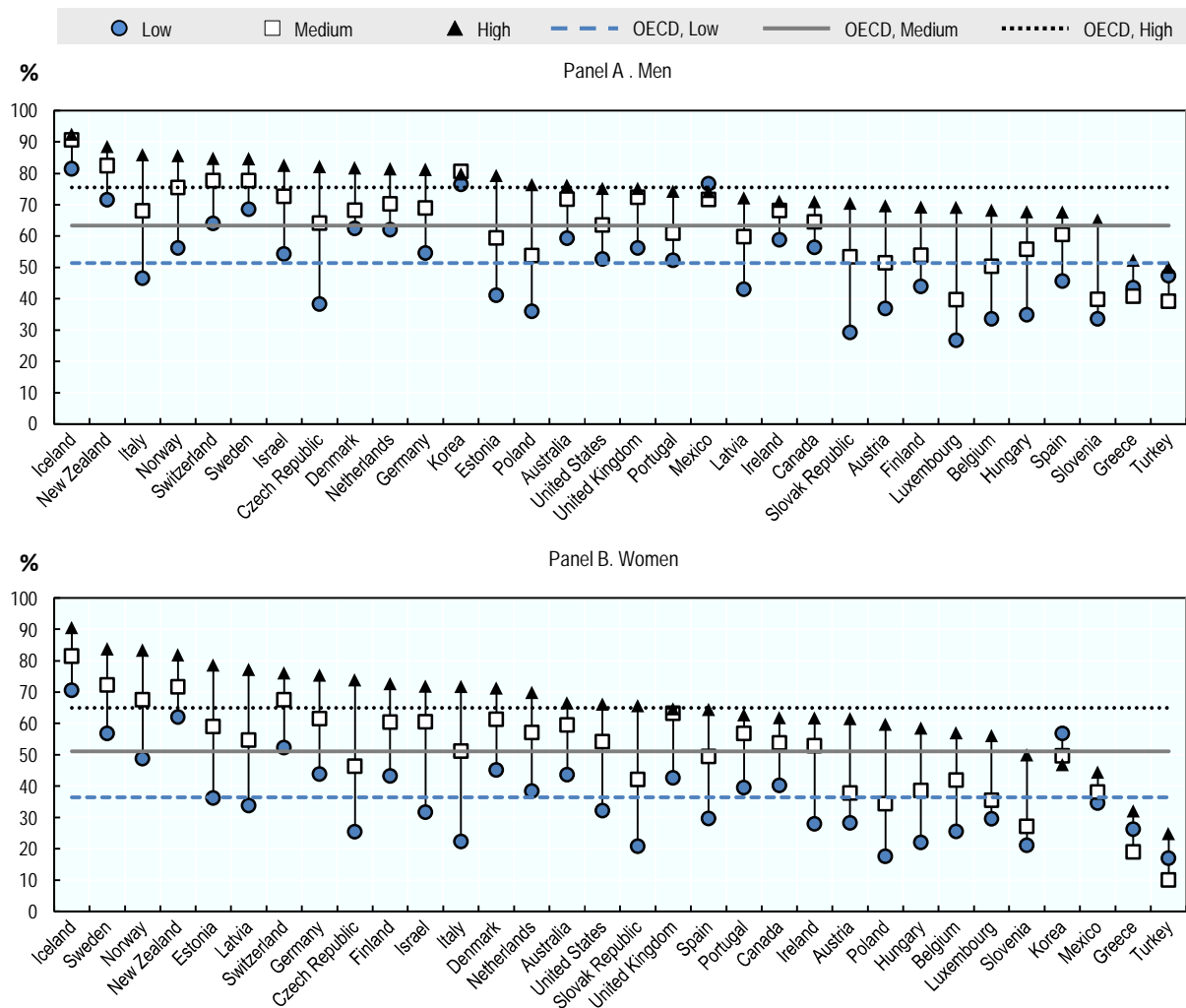
Employment rates among the over-50s differ widely along levels of educational attainment. In 2015, the average OECD employment rate among 55-to-64 year-old men with no upper-secondary schooling was 51%. Among those with upper-secondary schooling it was 63%, while 75% of men with tertiary-level degrees in this age bracket were in employment (Figure 5.1, Panel A).

For women in the same age group, employment rates show even steeper education-related gradients. In 2015, the average employment rate among females aged 55-64 who left school before the upper-secondary level was 36%. It was 51% for those who had completed upper-secondary education and 65% among those with tertiary education

degrees (Panel B). The only countries with low or no clear education-related employment gaps for men and women were Korea, Mexico, Greece and Turkey, where educational differences are small and high educational attainment does not always coincide with higher employment rates.

**Figure 5.1. Employment rates among older people rise with educational attainment, 2015**

Rates as percentages of the population aged 55-64 by level of educational attainment



Note: “Low” denotes below upper-secondary education, “Medium” upper-secondary and post-secondary non-tertiary education, and “High” tertiary education.

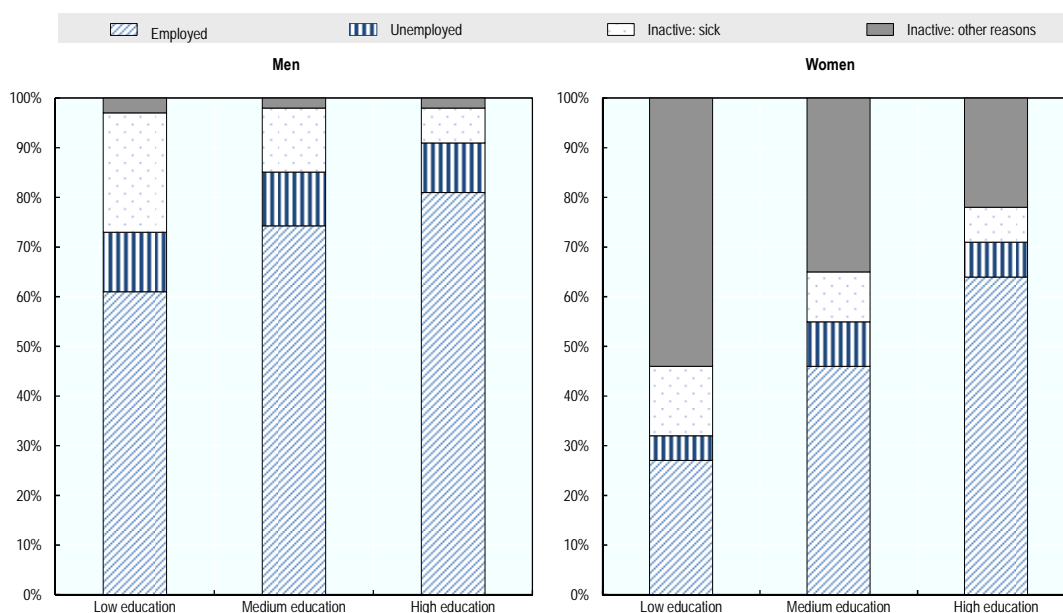
Source: OECD (2015), *OECD Education at a Glance: Educational attainment and labour-force status* (dataset), [http://stats.oecd.org/Index.aspx?DataSetCode=EAG\\_NEAC](http://stats.oecd.org/Index.aspx?DataSetCode=EAG_NEAC).

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The education-related employment gap later in life narrows with age in absolute terms and widens in relative terms. In absolute terms it narrows on average in the OECD from 29 percentage points among 55-to-59 year-olds with high and low levels of educational attainment to 24 points in the 60-to-64 year-old age group.<sup>1</sup> In relative terms, 55-59 year-olds with low levels of educational attainment were 35% less likely than their well-educated peers to have work, while 60-to-64 year-olds were 41% less likely (see Chapter 2).

The transition from work to retirement in OECD countries also differs with educational background (Figure 5.2). While most older workers with high education are employed until they retire, groups with lower levels of educational attainment are much more likely to retire after spells of inactivity, including for health reasons. The proportion of men not working prior to retirement for health reasons, for instance, is substantially higher among the poorly than the highly educated (24% versus 7%) reflecting socio-economic differences in health (Chapter 2). More than 50% of poorly educated women describe themselves as “inactive” before retirement for reasons other than health<sup>2</sup> – a share that falls to under 30% among their highly educated peers, pointing to retirement differences between these two groups.

**Figure 5.2. Last self-declared labour market status before retirement in OECD countries, people retiring between the early 2000s and today**



*Note:* The left-hand column in the left-hand panel indicates that about 60% of men with low education transit directly from work to retirement and slightly above 10% from unemployment, over 20% from sickness/disability. About 5% were out of the labour force for reasons other than sickness/disability immediately prior to retiring. The calculations are based on the assumption that permanently sick people, who do not work, are out of the labour force.

*Source:* Calculations based on data for 18 OECD countries reported in the Survey of Health, Ageing and Retirement in Europe (SHARE), the United States Health and Retirement Study (HRS) and the English Longitudinal Study (ELSA).

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## 2. Digital technologies drive age inequalities at work

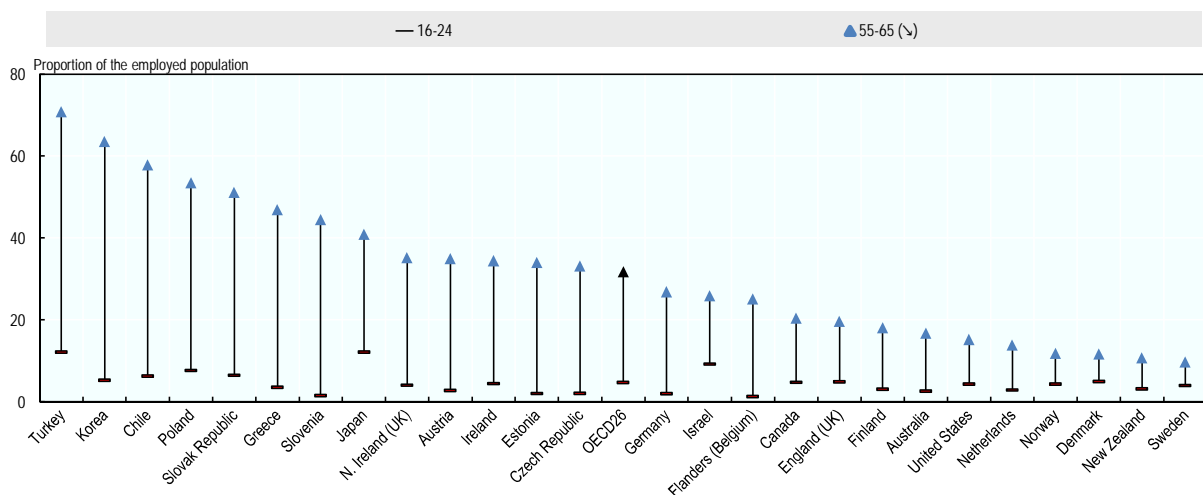
With rapid population ageing and low rates of employment among low-educated older workers, the digitalisation of the economy prompts concern over potential job losses and technological unemployment (OECD, 2016a). Although digital technologies in the workplace carry the promise of greater efficiency and productivity, they may also heighten age-related inequalities. Senior workers are less familiar with them than younger ones, thus less likely to use them effectively in the workplace. Digital technologies are also likely to accelerate skills obsolescence and make the elderly less employable. Some recent studies suggest that the demand for older workers is negatively affected by technological change and innovative work practices (Behagel et al., 2014).

### *Age gaps in digital technology proficiency*

The latest OECD data on skills, employment and technology use provide new evidence on the effects of digitalisation on seniors' employability and well-being. In all OECD countries, proficiency in literacy, numeracy and problem solving in technology-rich environments typically peaks between the ages of 25 and 34, while 55-to-65 year-olds are generally the least proficient of all groups of working age (OECD, 2016b). It is crucial, for both individuals and society, that older workers are not left behind by fast-paced technological change, particularly in a context of rapid population ageing.

The Survey of Adult Skills (PIAAC) shows that even though there are wide variations between individuals of the same age group, older adults are generally much less proficient in computer skills than younger ones. On average, 32% of 55-to-65 year-olds have no computer experience or have failed core ICT tests, compared with 5% of 16-to-24 year-olds (Figure 5.3). Indeed, the figure is lower than 15% among older adults in five countries only – the Netherlands, Norway, Denmark, New Zealand and Sweden.

**Figure 5.3. Many older workers have no computer experience or have failed core ICT tests, 2012 and 2015<sup>a</sup>**



Note: The OECD average refers to the unweighted average of the 26 OECD countries/economies that participated in the 2012 and 2015 PIAAC surveys.

a) Data for Chile, Greece, Israel, New Zealand, Slovenia and Turkey are for 2015. For all other countries, data is for 2012.

Source: OECD, Survey of Adult Skills (PIAAC) 2012 and 2015, <http://www.oecd.org/skills/piaac/>.

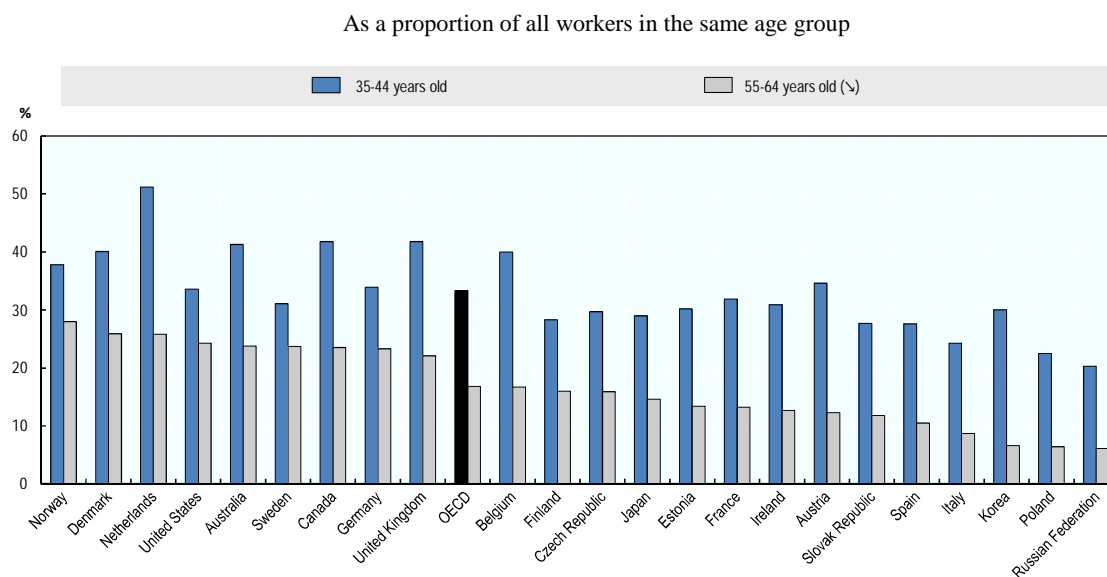
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Workplace technology – such as emails, word processing software and Internet – equips workers with the tools they need to be more productive, so increasing efficiency, cutting business costs and enhancing customer service. International data from PIAAC show that the use of digital technologies at work differs significantly between age groups. On average, only 27% of older workers (aged 55-64) use email or the Internet at work daily, against 49% of prime-age workers (35-to-44 years old). There are similar age-related differences when it comes to the everyday use of word processing software and spreadsheets (Figure 5.4).

The age gap in the frequency of digital technology use in the workplace is evident across all PIAAC participant countries. It is particularly pronounced in Korea where the ratio of older to prime-age workers using email or the Internet on a daily basis in the workplace is 1/4. It is also low in Poland and the Russian Federation at 1/3. In all three countries, the routine use of email is very uncommon not only among older workers, but among all workers. Considerable age gaps are also to be found in Austria and Belgium, where older workers are, respectively, 32 and 30 percentage points less likely to use email routinely.

As for word processing software or spreadsheets, the ratio of older to prime-age workers making everyday use of them is 1/4.5 in Korea and 1/3.5 in Poland. There are also significant gaps in the Netherlands and Belgium, where older workers are, respectively, 25 and 23 percentage points less likely to make routine use of processing software or spreadsheets (Figure 5.4). Norway and Sweden, by contrast, stand out as exceptions: age-related differences in digital technology use are less than 10 percentage points.

**Figure 5.4. Workers routinely using spreadsheets or word processing software, by age group, 2016**



*Note:* The OECD average is calculated from the OECD countries that participated in the first round of the PIAAC study.

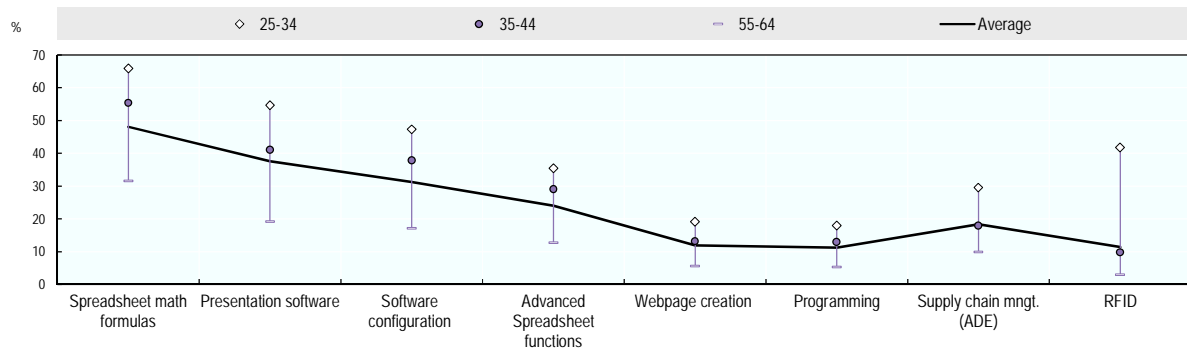
*Source:* OECD based on the PIAAC dataset.

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The gap between older and younger workers in the use of digital technologies increases as technology grows more complex (Figure 5.5). In OECD countries, prime-age workers are 1.7 times more likely to make frequent use of simple spreadsheet

mathematical formulas than older workers. Fifty-five per cent make basic use of spreadsheets, compared to 32% of their older peers, a gap of 24 percentage points (55% vs. 32%). As for the frequent use of advanced spreadsheet functions, the gap is 16 percentage points in absolute terms – 29% versus 13% – with prime-age workers 2.3 times more likely than their elders to use them. The countries with the widest age gaps in the use of increasingly complex software functionalities are Turkey and Ireland, where younger workers are respectively 3.1 and 4.4 times more likely to use them.

**Figure 5.5. Age differences in the use of increasingly complex software, average across countries, 2016**



*Note:* RFID refers to radio frequency identification technologies.

*Source:* OECD findings based on Eurostat Information Society Household Survey.

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### ***Factors that shape digital technology age gaps***

What shapes age-related differences in the use of digital technologies? Among the competencies measured by PIAAC, proficiency in problem solving in a technology-rich environment (PRSTE) may be regarded as a good proxy for assessing the ability to perform increasingly complex ICT-related tasks (OECD, 2016c). As proficiency in PRSTE declines with age, the question is whether older workers' lower-intensity use of digital technologies results only from their less advanced digital skills or from their generally poorer levels of educational attainment, too.

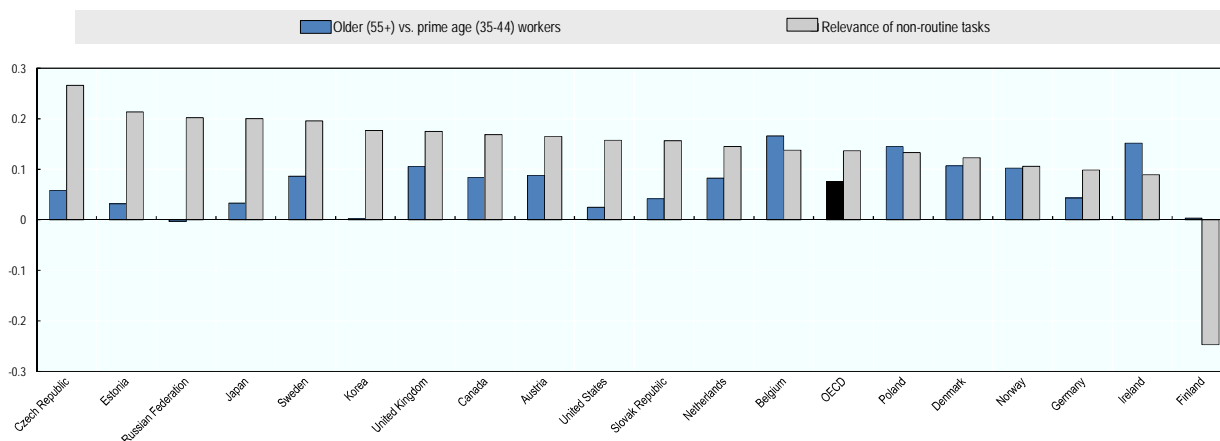
The PIAAC findings indicate that the effect of PRSTE proficiency on the routine use of email or Internet in the workplace becomes quantitatively negligible after controlling for educational attainment. One additional year of education is sufficient to increase the odds of using emails or the Internet on a daily basis by 35 percentage points on average across countries. However, higher educational attainment alone is not enough to address age-related differences. Older workers are 30% less likely to make daily use of emails or the Internet than their prime-aged (35-44 years old) peers with similar educational attainment. Indeed, the use of emails and Internet varies significantly with age in the vast majority of countries. Exceptions are Finland, Japan and Sweden where – once the effects of proficiency in PRSTE, years in education, gender and marital status are accounted for – older workers' use of email or the Internet is not significantly different from that of prime-age workers.

In addition to educational attainment and skills levels, the nature of the occupation helps explain age-related differences in the use of digital technologies. After controlling for years in education and ICT proficiency, it might be assumed that age differences between workers employed in similar types of occupations tend to fade. However, data

analysis shows that, while the level of routine tasks in an occupation matters, age-related differences in the degree of digital technology use persist. Working in occupations that entail more non-routine tasks, for example, increases the likelihood of using emails or the Internet daily in the workplace by 14 percentage points on average in the OECD (Figure 5.6). When older workers (over the age of 55) move into jobs that require them to carry out a greater number of non-routine tasks, their use of communication and office productivity software rises by an average of 8 percentage points more than among prime-age workers (35-44 years old) and by as much as 17 percentage points in Belgium and 15 in Poland and Ireland.

**Figure 5.6. Daily use of email or the Internet, by routine-task intensity of occupation, 2016**

Average marginal effects of routine-intensive jobs on the likelihood of using emails or the Internet daily



*Note:* The grey bars indicate the extent to which performing non-routine tasks affects the probability of using emails or the Internet daily regardless of age. Darker blue bars indicate the extent to which carrying out non-routine tasks increases older workers' relative probability of using emails or the Internet daily in comparison with their prime age peers. The "OECD average" bars compute the average effects for the OECD countries participating in the first round of the PIAAC study.

*Source:* OECD based on the PIAAC dataset.

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### *Age-biased technological change and labour market outcomes*

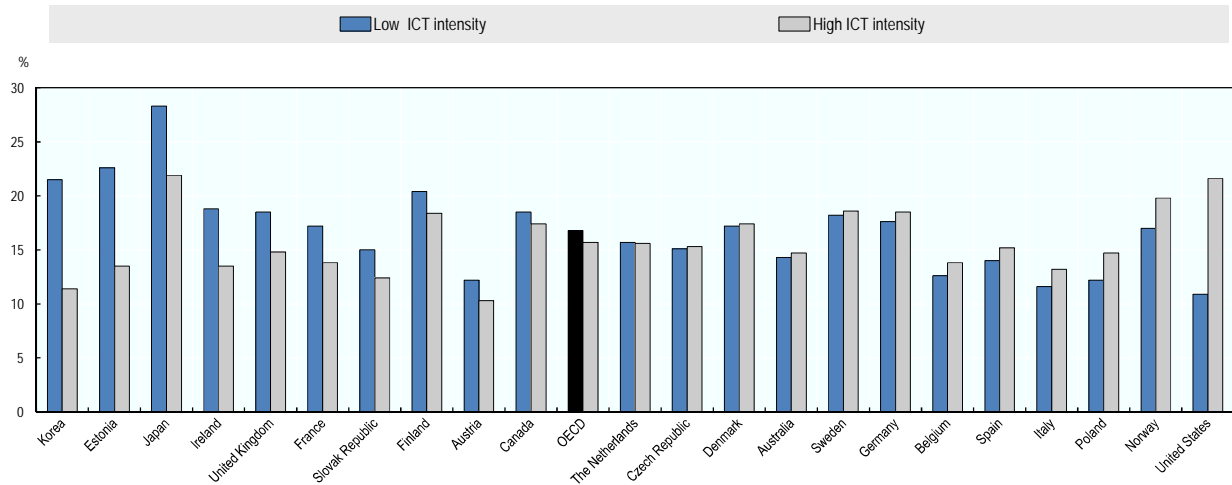
#### *ICT intensity of occupations and employment composition by age groups*

The risk of unemployment tends to be lower in technology-intensive occupations, but older workers are less likely to work in them than their prime-age peers. Likewise, ICT-intensive occupations employ a relatively younger population. For example, the 18%-share of older workers in relatively lower-tech occupations falls slightly to 15% in more technology-intensive ones (OECD, 2017).

In some countries, the share of older workers in the employed population drops rapidly as occupations become more technology-intensive (Figure 5.7). This is the case, for example, in Korea, Estonia and Japan, where the percentage of older workers in highly technology-intensive occupations is between 6 and 10 percentage points less than in low-tech jobs. In the United States, by contrast, the percentage of older workers is significantly greater (over 10 percentage points) in occupations which are very technology intensive.



**Figure 5.7. Share of older workers (55-64) in total employment in occupations where ICT intensity is low and high, 2016**



*Note:* The OECD average is calculated as the average of the OECD countries that took part in the first round of the PIAAC study. The countries are ordered according to the difference between the share of older workers in jobs with high ICT intensity minus the share of older workers in jobs with low ICT intensity.

*Source:* OECD based on the PIAAC dataset.

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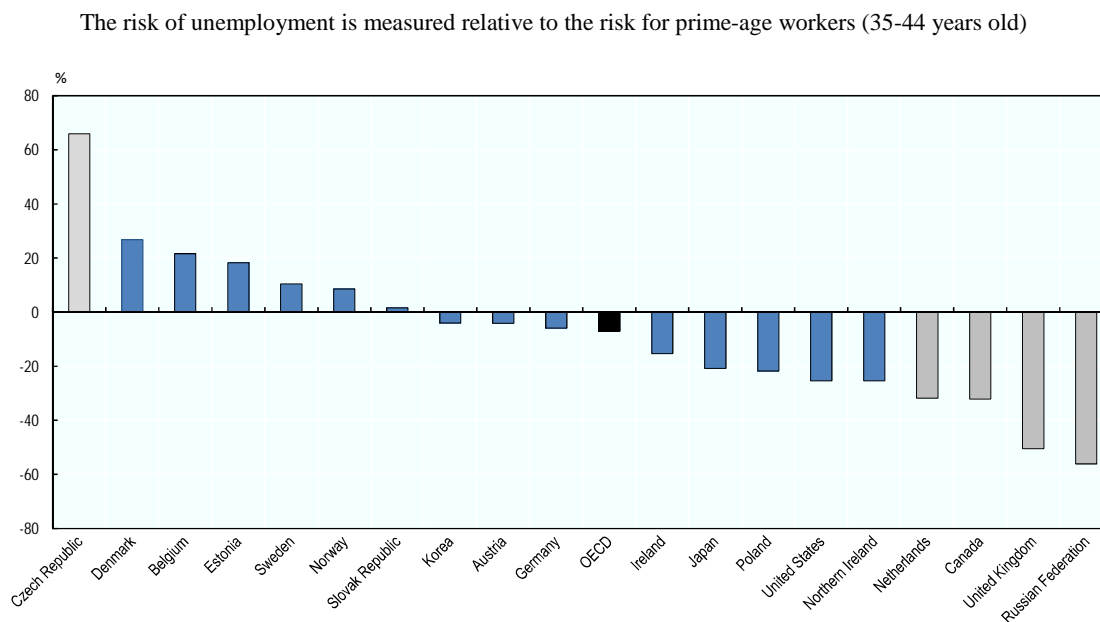
### *Do digital technologies heighten older workers' risk of unemployment?*

Evidence for the 2008-12 period shows that workers in more technology-intensive and innovative sectors have a lower risk of unemployment (OECD, 2017). However, older workers appear to be dismissed in greater numbers than younger workers at times of lay-offs. For every prime-age worker who loses his or her low-tech job, 1.7 older ones lose theirs'. In technology-intensive occupations the ratio rises to 1/2.9. Age inequalities may also exist in labour markets that are characterised by high levels of technological intensity and change.

In that regard, a recent OECD study explored the extent to which job losses between 2008 and 2012 could be attributed to technological change, educational attainment, technology intensity and ageing (OECD, 2017). The OECD findings suggest that, while the risk of unemployment generally falls with educational attainment, proficiency in PRSTE, and with the technology-intensive nature of an occupation, controlling for these three factors does not eliminate age-related differences in the risk of job loss. During the period 2008 to 2012, older workers were almost three (2.8) times more likely than their prime-age peers to lose their job.

At the sector level, fast-paced technological change does not generally seem to put older workers at greater risk of unemployment. Only in the Czech Republic was technological change estimated to affect them more significantly than their prime-age peers. Indeed, working in a sector undergoing technological change actually lessened the risk of unemployment among older workers in the Netherlands, Canada, the United Kingdom and the Russian Federation (Figure 5.8). Similarly, older employees working in non-routine occupations are no more at risk of unemployment than their younger peers. As in the case of ICT specialist occupations, being employed in a non-routine intense job offsets the negative impact of ageing on the likelihood of a job loss in the five years prior to the survey.

**Figure 5.8. Effects of technological change on the risk of unemployment among older workers (aged 55-64), 2016**



*Note:* The graph displays older workers' relative unemployment risk in sectors characterised by high degrees of technological change. The y axis corresponds to the changes in the probability to fall into unemployment. Unemployment risk is measured as the probability to fall into unemployment between 2008 and 2012. Grey bars indicate statistically significant percentage changes in the probability of falling into unemployment, dark blue bars reflect changes that are statistically not significantly different from 0.

The OECD average is the average calculated for the OECD countries that took part in the first round of the PIAAC study.

*Source:* OECD based on the PIAAC dataset.

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### *Lifelong learning*

At the aggregate level, technological change does not seem to penalise older workers more than prime-age workers. However, age-related differences in the use of digital technology can put older workers at a disadvantage. If they are to extend their working lives, then they must have access to lifelong learning programmes that address the skills needs of technology-intensive occupations in the digital economy (Section 3) and enable them to upgrade and acquire new digital skills. Lifelong learning opportunities for all are indeed crucial to fighting age-disparities. Age-related differences in the use of digital technologies are not attributable only to older workers' lack of the required skills, however. They also reflect the fact that older people generally work in more heavily routinised occupations than the younger generation. In order to improve their access to non-routine jobs, lifelong learning programmes should be designed to strengthen the skills required to perform jobs that comprise non-routine and non-manual tasks.

### **3. Inclusive labour markets for older workers**

Equal-opportunity employment policies are not age-specific. Rather, they seek to support at-risk groups, irrespective of their age. That is one of the key messages delivered by the OECD Recommendation of the Council on Ageing and Employment Policies (OECD, 2016b). Older workers are a very diverse group. Many do well in the labour market, while others struggle to find and hold on to jobs, very often because they lack sufficient skills.

Older workers belong to a generation that was initially less well educated than their younger colleagues and are much less likely to take part in job-related training. The additional risks of obsolete skills and reduced work capacity due to health problems (Section 5) tend to increase with age. The right policies could both mitigate those risks and harness older workers' assets – their experience for example – which are often not fully exploited (Section 5). Promoting the employability of workers throughout their working lives – with a view to strengthening labour market opportunities at an older age – is key to preventing unequal ageing. And as populations age rapidly, it is essential not only to mobilise the potential workforce as much as possible but also to increase labour productivity, which requires a healthy, albeit greying, workforce with relevant skills.

### ***Investing in effective skill development strategies over the life course***

#### *Providing equal opportunities for workers to upgrade their skills and learn new ones at all ages*

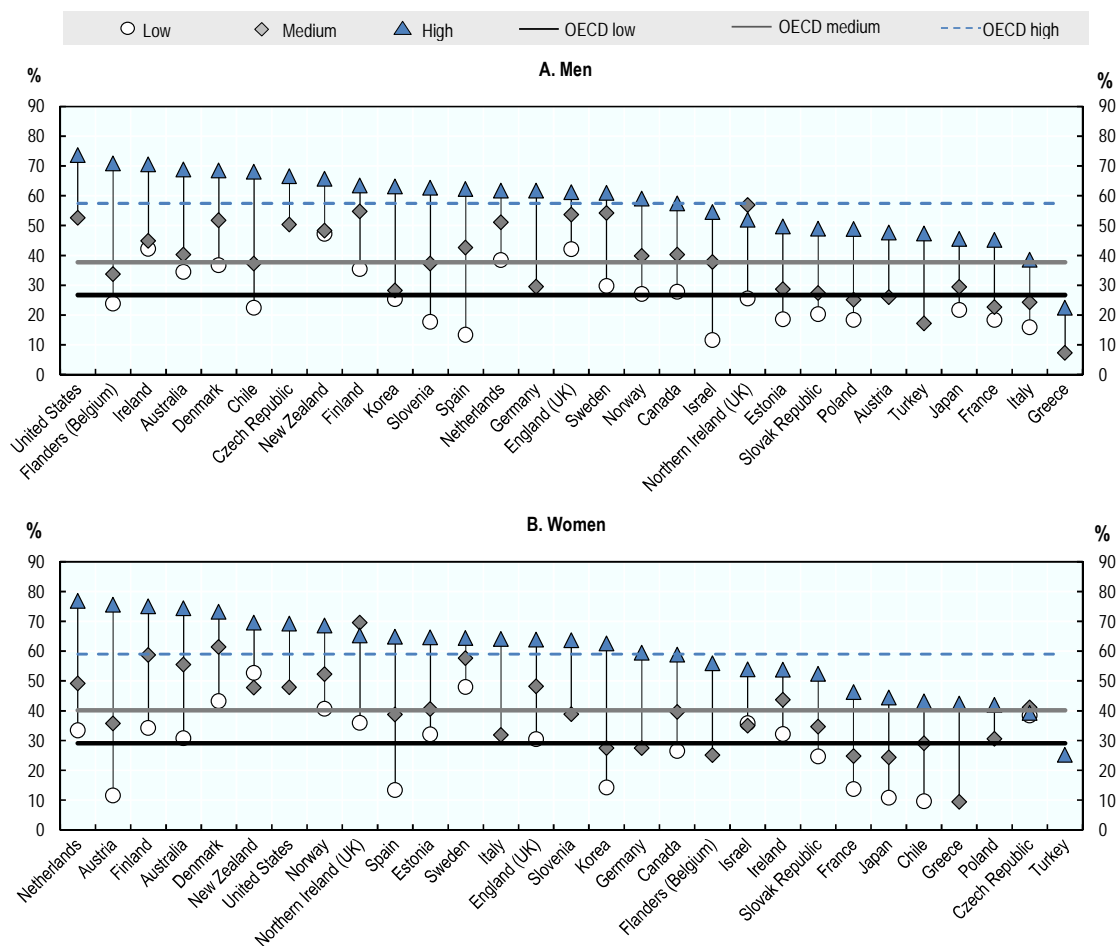
Workers who maintain and upgrade their competencies by training during their working life fare better in the labour market. They enjoy better employment prospects and better jobs. And upskilling becomes even more necessary with the digitalisation of the economy (Section 2). Yet, the most disadvantaged groups in the workforce – who include older workers – also receive less training, which further worsens their disadvantage. Moreover, as learning is inherently a dynamic process, vulnerable groups are prone to getting trapped in situations where they seldom have access to training. Their skills thus remain weak or deteriorate over time, which, in turn, makes it harder for them to draw benefit from learning activities.

Education helps increase older people's employment rates and improves their access to continuous training, to skills upgrading and to rewarding employment opportunities. And even if there are wide variations in elder employment rates between countries, those rates rise strongly with higher levels of educational attainment (Section 1). Furthermore, access to continued training is dictated primarily by workers' levels of initial education.

Thus, far from correcting the inequalities inherited from school, adult education reinforces them over the life course. On average, according to PIAAC data, access to training among employed men aged 55-to-65 increases steeply as their level of educational attainment rises – from 27% of employees with no upper-secondary education to 38% for those who completed upper-secondary education, and 57% among workers with higher-education qualifications (Figure 5.9, Panel A). The same is true of older women, so there is almost no gender gap in older workers' access to training (Panel B). Country differ strongly, however; those with the narrowest education- and gender-related age gaps are Denmark, New Zealand and Finland.

**Figure 5.9. Highly educated older workers are, on average, more likely to have access to continued training, selected OECD countries,<sup>a</sup> 2012 and 2015<sup>b</sup>**

As a percentage of employed individuals aged 55-65, by low, medium and high levels of educational attainment<sup>c</sup>



- a) OECD average refers to the unweighted average of the 29 OECD countries/economies that participated in PIAAC.
- b) Year 2015 for Chile, Greece, Israel, New Zealand, Slovenia and Turkey and 2012 for all other countries.
- c) “Low” level is below upper-secondary level of education. “Medium” denotes education to the upper-secondary level. “High” denotes tertiary educated. The OECD does not publish statistics when the sample size is smaller than five observations per cell. That is the case for Austria, the Czech Republic, Germany, Greece, Turkey and the United States for low-educated employees who take part in training; for Belgium, Germany, Greece, Italy, Poland, Slovenia and the United States for low-educated women who take part in training; and for Greece for medium-educated men and women who take part in training.

Source: Survey of Adult Skills (PIAAC) 2012, 2015.

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Relatively few older people attend education or training programmes to improve their skills. Their employment potential suffers as a consequence. Rates of participation in formal and informal training differ substantially from one age group to another (OECD, 2016b): 37% of 50-to-65 year-olds, 57% of 30-to-49 year-olds and 61% of 16-to-29 year-olds.

Older workers' restricted access to job-related training meets employers' perception that it is a poor investment that yields benefits over too short a time. Policy makers must make training more attractive in the eyes of older workers and persuade employers to provide training even after the age of 45. According to the sixth European Working Conditions Survey carried out in 2015, the main issues for workers over 50 are inadequate training provisions and fewer prospects for career advancement (Eurofound, 2016).

Policy should seek to ensure that continuous learning is more work-focused and an integral part of age management. Training for workers approaching the end of their careers should pay off swiftly to ensure positive returns for both employers and employees. It could, for example, be directly tied to a specific task or job. Denmark's *Jobrotation* scheme, for example, encourages firms to train their employees, by providing them with a short-term subsidy to hire a replacement for the employee in training (OECD, 2015b). To receive the subsidy, firms should employ stand-ins who receive unemployment insurance or social assistance benefits. The aim is to combine the upskilling of workers with workplace experience for the unemployed.

#### *Delivering the right job skills to the right people*

Adult learning has two main functions:

- equip workers with job-related skills that match employers' needs and yield direct returns in productivity, employability and earnings;
- provide people with foundation skills that have less immediate returns but are essential to the support of lifelong learning.

To be effective, vocational education and training (VET) systems should find the right mix of foundation and job-related skills. Although the mix varies according to the industry, firm, occupation, and individual workers, it is particularly important that it evolves throughout working life, with foundation skills becoming progressively less important as people grow older. Programmes designed along the lines of an apprenticeship concept – combining short classroom sessions with a firm-based approach – are more effective for older workers, as is informal, self-determined training with a clear focus on practical, relevant work issues. Only recently have countries started to promote the access of adults to apprenticeship schemes. One example is New Zealand Apprenticeships, a programme introduced in 2014 and under which all apprentices now enjoy the same level of government support, regardless of age.<sup>3</sup> Previously, support and mentoring were available only to 16-to-21 year-old apprentices.

Providing guidance in lifelong learning helps to improve the match between the training needs of firms and workers. Case studies showed that career guidance stimulates older employees to work on their own employability, to learn new skills and transfer expertise, so increasing job satisfaction. A further positive effect of guidance in employers' age management activities is that it counters negative stereotypes of older employees (Cedefop, 2015). Since 2007, Austria's public employment service, for example, has provided a counselling programme for employers that puts special emphasis on developing life-cycle-oriented educational programmes and disseminating the concepts of "diversity management" and "productive ageing".

### *Enhancing job quality for workers at all ages*

Job quality improves employees' sense of engagement and well-being at work and beyond. Furthermore, there is now abundant evidence that poor working environments can profoundly impair workers' physical and mental health (OECD, 2014a). Against that background, flexible working conditions can have an important bearing on decisions by older workers to keep working or retire. Part-time work should be an option for all older workers, even the most vulnerable. It facilitates phased-in retirement – i.e. transitioning to retirement through gradual reductions in the working week.

In the first place, working conditions should not impinge negatively on workers' health. Second, the workplace should be organised to make the most of a diverse workforce. Both recommendations pertain to all firms, irrespective of their size. Older and younger workers have relative strengths and needs that may give rise to positive externalities. The most obvious strengths of older workers are those that derive from maturity and experience, whereas younger workers may boast more up-to-date skills and the capacity to carry out more physically and mentally demanding work. At the same time, workers have needs and family responsibilities that differ according to their age and relate to how and how fast they work and the balance between work and family commitments. Few OECD countries have taken steps to promote intergenerational partnerships and the initiatives undertaken to date do not seem to have had a decisive impact (European Parliament, 2013a; OECD, 2013a).<sup>4</sup>

### *Making disability an ability*

Health problems are one common reason for withdrawing from the labour market, especially among older workers (Section 5). Yet many of those no longer in employment for health reasons would like to return to work. Occupational health care services and disability policies have a crucial role to play in this respect. Early intervention is often the best way of preventing long-term dependence on benefits – particularly among older workers. They are the group whose long-term absences most often translate into permanent withdrawal from the workforce and definitive loss of human capital for society.

Many countries have, in recent years, sought to strengthen both the work focus of sickness and disability benefits and assessments of remaining work capacity (OECD, 2010). To those ends, reforms have been directed at early detection and intervention, as in Switzerland.

Another example is Finland, where some private and public insurance pension agencies have developed early intervention methods – a negotiation process is required after 90 days of sick leave. Other agencies work on fostering well-being and health in the actual workplace context (Arnkil, 2012). Still in Finland, the Masto project (2007-11) sought to prevent depression and depression-related work disability by tackling mental health problems at an early stage (de la Maisonneuve et al., 2014).

Since 2010, the United Kingdom has required workers absent from work on sick leave for more than seven days to see their general practitioner (GP). The GP must determine whether the worker is fit or not for a certain degree of work and draw up a Statement of Fitness to Work (“fit note”) to that effect. Research carried out by the Department of Work and Pension showed that the measure has promoted returns to work.

Sweden drew up a clearly structured framework governing sick leave and the return to work between 2008 and 2010. It sets out a rehabilitation schedule with precise time

limits for testing the ability to work. The reform has improved the possibilities for people on disability benefits to resume work. It has also led to a sharp drop in the number of people on sickness and disability benefits and an increase in the number with partial work capacity now receiving unemployment benefits or activity allowances. Nevertheless, there is room for improving early activation of workers on long-term sick leave (OECD, 2013b).

Several countries have enacted reforms that both restrict access to disability pensions and promote work and the receipt of (partial) disability pensions. Australia, for example, has increased the number of hours that disability support claimants can work without having their benefits cancelled from 15 to 30 per week. In Denmark, the June 2012 reform of the disability pension restricted entitlements to disability benefit to the over-40s and required them to attend a rehabilitation programme before they could receive any disability benefit.<sup>5</sup> Other countries made further improvements to their working capacity assessment methods (e.g. Sweden and Australia).

Employers also play a very important part in moves to improve job prospects for people suffering from ill health or disability. There is a large body of evidence that helping people stay in work is much more effective for sustainable employment than helping them resume after an absence. And, to a large extent, it is employers who decide whether job requirements change with employees' health status, or whether they remain the same, so forcing workers with health issues to take long-term sick leave. It is also up to employers whether a person with reduced work capacity due to health problems is hired for a particular job.

Well articulated information campaigns, together with guidelines and financial support for making the necessary work and workplace adjustments and accommodations, can make employers more receptive to taking on people with ill health or disabilities. Examples of such guidance, particularly for SMEs, include:

- An initiative from the United Kingdom's Department for Work and Pensions designed to promote national occupational health advice services.
- Finland's Forum for Well-being at Work, which ran from 2012 to 2015. It shared information and good practices, increased the availability and visibility of networks and services for occupational well-being, strengthened co-operation, supported partnerships, and singled out successful well-being at work practices.<sup>6</sup>
- In Canada, the Mental Health Commission of Canada (MHCC) issued a National Standard of Canada for Psychological Health and Safety in the Workplace in 2013.<sup>7</sup> It has received very positive responses from unions, employers, employees, and the media, and has been adopted fully or partially by a number of businesses, universities and provincial governments. An evaluation was launched in 2014.

### ***Changing employer attitudes and encouraging them to help vulnerable older workers***

Affirmative action – like information campaigns and guidelines – to promote the work capacity of older people is necessary but not sufficient. It needs to be backed up with age-discrimination legislation. Furthermore, there are still objective obstacles which prevent employers from hiring and retaining older workers, especially the most vulnerable. Policy makers should seek to ease such obstacles, especially as raising retirement ages and curbing early retirement are parts of policy responses to longer remaining life expectancy at old age. In the wake of the recent economic crisis and the

rise in elder unemployment, it is particularly critical to continue addressing demand-side issues in order to strengthen the employability of ageing workers (Sonnet et al., 2014).

*Persuasion and coercion, two sides of the same coin*

To counter negative employer attitudes, policy makers must take affirmative action and coercive measures. Concrete affirmative action to change employer practices has mostly entailed awareness campaigns, tool kits, and the promotion of best practices. Action has also included consulting and working with the social partners, and consultative forums or councils involving actors across sectors and disciplines are now quite widespread. However, there have been few sound evaluation studies of the effectiveness of pro-age measures.

Most coercive measures are related to the issue of age discrimination in a number of dimensions, including recruitment, career prospects and training as well as perceived low productivity. Evidence suggests age discrimination persists in hiring and other employment-related decisions, such as promotion. According to Davey (2014), legislation outlawing age discrimination in the workplace has had limited success as it is often hard to establish that it has occurred, “because much of it is not overt, and discriminatory practices are deep seated in business culture”. Neumark and Song (2013) found that, in the United States, tougher laws boosted recruitment rates among older workers trying to work longer hours in response to social security reform. They also found that anti-ageist legislation may extend working lives by easing the transition to bridge employment or jobs on partial retirement.

Even though the EU directive issued in 2000 on equal treatment in employment and occupations required all member countries to have anti age-discrimination legislation in place by 2006, there is still a perception of age discrimination in Europe. A Eurobarometer survey (2012) found that 21% of respondents in Europe reported having been discriminated against on the grounds of age in the workplace in 2011 or had witnessed such discrimination (though only 6% reported it). The Netherlands has taken robust measures against age discrimination, such as the screening of vacancy adverts. In France, the public employment service has developed a job simulation recruitment method whereby new hires are selected for their aptitude without regard to age or previous work. Yet neither this tool nor the use of anonymous CVs are guaranteed to eliminate discrimination in hiring, for they are effective only in the first stage of the selection process. Moreover, they also preclude pro-age affirmative action in organisations that practice it (Behaghel et al., 2011).

In this context, the practice of mandatory retirement in firms has been called into question, as it may be considered to run counter to the principle of non-discrimination on the basis of age. Mandatory retirement is the practice of requiring workers to retire at a statutory age. As a result, employers can re-employ them only if they have retired and on a new contract, depending on national regulations on combining work and pension receipt.<sup>8</sup> Organisations representing older people are generally favourable to eliminating any reference to age when it comes to mandatory retirement (AARP, 2016; Age Platform Europe, 2010). Suitability for employment should be based on competence and health rather than age. In 2013, the European Parliament recommended that European Union member states should “put a ban on mandatory retirement when reaching the statutory retirement age, so as to enable people who can and wish to do so to choose to continue to work beyond the statutory retirement age or to gradually phase in their retirement” (European Parliament, 2013b).



Ending mandatory retirement altogether is certainly not without controversy. There are good economic reasons both for and against. Employers in particular often argue that their businesses could not run as efficiently without it. And, as it is difficult to measure the performance of older workers objectively, mandatory retirement is a convenient mechanism for parting with unproductive workers. Ultimately, though, why should someone who still performs well be forcibly retired just because of age? The United States progressively raised the minimum age of mandatory retirement in 1978 and eventually discontinued mandatory retirement altogether in 1986. Of course, employers will struggle more without compulsory retirement in countries where employment protection rules are very rigid. But these difficulties should be another reason for reforming such rules and affording employers greater flexibility in dismissing ageing workers for poor performance and retaining those who do well.

Mandatory retirement is still in place in many OECD countries. Age limits in some collective labour agreements remain a barrier to working at an older age and send out the signal that the ability to work is diminished beyond a certain age. In 2013, the United Kingdom was the only European OECD country that had abolished any mandatory retirement age, as have four non-European ones (Australia, Canada, New Zealand and the United States).

France is one of the few in the OECD where the mandatory retirement age for private-sector workers is higher than the age at which the full rate pension kicks in. In 2009, the government raised it to 70. For public-sector workers, by contrast, there is still a full-pension age limit (67 years in 2017) even if there are some exceptions. In Norway, however, the 2011 pension reform allows workers to postpone the take-up of pension benefits to the age of 75 on actuarially neutral terms. But, employers were free to fire employees earlier – at 70 until the age was raised to 72 years in mid-2015.

#### *Removing objective barriers to retaining and hiring older workers*

A number of objective factors still prevent employers from hiring and retaining older workers. There are two particularly important ones: i) the imbalance between the costs of employing older workers and their productivity, and ii) the imbalance between the need to protect older workers' job and to enhance their labour mobility.

To strike a more even balance between the older workers' productivity and the cost of employing them, a number of countries have introduced wage-subsidy and in-work benefit schemes. They are designed, over a certain period of time, to incentivise companies to employ older workers. Nonetheless, recent praxis shows that a package of placement, training and counselling measures targeted at disadvantaged older workers may be more effective than wage subsidies alone.

Germany placed great emphasis on intensive counselling for the older unemployed under its "Perspective 50 Plus" employment pacts for older workers in the regions, which ran from 2005 to 2015.<sup>9</sup> Another example comes from Canada – the Targeted Initiative for Older Workers programme (TIOW), launched in 2007. It supports older job seekers, typically between the ages of 55 and 64, who live in small, vulnerable communities, helping them to regain a place in the labour market and improve their employability. TIOW projects include a mix of group-based employment assistance services such as peer mentoring, résumé writing, counselling, interview techniques, and job search assistance and employability improvement activities such as skills upgrading and training, work placements, and self-employment assistance. Initially limited to vulnerable communities experiencing high unemployment or significant downsizing, the TIOW eligibility criteria

was broadened in 2014 to communities struggling with skills mismatches or unfulfilled employer demand. Findings from various phases of programme evaluation indicate consistently positive results from which the Government of Canada, in collaboration with provinces and territories, drew a compendium of best practices in 2014.

Policy makers need also to strike the right balance between protecting older workers' jobs and increasing their labour mobility. Greater mobility requires hiring more older job seekers and making older workers more willing and able to move from job to job. Special employment protection rules for older workers can be counterproductive. Policies that penalise firms for laying them off may backfire and actually lead to lower hiring rates or to substitution between younger and older workers. Firms may also seek to avoid penalties through early retirement arrangements. Ultimately, the best form of employment protection for older workers is to improve their employability and increase the range of job opportunities open to them.

#### 4. Health-related ability to work at older ages

Increasing *effective* retirement ages is one main option for addressing the economic impact of population ageing and alleviating old-age inequality. Careers can be prolonged, however, only if workers are in sufficiently good health to work. This section first summarises studies that analyse the health employment nexus and then looks at differences in labour market participation rates between countries, genders and educational groups with similar remaining life expectancies. The results suggest that health alone cannot explain why labour market participation declines so sharply with age even before the retirement age, which points to the importance of other factors leading to early labour market exit (see Section 5). Based on health alone, there seems to be a considerable potential for higher participation rates, especially among women and low-educated men.

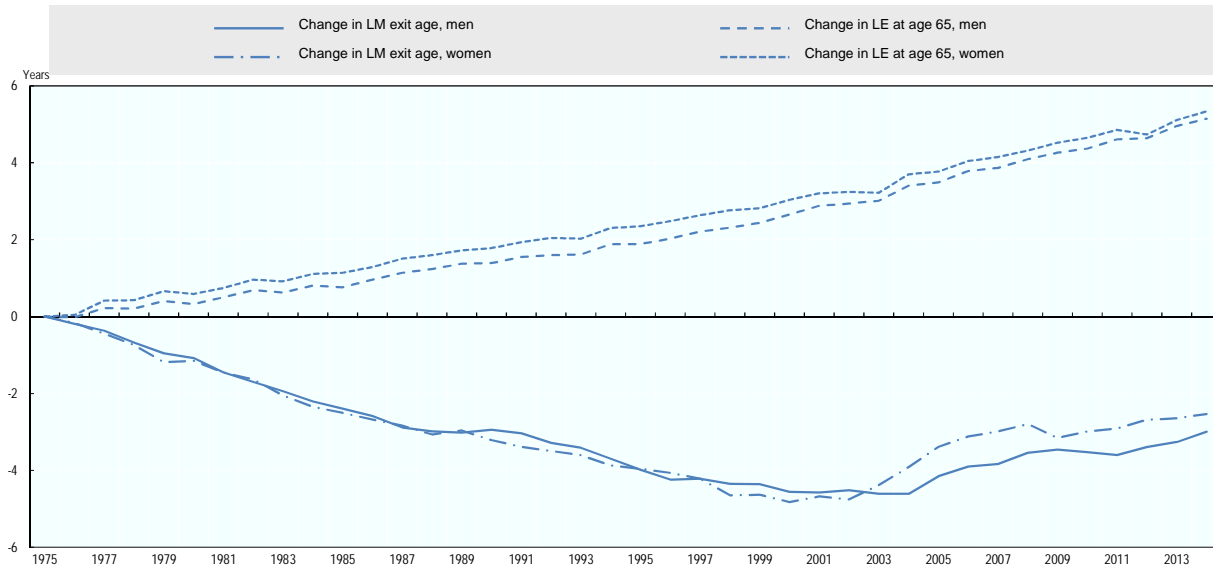
##### ***Cross-time and cross age-group comparisons point to greater health-related work potential***

Two diverging trends since the 1970s are at odds with the view that poor health is the current key obstacle to higher participation rates at older ages. Life expectancy at the age of 65 has continued to rise rapidly in the OECD since the mid-1970s while the average age of effective labour market exit fell by more than four years between the mid-1970s and the late 1990s (Figure 5.10). Although this second trend reversed around the turn of the millennium, the average labour market exit age is still lower today than it was 40 years ago. These patterns fuel the contention that current labour force participation and employment rates among older people are below what health permits and that, if policies offered stronger work incentives, participation rates would increase.

Several studies have aimed to disentangle health from other determinants of labour supply and demand in order to estimate the potential for additional labour force participation and employment that older people's health really offers. Among them, the project "Social Security and Retirement Programs Around the World: The Capacity to Work At Older Ages" (Coile et al., 2016), initiated and organised by the National Bureau of Economic Research (NBER) in the United States, computes maximum health-related capacities for employment of 50-to-69 year-olds in 12 OECD countries. The estimates suggest that people's health status would permit substantially higher employment rates at older ages in all investigated countries and that the difference between health-related work potential and actual employment increases with age, exceeding 50 percentage points among 65-69 year-olds in some countries.

**Figure 5.10. Changes in labour market (LM) exit ages and life expectancy (LE) at the age of 65 among men and women since 1975**

OECD averages for 24 countries in years



*Note:* The trend reversal that led to increases in the effective labour market exit age between the early 2000s and today can be found in most OECD countries, but not all. The effective age of labour market exit was actually higher in 2000 than in 2014 for men in Denmark, Greece, Iceland, Japan and Mexico and women in Greece, Ireland and Mexico.

*Source:* OECD estimates. Labour market exit age data are based on the results of national labour force surveys, the European Union Labour Force Survey and, for earlier years in some countries, national censuses. Life expectancy data stem from *OECD Health Statistics* and are based on Eurostat data and national sources.

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The first method used in that project compares the employment rates of older men today with those of younger men 40 years ago who had the same mortality rates – they were younger because age-specific mortality rates have fallen over time. The two assumptions underlying the method are: that health-related ability to work depends only on mortality rates, and not on age; and that the relationship between the ability to work and mortality rates has remained unchanged over time. As a consequence, older men’s employment rates could increase up to the highest employment rate reached in the past among people with comparable mortality rates. This maximum rate is termed as the highest “health capacity to work”. As labour markets and population demographics have changed over time, the maximum work capacity computed by the first NBER method depends heavily on the choice of the year of comparison.

A second method in the NBER project, which is more statistically elaborate, supports the project’s overall findings and confirms that health would permit higher employment rates in all the countries in the study. It compares current older workers to their younger peers today, controlling for health differences between them and for many additional individual characteristics. The employment differences that cannot be attributed to health must be ascribed to other factors, such as different financial incentives to work or labour market opportunities.

### ***Relationship between labour participation and life expectancy confirms greater work potential***

#### *Life expectancy and labour force participation across population groups and countries*

This section now turns to an analysis of the relationship between remaining life expectancy and labour force participation in the OECD today, which is crucial to understanding the degree to which health accounts for low workforce participation rates at older ages. It compares remaining life expectancy and labour force participation among different population groups, which differ by age, gender, educational attainment and country.

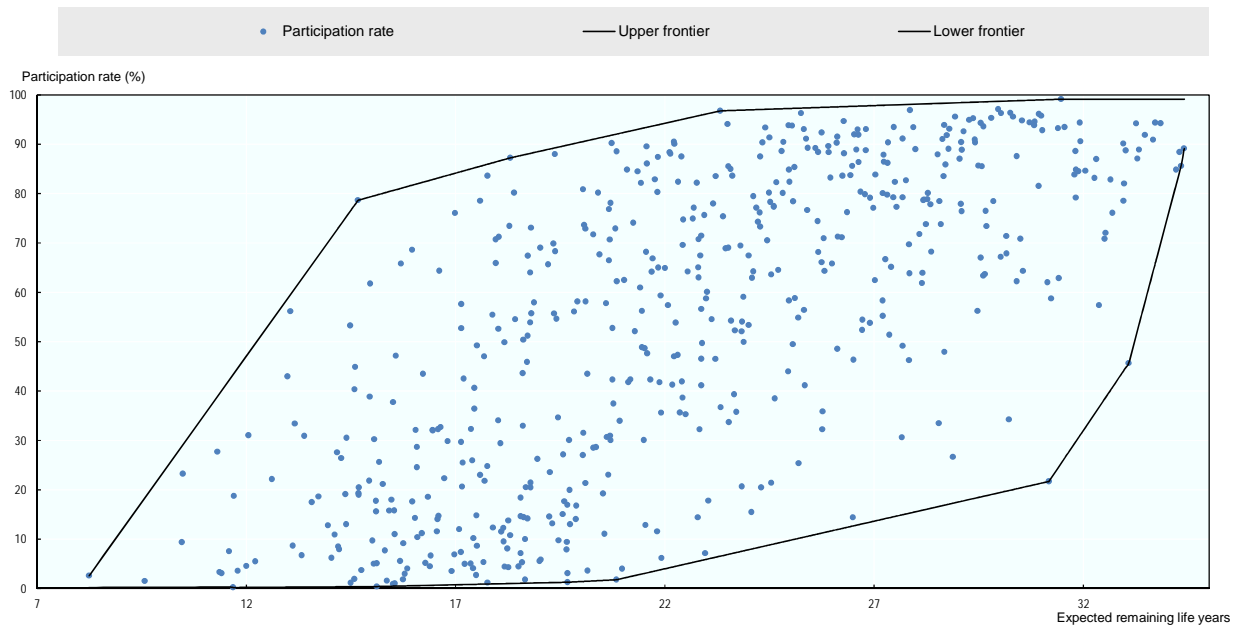
The analysis draws on a mortality-based measure to approximate the health-related ability to work. Although not all ill-health conditions lead to increases in mortality, health and mortality are closely linked. According to WHO estimates, over 90% of gains in life expectancy at birth since the year 2000 have translated into disability-free life years.<sup>10</sup> Moreover, many alternative health measures suffer from shortcomings, e.g. unavailable data at the gender-age-education level for some countries. As a result, the analysis focuses on remaining life expectancy, assuming that mortality rate differences capture the health disparities that matter for work capacity reasonably well.

Figure 5.11 plots the relationship between the remaining life expectancy and labour force participation of workers in their 50s and 60s in OECD countries. Each data point represents a population sub-group characterised by educational attainment (high, medium, low), a five-year age group (50-54, 55-59, 60-64 and 65-69 years old), gender and country. The two curves that encompass the data points reflect the upper and lower frontiers of labour market participation in the data.<sup>11</sup> When a data point lies on the upper frontier, no other group with a comparable life expectancy has a higher participation rate, which suggests that the group fully exploits its work capacity. When a point lies on the lower frontier, there is no example of a group with a comparable life expectancy and lower labour force participation. In these cases, health would permit substantially higher participation rates.

Three main insights can be gained from Figure 5.11.

- Labour force participation rates tend to be higher when expected remaining life times are longer. The inference is that older and less well educated people, who both have lower remaining life expectancies, participate less in the labour market. The pattern holds true even though labour force participation among women – who can expect to live longer – is lower than among men.
- The upper frontier is concave. In other words, when the remaining life expectancy is short (in older age-groups for example) improving health (i.e. lengthening life expectancy) has a stronger effect on the maximum work capacity.
- Labour force participation rates differ substantially between population groups with similar remaining life expectancy – a finding that suggests that bad health alone can explain low participation rates at older ages to a limited extent only. Additional factors, including financial incentives in the pension system, wealth and education, are likely to be very important.

**Figure 5.11. Labour market participation among older workers in their 50s and 60s and remaining life expectancy, 2015 or latest**



*Note:* Each blue data point in the graph corresponds to a population subgroup that is characterised by the following characteristics: educational attainment (high, medium, low), a five-year age group (50-54, 55-59, 60-64 and 65-69 years old), gender and country.

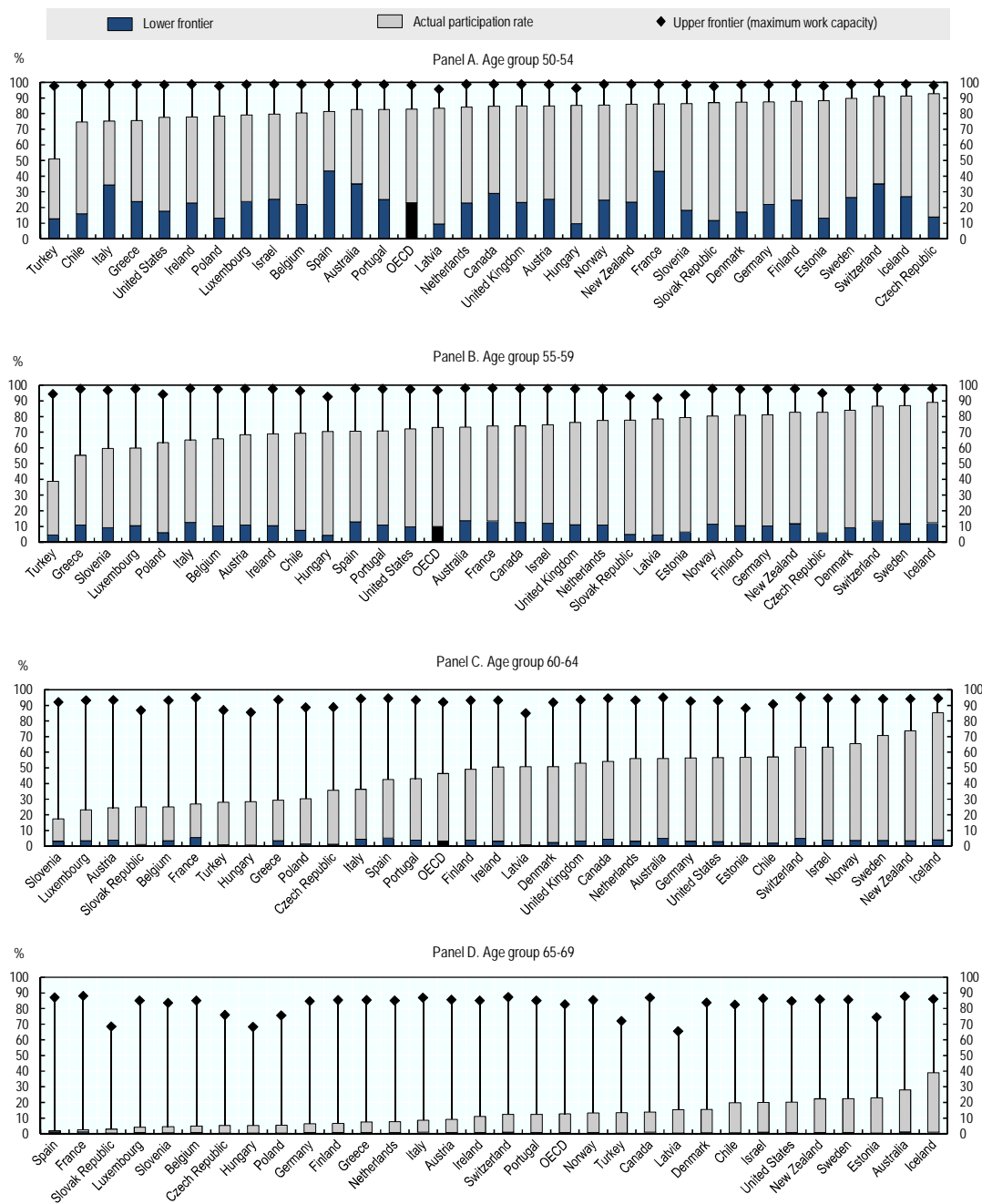
*Source:* OECD Employment and Labour Market Statistics and OECD Health Statistics.

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### *Unused work potential differs with age*

While participation rates in the 50-to-54 age bracket lie about 15 percentage points below maximum work capacity on average across OECD countries, the difference between work capacity and actual participation grows with age (Figure 5.12). At ages 50-to-54, the health-related capacity to work is very high in almost all OECD countries, often greater than 95%, meaning that there are examples of population subgroups in the data with comparable life expectancies and almost full labour market participation. At the same time, the OECD average rate of labour market participation among 50-54 year-olds is relatively high as well, at about 83%. At ages 65-69, participation is a lot lower, the OECD average stands at 13%, while the health-related work capacity remains comparatively high, at 82.5% on average, leading to a large difference between work capacity and actual participation. The age-related drop in participation rates in almost all OECD countries is steeper than can be explained by health alone.

**Figure 5.12. Labour force participation among older workers: Actual rates, upper frontiers (estimated maximum health-related work capacities) and the lower frontiers of labour force participation, 2015 or latest available year**



*Note:* The actual participation rates of each age group displayed is computed as the percentage of workforce participants in the total population of each age group averaged across the genders. Maximum work capacity and the lower frontiers refer to the maximum and minimum participation rates observed in population groups with comparable remaining life expectancy (see Figure 5.11). United Kingdom data for the 65-69 age group are missing.

*Source:* OECD Education at a Glance (database), <http://stats.oecd.org/Index.aspx>.

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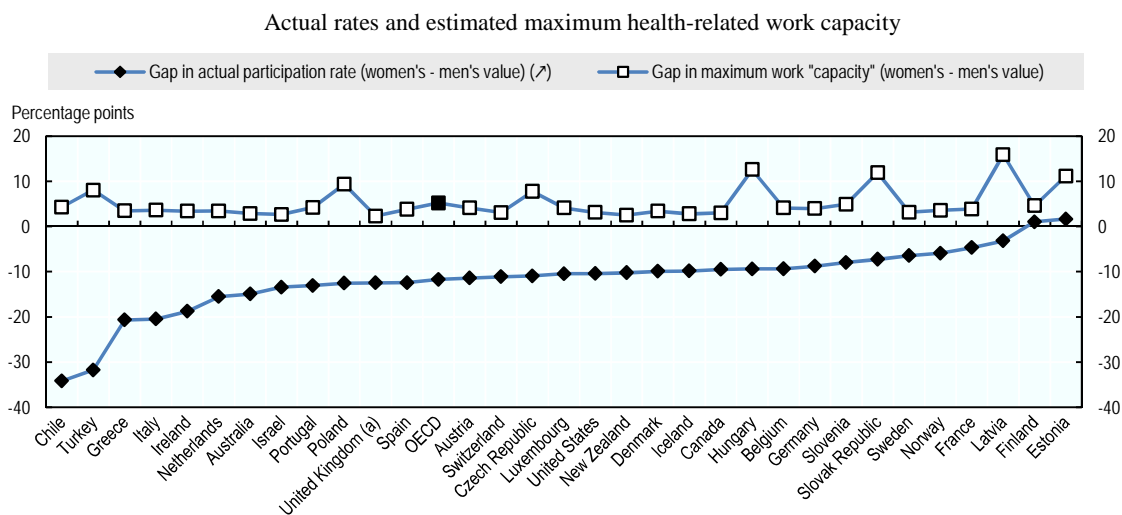
### Unused work potential differs by gender

In all countries, except for Estonia and Finland, the labour force participation rates among men between 50 and 69 are higher than among women (Figure 5.13) – by more than 30 percentage points in Chile and Turkey. The OECD-wide average difference is close to 12 percentage points, which points to a considerable gender gap among cohorts born between the mid-1940s and the mid-1960s.

As women live longer, their health-related potential for working at older ages should be greater than men's according to the methodology used above, by 5 percentage points on average. Yet it may be that remaining life expectancy is a distorted measure of health-related ability to work. Non-fatal health problems can prevent people from working without making more likely they will die early. Such health problems are particularly frequent among older women and translate into higher female disability rates.<sup>12</sup> When controlling for disability, the gender gap in health-related work capacity shrinks to low levels in nearly all countries in the sample. In 20 out of the 23 countries for which this measure is available, the gender gap drops to below 1 percentage point, as accounting for the differences in disability between men and women offsets the differences in total life expectancy.<sup>13</sup>

Employment gender gaps are thus attributable mostly to non-health factors. Irrespective of the health measure, the data reveal greater unused work potential among women than men in nearly all countries. Other factors seem to be more important than health in explaining labour market participation gaps between men and women. Among them are wage gaps, different retirement ages<sup>14</sup> and social norms, which result among other things in a larger share of women engaging in care tasks for family members.

**Figure 5.13. Gender gaps in labour force participation among 50-69 year-olds, 2015 or latest available year**



*Note:* The gender gaps shown for the 50-69 year-old age group are computed as the average of the gaps in the 50-54, 55-59, 60-64 and 65-69 year-old age groups.

a) Due to data restrictions, the data reflect the 50-64 instead of the 50-69 age group.

*Source:* Calculations based on *OECD Employment and Labour Market Statistics* and *OECD Health Statistics*.

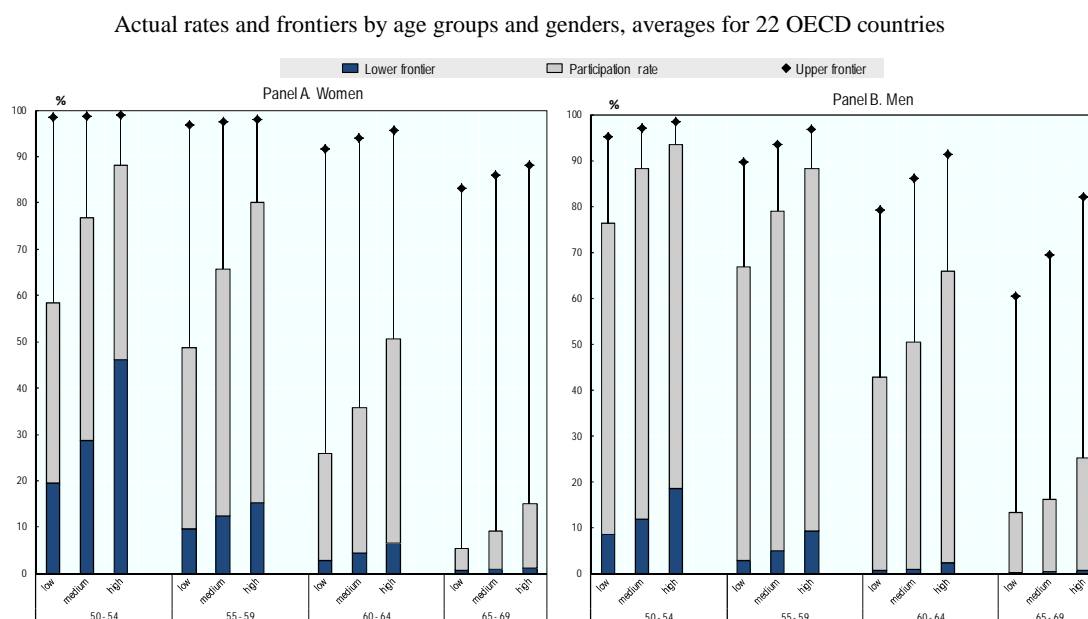
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### Unused work potential differs by level of education

While low-educated people in all age groups lag behind their highly educated peers on the labour market, they also suffer from worse health conditions (Chapters 2 and 4 and Section 5). However, average health differences by level of education among people in their 50s account for differences in labour market participation to a limited extent only: at these ages, the health-related capacity to work is still relatively similar across educational groups (Figure 5.14). As a consequence, most of the wide education gap in actual labour market participation – 14 percentage points out of the 17 percentage points difference between poorly educated men at age 50-54 in OECD countries and their highly educated peers – is attributable to reasons unrelated to health. As for women of the same age, the difference in health-related work potential between the high-educated and the low-educated is below 1 percentage point whereas the difference in actual labour market participation between educational groups amounts to 30 percentage points. Non-health factors explain why people in their 50s lag so far behind on the labour market when they have low educational attainment – particularly in the case of women.

Education-driven differences in maximum work capacity are more marked at older ages because health differences, as proxied by gaps in remaining life expectancy, influence work capacity more strongly at these ages.<sup>15</sup> However, discrepancies in actual participation rates by level of education tend to match differences in maximum work capacity. This implies that the difference between work potential and labour force participation does not vary much across education levels among people in their 60s; by only 10 and 5 percentage points on average among 65-to-69 year-olds in OECD countries for men and women, respectively, between the high- and the low-educated. That is, health increasingly contributes to disparities in labour market participation between educational groups as people age.

**Figure 5.14. Differences in estimated health-related work capacity between educational groups, 2015 or latest available year**



Note: “Upper frontier” and “lower frontier” refer to the maximum and minimum participation rates observed among population groups with comparable remaining life expectancy (see Figure 5.11). Data refer to 2015 or latest available year.

Source: OECD Education at a Glance (database), <http://stats.oecd.org/Index.aspx>.

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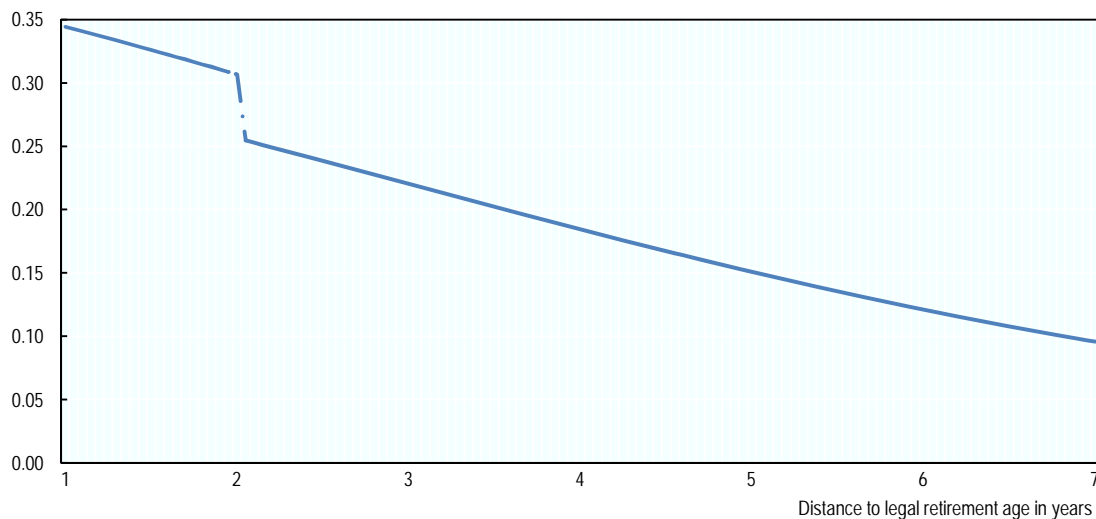


## 5. Barriers to longer working lives and the retirement decision

This section reports the results of an OECD analysis that seeks to quantify the impact of various determinants of the decision to retire – such as pension system parameters, health, working conditions and other personal characteristics (Luske and Rocard, 2017). The analysis draws on data from the Survey of Health, Ageing and Retirement in Europe (SHARE), the English Longitudinal Study of Ageing (ELSA) and the Health and Retirement Study (HRS) in the United States. It considers workers who were in employment when they entered the survey in 2010/11 and estimates how likely they were to retire over the following two years (see Box 5.1), taking into account a wide set of explanatory factors.

Pension system parameters strongly influence retirement patterns. As expected, the likelihood of retirement increases as people approach the statutory retirement age (Figure 5.15).<sup>16</sup> Workers with sample-average characteristics who are four years below the statutory retirement age have less than a 20% chance of retiring over the next two years, while those who are only two years short have over a 31% chance.<sup>17</sup> Reaching the statutory retirement age has a strong impact on the probability of retiring, as can be seen by the kink in Figure 5.15. This effect is particularly pronounced among the low-educated.<sup>18</sup>

**Figure 5.15. Effect of the time left to legal retirement age on the probability of retiring over the next two years**



*Note:* The figure shows the effect of the time to the statutory retirement age on the predicted probability of retiring over the next two years for a person with sample-mean characteristics in European countries and the United States. A person who is four years younger than the legal retirement age, for instance, has a probability of about 18% of retiring in the next two years if his/her other characteristics, such as health or wealth, match the average values in the sample.

*Source:* Calculations are based on data from the Survey of Health, Ageing and Retirement in Europe (SHARE), the English Longitudinal Study of Ageing (ELSA), the United States' Health and Retirement Study (HRS), and the MISSOC Comparative Tables on Social Protection.

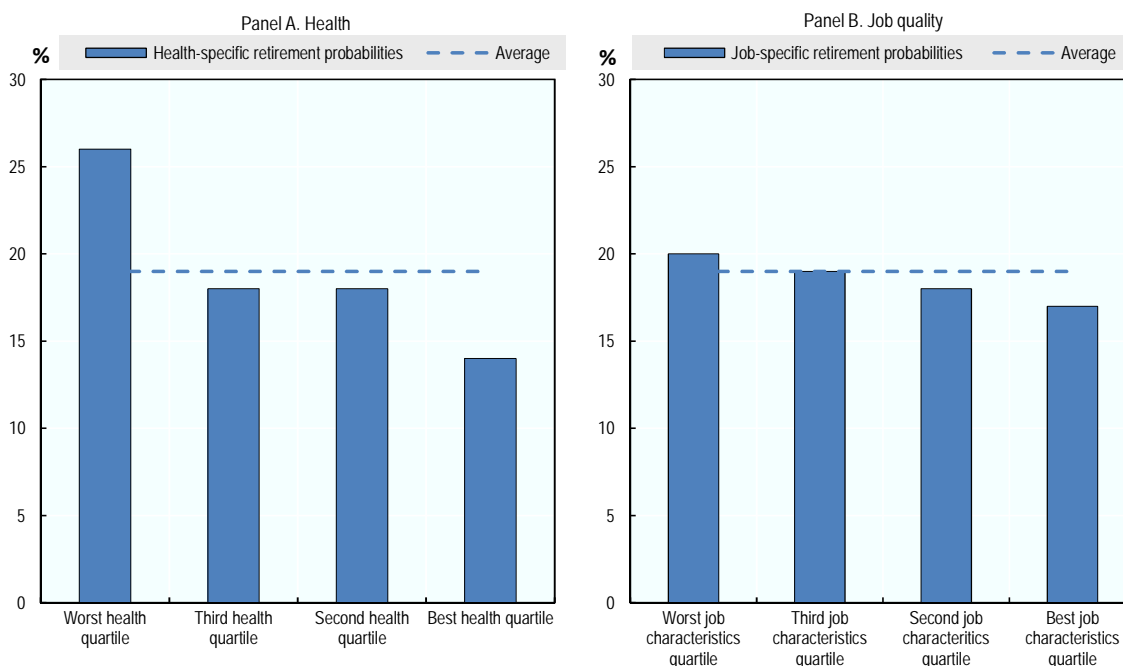
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The health status of older workers also affects how likely they are to retire. The OECD computed a health index to evaluate health as comprehensively as possible. It takes into account a wide range of health information, including objective health

measures and self-assessments of health, and permits to divide respondents into health quartiles, i.e. into four health groups (Box 5.1). Men and women who belong to the healthiest 25% of the population and whose age is four years below the statutory retirement age have around a 15% chance of retiring over the following two years (Figure 5.16, Panel A). The probability increases to more than 25% for the unhealthiest 25%. These figures show that health is an important factor for labour market exits even though, as observed above, the steep age gradient in employment rates after the age of 50-55 may be ascribed to worsening health to a limited extent only.

**Figure 5.16. Increases in the probability of retirement due to poor health and poor job quality**

Probability that a worker aged four years below the statutory retirement age will retire over the next two years, depending on his or her health



*Note:* Estimates refer to a worker with sample-mean characteristics in European countries and the United States.

*Source:* Estimates based on the Survey of Health, Ageing and Retirement in Europe (SHARE), the English Longitudinal Study of Ageing (ELSA) and the United States' Health and Retirement Study (HRS).

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Working conditions play a role, too, albeit to a lesser extent. The analysis captures them as a summary measure of job characteristics – such as self-assessed career prospects and freedom at work (Box 5.1) – which can be broken down into job quality quartiles. Older employees who enjoy very good working conditions (highest job quality quartile) retire later than those in jobs of poorer quality (Figure 5.16, Panel B). While there is a chance of about 19% that people with average or poor working conditions (the three lowest job quality quartiles) will retire in the next two years if their current age is four years short of the statutory retirement age, this chance drops to 17% among workers with very good working conditions.

### Box 5.1. Methodology

The objective of the OECD study on retirement determinants (Luske and Rocard, 2017) is to quantify the factors that shape the likelihood of retiring at a given age. To that end, it uses longitudinal data from 13 OECD countries or territories and multinomial logistic regression techniques.

The longitudinal data stem from Waves 4-5 of the Survey of Health And Retirement in Europe (SHARE), Waves 5-6 of the English Longitudinal Study of Ageing (ELSA) and Waves 10-11 of the United States' Health and Retirement Study (HRS). They include 2 waves per individual and cover the time period 2010/11 to 2012/13 and 13 OECD countries/territories: Austria, Belgium, the Czech Republic, Denmark, England, France, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland and the United States.

The sample includes people who were between 50 and 67 years old in 2010/11 and who were in employment at that time. The dependent variable is their labour status two years later. Possible outcomes for the dependent variable are: still in employment, retired, or no longer in employment for a reason other than retirement – unemployment, sickness or inactivity.

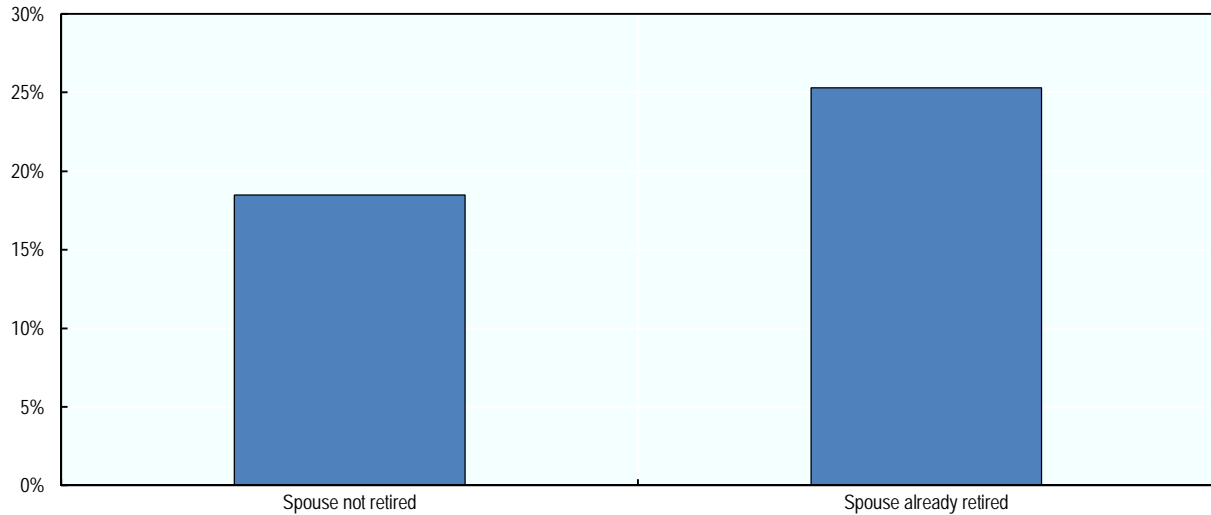
The OECD study uses a large number of regressors in its econometric models to explain the outcome variable. Among these factors are gender, education (levels 0-2, 3-4 and 5-6 of the International Standard Classification of Education *ISCED*), health quartiles, job quality quartiles, income, wealth, the time left until the normal retirement age is reached, a binary variable indicating that a respondent is over the retirement age, marital status, the labour force status of the spouse and the spouse's self-reported health.

The job quality quartiles are the quartiles of the first principal component computed using a polychoric principal component analysis of a wide range of job characteristics. ELSA and SHARE include a large set of characteristics such as job satisfaction, work recognition, salary adequacy, self-perceived professional prospects, job security, work pressure, freedom to organize work, opportunity to develop skills and adequacy of support. HRS contains information on whether the work requires lifting heavy loads, stooping, kneeling or crouching, good eyesight and whether it involves much stress.

Analogously, the health quartiles correspond to the quartiles of the first principal component computed using a polychoric principal component analysis of self-reported health, a number of functional limitation indicators (e.g. ability to walk 100 metres and to climb several flights of stairs) and chronic diseases (e.g. heart problems, depression).

The OECD analysis shows that a spouse's employment situation also has a strong impact on retirement rates (Figure 5.17). Older workers whose spouses have already retired are more likely to retire over the next two years than those whose spouses are not retired – the probability of retirement is 25% versus 18%, respectively. This strong positive association between spouses' retirement statuses points to joint retirement decisions within couples.

The OECD study shows that, while retirement system rules, health, spousal retirement status and working conditions shape retirement behaviour, they do so to different degrees. Especially the first three are found to have strong effects.

**Figure 5.17. Retirement probability of married workers, by retirement status of worker's spouse**

*Note:* The estimates relate to the probability of married workers four years younger than the statutory retirement age to retire over the next two years. The calculations refer to a person with sample-mean characteristics in European countries and the United States.

*Source:* Reported estimates based on the Survey of Health, Ageing and Retirement in Europe (SHARE), the English Longitudinal Study of Ageing (ELSA) and the United States' Health and Retirement Study (HRS).

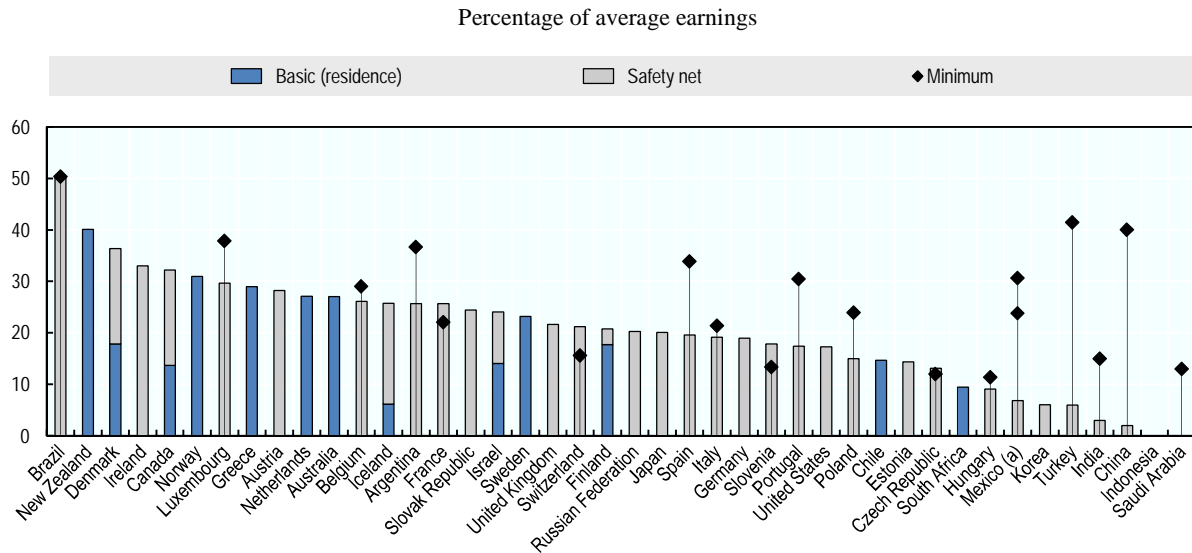
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## 6. Retirement income adequacy issues

### *Ensuring sufficient protection from first-tier pensions*

Recent pension reforms have sought chiefly to improve the financial sustainability of pension systems, particularly in response to the pressures of demographic change. Replacement rates have consequently been reduced and pension benefits more closely aligned on earnings histories. Combined with growing wage inequality and the development of non-standard work, more and more vulnerable pensioners in the OECD are likely to come to rely on the protection afforded to them by special provisions in the pension plans.

First-tier old-age pensions are defined as the first layer of protection of the elderly within the pension system. In most countries it combines financial support to those who were unable to provide for their retirement and are vulnerable to poverty with a mechanism that rewards workers who have paid in minimum levels of contribution. Although first-tier pensions exist in all countries, their structure and level vary considerably (OECD, 2015c). Residence-based basic pensions range from 6% of average earnings in Iceland to 40% in New Zealand, whereas safety-net payments vary from less than 10% in China, India, Turkey, Korea, Mexico and South Africa to 50% in Brazil, though both China and Turkey also provide high minimum pensions of above 40% of average earnings (Figure 5.18).

**Figure 5.18. First-tier old age pension benefits as a percentage of average earnings, 2015**

a) The additional marker for Mexico reflects the minimum pension benefit from the old private-sector system, which is still relevant for many workers, and is equivalent to 23.8% of average earnings.

Source: OECD (2015), *Pensions at a Glance 2015: OECD and G20 Indicators*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/pension\\_glance-2015-en](http://dx.doi.org/10.1787/pension_glance-2015-en).

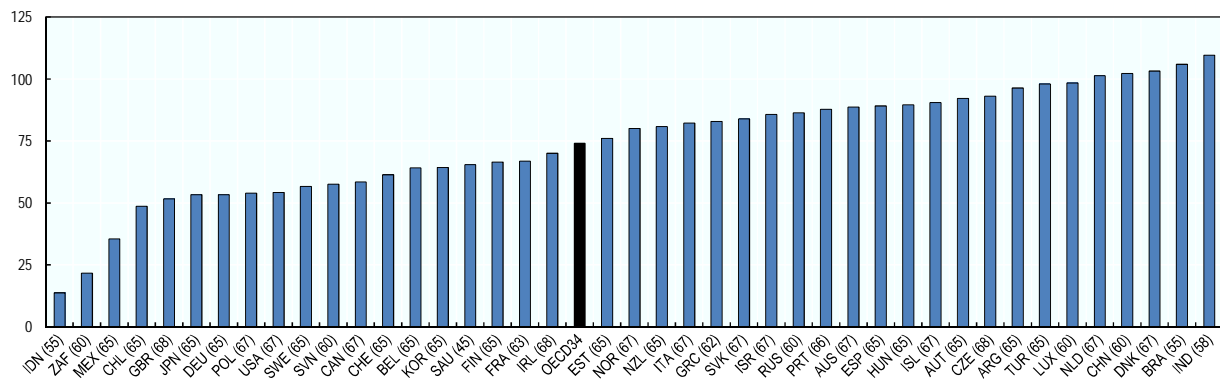
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There is significant scope for a number of countries that combine relatively high old-age poverty rates and low safety-net benefits to increase the value of their safety-net payments, even after taking into account the level of GDP per capita (OECD, 2015). This is particularly the case in Chile, Korea, Mexico and Turkey but also Switzerland and the United States. All those countries belong to the quarter of OECD countries with the worst pensioner poverty rates – as high as 50% of all over-66s in Korea. Poverty levels are further compounded by the fact that most countries index their safety nets to prices, thereby reducing their value relative to wages over time.

Low-income workers are at particular risk of old-age poverty in Mexico, Chile, the United Kingdom, Japan, Germany, Poland, the United States, Sweden, Slovenia and Canada (Figure 5.19). These countries offer net projected replacement rates of below 60% at half the average wage even for a full career, meaning that the pension will then be lower than 30% of the average wage.

**Figure 5.19. Net projected pension replacement rates from mandatory schemes for low earners**

Full career from age 20 at half the average wage



Note: Numbers in brackets indicate countries' ages of retirement on full pension.

Source: OECD pension models; OECD (2015), *Pensions at a Glance 2015: OECD and G20 Indicators*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/pension\\_glance-2015-en](http://dx.doi.org/10.1787/pension_glance-2015-en).

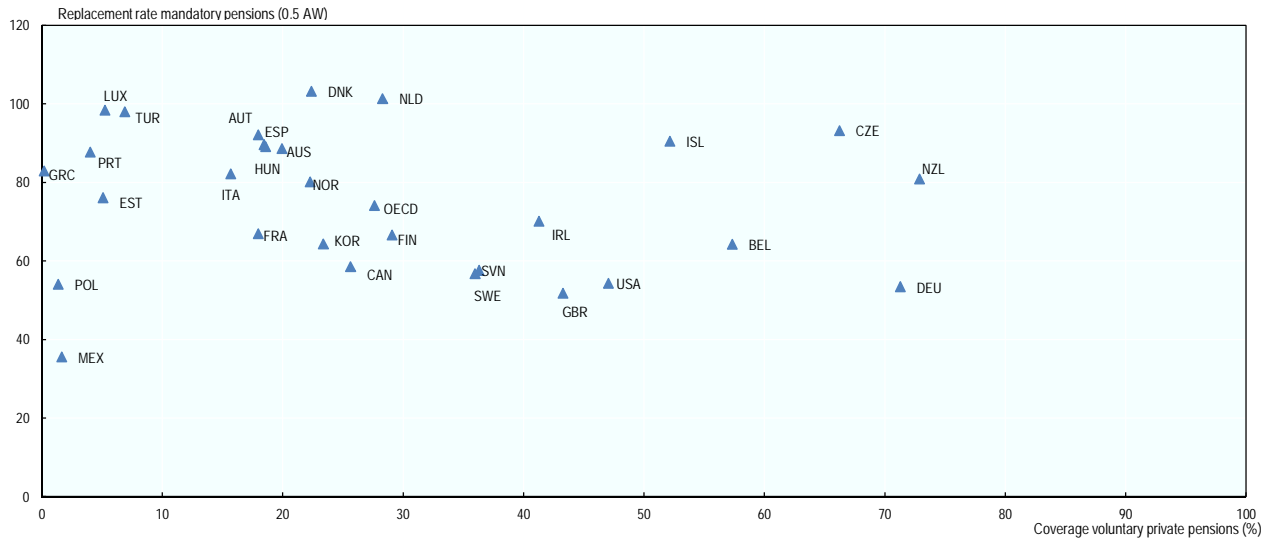
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### **Boosting pension coverage**

With the exception of Chile, Korea and Mexico, which have relatively large informal economies, coverage of mandatory earnings-related pensions is high for employees across OECD countries.<sup>19</sup> Many, however, do not require the self-employed to contribute, so far fewer of them enjoy coverage. In Latin America and the Caribbean, for example, about two-thirds of salaried workers contribute to pension schemes, compared to only one-sixth of the self-employed (OECD/IDB/World Bank, 2014). Moreover, the growing trend towards shorter contracts and part-time work lowers the share of the labour force who are in fact covered by traditional pensions.<sup>20</sup> Indeed, many mandatory earnings-related pensions do not apply to all types of contracts, demand minimum numbers of contribution years, and have limited portability. If workers on non-standard contracts are also to receive adequate pensions, countries must widen pension coverage.

Even when the coverage of mandatory earnings-related pensions is wide, replacement rates may be low. In that event, voluntary private schemes may provide the top-up required for an adequate pension. There has, in fact, been growth recently in voluntary private pension schemes. However, the coverage of voluntary private pensions varies considerably (Figure 5.20). Only eight OECD countries have coverage from voluntary private pensions (occupational and personal) that exceeds 40% of the working-age population (OECD, 2015c) – and as much as 70% in Germany and New Zealand. At the other end of the spectrum, Mexico and Poland are of particular concern. Both combine low replacement rates for low-wage workers from mandatory earnings-related pensions with low coverage from voluntary private pensions. In Canada, Sweden, Slovenia, the United Kingdom and the United States, too, replacement rates are projected to be low for private-sector workers, more than half of whom are not covered by additional voluntary private pensions.

**Figure 5.20. Low earners' net replacement rates from mandatory pension schemes versus coverage from voluntary pension schemes, 2013 and 2014**



Note: Coverage (x axis) refers to 2013, replacement rates (y axis) to 2014. Voluntary pensions in Austria, Hungary, New Zealand, Norway, Portugal and Turkey are personal. In Canada, Greece and Poland, they are occupational. In all other countries they are both.

Source: OECD (2015), *Pensions at a Glance 2015: OECD and G20 Indicators*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/pension\\_glance-2015-en](http://dx.doi.org/10.1787/pension_glance-2015-en).

StatLink  <http://dx.doi.org/10.1787/888933568072>

Expanding mandatory earnings-related pensions is the most effective way to widen pension coverage. However, if governments decide that flexibility and freedom of choice are key elements of a pension system, extending the coverage of voluntary private pensions – especially to lower-income groups – is particularly important for ensuring adequate pensions. There is solid evidence that coverage is lower among low-wage earners. Poterba (2014) reports that only 13% of the lower half of the income distribution receive (occupational and personal) private pensions in the United States, compared to over 50% of the upper half. Dushi et al. (2017) estimate that under 20% of 25-59 year-old full time workers in the lowest earning decile participated in a defined contribution plan in 2012 in the United States, against over 80% in the highest earnings decile. Similarly, Antolin (2008) reports that coverage from voluntary private pensions among the lowest income decile is low – not exceeding 20% in the nine OECD countries studied, except for Germany which boasted over 40% coverage.<sup>21</sup> Conversely, more than 40% of the highest income decile had a private pension plan in all nine countries, save Norway. As a result, untargeted financial incentives for widening coverage from voluntary pensions might benefit high incomes more than low ones and become a regressive policy instrument.

Low coverage from private pensions in the lower income brackets has a variety of causes. Low-earner households tend to have higher replacement rates from traditional mandatory earnings-related pensions (OECD, 2015), which lowers the incentive to save for retirement. Lower savings from voluntary private pensions could, therefore, simply be the result of lifetime income smoothing. However, they might also be attributable chiefly to the inability to save because of the financial strains of everyday life. Changing labour markets and recent pension reforms driven by the need to improve the financial soundness of the pension system mean that replacement rates are likely to fall in many

countries, increasing the need to boost coverage from private pension arrangements, especially among low-income households.

Another possible reason for disparities in coverage between income groups is that strong tax incentives are in place in many countries to encourage private saving for retirement. Private pension savings are widely deductible from taxable income, for example. The outcome may be a regressive private pension system, as in Chile, Denmark, Israel, the Netherlands, the Slovak Republic and Switzerland (OECD, 2016d), which detracts from the relative attractiveness of voluntary private pensions for low-income households. Finally, differences in financial literacy between socio-economic groups might also explain differences in coverage. A number of studies have shown a correlation between financial literacy and income (Hilgert and Hogarth, 2002; OECD, 2005).

While there are plenty of reasons for the low pension coverage from voluntary private schemes among low-income households, it is of vital importance that policy makers swiftly address the issue. The first-best policy is to design a financially sustainable mandatory system that ensures adequate benefits for low earners. If the political decision is rather to improve coverage from voluntary pensions, in particular for low-income households, a number of measures can be taken. Well designed auto-enrolment (e.g. based on income targeting and temporary financial incentives) has proven a powerful tool for widening pension coverage (OECD, 2012). It still leaves the ultimate decision in the hands of employees but nudges them in the right direction. Better tailoring annuities to socio-economic groups – e.g. increasing annuity pay-outs for disadvantaged groups who typically have a lower life expectancy – could boost demand for annuities (OECD, 2016e), and thus increase voluntary pension coverage. Other measures to improve private pension coverage include improving financial literacy and equalising tax incentives across socio-economic groups.

### ***Well designed survivor pensions***

#### *Goal of survivor pensions*

Poverty levels are higher among older women than older men in all OECD countries (Chapter 1), with the over-75s more at risk of poverty than 66-to-75 year-olds. Because they live longer and tend to be more affected by lower pension indexation, elderly women are a vulnerable group. Single female pensioners are typically more reliant on safety-net benefits or minimum pensions, since women's employment rates have historically lagged behind men's. However, the development of female employment over recent decades (Chapter 3) will reduce that reliance.

As for married female pensioners, their situation differs slightly since they may be entitled to a proportion of their partner's pension in the event of his death. Survivor benefits play an important role in averting poverty among widows and widowers and, notwithstanding improved female employment rates, the risk of old age poverty remains higher for women due to the sizable gender gaps in wages and employment that persist to this day. Moreover, most beneficiaries of survivor allowance are women, given their longer life expectancy and the fact that they are generally the younger partner in couples.<sup>22</sup> While survivor benefits should be carefully designed to avoid inefficient forms of redistribution and work incentives (see below), an insufficiently low benefit level increases income risks after the death of the spouse.

The main goal of survivor pensions is to serve as a joint income-smoothing measure for couples when a partner dies. This goal may therefore be regarded as a form of



insurance. Though not necessarily intended to be redistributive, survivor pensions contribute to limiting old-age poverty among widows and widowers. Moreover, it frequently includes other, less straightforward redistributive features – as from singles to married households.

#### *Design and pitfalls of survivor pensions in defined-benefit schemes*

As with the other pension systems across the OECD there is no consistent approach to the rules governing allowances for survivors. In most countries, they are built into defined-benefit (DB) pension systems which, be they funded or pay-as-you-go, comprise an element of transferral following a spouse's death. They thus supplement the individual pension that the surviving spouse already receives. In DB schemes the survivor commonly receives a proportion of their deceased spouse's entitlement. In both Estonia and Finland, for example, that proportion is 50%, while in Belgium it is 80% of the earnings-related component.

However, benefits are often capped, with payment dependent on the survivor's own earnings-related pension or reduced over time (James, 2009). Moreover, in many DB schemes, neither contributions nor benefits depend on whether a survivor pension might have to be paid. Survivor pensions often redistribute from singles to couples (especially single-earner couples), working women to non-working women, from couples with slight age differences to couples with wide age differences, from divorcees to non-divorcees and from low- to high-income families (James, 2009). Apart from distribution often being skewed towards higher-income groups, it also deters labour force participation (mainly among women) – particularly if:

- survivor benefits depend on the survivor's own pension,
- individual contributions and/or old-age benefits are not adjusted to take into account the entitlement to the survivor pension if the death risk materialises.

#### *Design and pitfalls of survivor pensions in defined-contribution schemes*

Many funded defined-contribution (DC) pension systems in Latin America include a mandatory survivor pension provision. The insurance element covers the family unit, effectively reducing benefits for couples but in the event of the death of a partner, the survivor keeps his/her own pension. Therefore, the system does not redistribute between families and has fewer disincentives to work than DB schemes. Conversely, for other countries with extensive DC schemes, such as Australia, Denmark and Iceland, surviving spouses are unlikely to receive a payment from their recently deceased partner's pension plan, as few have mandatory survivor schemes in place.

Another case in point is the United States. In voluntary (DC) pensions, people usually have to choose between annuitisation and taking a lump sum payment at the time of retirement. By ruling out old-age and survivor benefits, the latter increases the longevity risk – i.e. the material risk of outliving financial assets – which affects those living a long life and therefore surviving spouses in particular. If people choose annuitisation they can often opt for a survivor benefit provision, but this is not mandatory. If they do choose survivor benefits, the initial old age pension is lower, but the survivor continues to receive payment after the death of the spouse, though at a reduced level. If they do not choose survivor benefits, pension payments cease after the death of the spouse, which may result in a significant loss of income for the survivor.

Short-sightedness often leads to people making poor choices between the three options – survivor benefits, no survivor pension, or lump sum. Orlova et al. (2015) find that the type of pension system – DB or DC – does not have a significant impact on the likelihood of old-age poverty. However, taking out a cash lump sum – a relatively common practice under DC schemes – heightens the risk of falling into poverty. Similarly, not opting for a joint-and-survivor annuity considerably increases the surviving spouse’s risk of poverty. The recent switch towards defined-contribution pension systems with a greater choice of survivor pension options has thus replaced unintended redistribution under DB systems with the higher risk of old-age poverty among widows and widowers in DC schemes.

## Notes

1. In 2015, the average OECD employment rate among highly educated 55-to-59 year-old men and women was 82%, 68% among those educated to a medium level, and 53% among those with a low level of schooling. In the 60-to-64 year-old age group, the rates were 58%, 44% and 34%, respectively.
2. Inactivity for reasons other than health relates to all people in the data who report being inactive but do not self-define as sick/disabled. Many reasons beyond health can explain inactivity prior to retirement, for example care-giving activities or insufficient job opportunities.
3. New Zealand Apprenticeships replaced the Modern Apprenticeships programme, which had been designed for 16-21 year-olds.
4. In particular, the “generation contracts” created by law in France in 2013, following the national multi-sector agreement signed by all the social partners in 2012, have gained strength much more slowly than the government expected (OECD, 2014b). Its purpose is to institute specific, negotiated measures to promote the employment of young people, older workers, and the transmission of knowledge and skills between generations within the firm.
5. The Flexjob scheme introduced at the same time allows reductions in working hours or adjustments of working conditions depending on the needs of individuals. The Flexjob scheme is not targeted at older people in particular, although more than half of all people in flexi jobs in 2013 were over 50. However, a feature of the scheme is the very low share of participants who return to regular jobs. The scheme was modified in 2013 to curb the risk of flexi jobs replacing regular jobs. Regular assessments and not granting the over-40s a permanent position after their first five years in a flexi job are essential if misuse of flexi jobs is to be prevented (OECD, 2015b).
6. <http://www.ttl.fi/partner/thf/eng/sivut/default.aspx>.
7. For more information, go to <http://www.mentalhealthcommission.ca/English/issues/workplace/national-standard>.
8. Mandatory retirement ages are determined either by national law or by a clause in a worker’s employment contract. In order to encourage employers to retain and hire older workers, the OECD Council Recommendation on Ageing and Employment Policies indicates that countries should seek to discourage or further restrict mandatory retirement by employers in close consultation and collaboration with employers’ and workers’ representatives, while accepting that, in a limited number of instances, such practices may be necessary (OECD, 2016b).
9. The regional employment pacts brought together nearly all job centres and a wide range of local stakeholders and key actors, such as companies, chambers and business associations, trade unions, municipalities, training institutions, churches and social service providers. The measures implemented included coaching, profiling, more training in general as well as training in communication skills and

job application training, internships and wage subsidies. Early evaluation of the first phase of the programme, conducted in 2007, showed that the success of the programme sprang from the combination of individualised counselling and coaching as well as the proactive, targeted outreaching to employers. The most recent evaluation of the programme showed that placement results were better than in more traditional approaches where the onus is more on active labour market measures and less on intensive counselling (Knuth et al., 2014).

10. Calculations based on the variable “healthy life expectancy” (HALE), available at [www.who.int](http://www.who.int), and life expectancy data.
11. Labour market participation rates in the data are observed only at certain remaining life expectancy values. Upper and lower frontiers of labour market participation are computed using linear interpolations between the sets of remaining life expectancies with the highest and lowest observed participation rates, respectively. The curves are constructed in such a way that any point, as well as any linear combination of points, lies inside the set (e.g. convex sets). The upward sloping profiles suggest that work-related health improves in the number of expected remaining life years, allowing for higher labour market participation rates at the frontier.
12. An indication for this is the fact that older women have a longer life-expectancy but worse self-reported health than older men (OECD, 2013c).
13. The gender difference based on life expectancy is around or below 5 percentage points in most countries, even though there are a few countries with higher gender differences, such as in most Central and Eastern European Countries. When using healthy life-expectancy, the gender gap virtually disappears in most countries and remains important in a very limited number of Eastern European countries only. As healthy life expectancy is not available for all of the countries and its use does not alter the main results, the analysis sticks to life expectancy to measure health-related work capacity.
14. In several OECD countries, gender-specific retirement ages still exist. In most of these countries, the retirement age differences between men and women are planned to disappear over the next years. See OECD (2015c), Figure 1.6.
15. Gaps in life expectancy lead to different of work capacity gaps between population groups because the relationship between remaining life expectancy and estimated work capacity is non-linear, as the concave slope of the upper frontier of labour market participation indicates (see Figure 5.11).
16. The legal retirement age is defined in accordance with the Comparative Tables on Social Protection from the European Union’s Mutual Information System on Social Protection (MISSOC).
17. These numbers apply to individuals whose characteristics, such as wealth or health, are in line with the average wealth or health in the sample.
18. For more information see Luske and Rocard (2017)
19. Coverage in these three countries is between 30% and 60% of the working age population (World Bank pension database) compared to well over 70% in nearly all the other OECD countries.
20. Temporary employment makes up 11.4% of total employment in OECD countries, 16.8% of employees work part-time and 15.6% of the employed are self-employed (OECD, 2017b).

21. The nine countries covered are: Australia, Canada, Chile, Finland, Germany, Ireland, Norway, the United Kingdom and the United States. The paper considers funded pensions only.
22. In the United States men are on average 2.3 years older than women in couples (Current Population Survey 2014).

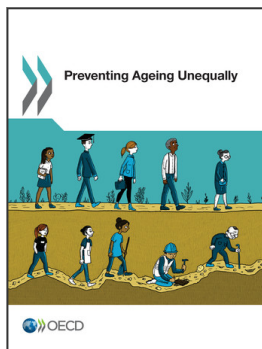
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From:  
**Preventing Ageing Unequally**

Access the complete publication at:  
<https://doi.org/10.1787/9789264279087-en>

**Please cite this chapter as:**

OECD (2017), "A closer look at the over-50s", in *Preventing Ageing Unequally*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/9789264279087-8-en>

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