

## Chapter 2

# Flexible retirement in OECD countries

*This chapter looks at flexible retirement in OECD countries. First, it looks at how people work and retire in OECD countries. Second, it looks at the existing flexible retirement options in OECD countries. It looks at combining work and pensions before and after the retirement age and the flexibility to choose when to retire. Third, it looks at people's preferences regarding flexible retirement and the actual use of these programmes. Finally, it draws conclusions.*

## 2.1. Introduction

Governments around the world have been increasing standard pension ages and closing down routes into early retirement. As documented in Chapter 1, more and more countries are moving beyond an official pension age of 65, as they seek to strike an appropriate balance between time spent in work and in retirement. In part, this is a financial calculation: in a context of rising life expectancies and ever-larger elderly populations, measures are required to improve the financial sustainability of pension systems and to limit the cost of supporting retirees borne by current and future generations of workers. However, it also reflects the fact that older people are leading healthier and more active lives.

Imposing a fixed retirement age might not be beneficial for all. Advocates of retirement “à la carte” point to the diversity among older workers. Some are able and motivated to work longer for the income, the social interactions or simply because they like their job; others want to stop working earlier because of health problems, to pursue other interests or, as is increasingly the case, to care for elderly relatives or grandchildren.

These differences between people have prompted calls for flexible retirement arrangements that allow individuals to choose when and how to retire. In its most common use, the term “flexible retirement” refers to the ability to draw a pension benefit – full or partial – while continuing in paid work, often with reduced working hours. This is also known as “gradual”, “phased” or “partial” retirement. A second dimension of flexibility refers to the moment of retirement – allowing people to draw a pension before or after the official pension age. Some countries already have introduced an age range within which workers are free to choose when they retire.

A large share of workers wants greater retirement flexibility. A recent survey found that 43% of respondents aspired to continue working past retirement in Japan, whereas in France only 15% were considering this (Aegon Center for Longevity and Retirement, 2015). Meanwhile, almost two-thirds of EU citizens would prefer to combine a part-time job and partial pension than to fully retire (Eurofound, 2016). In part, disparities in preferences for flexibility across countries are likely driven by the design of pension systems in each country: the level of pensions available at different ages and the gains from working longer play an important role in shaping workers’ attitudes towards flexibility. For example, earnings limits, which limit the amount that can be earned before pension benefits are cut, can reduce the incentive to work beyond the official retirement age.

Yet individuals are not motivated to work longer solely by financial gain; doing so can improve life satisfaction. Workers over the age of 45 experience less stress and greater life satisfaction, on average, than younger workers in several European countries and the United States (Nikolova and Graham, 2014).<sup>1</sup> This holds for full-time workers, voluntary part-time workers and the self-employed. However, although still positive, the differences compared to younger respondents diminish for the ages 66 and older. The drop for full-time workers is particularly steep, indicating that for some, continuing to work might not have been a voluntary decision.

Many employers see benefits in retaining older workers. Older workers are more experienced and can preserve and transfer knowledge to younger workers. In countries where population ageing has already advanced considerably and shortages of qualified staff are looming, such as Japan and Germany, employers are stepping up efforts to keep older workers on the payroll, in part because re-employing workers who have already retired in response to staff shortages can be complicated and expensive. At the same time, technological advances are facilitating flexible retirement by making it easier for individuals to work from home and by reducing physically demanding aspects of work.

Yet employers may also have reservations about retaining older workers. Age discrimination is still common in many workplaces, as is prejudice regarding older workers' productivity and their ability to adapt to new challenges.<sup>2</sup> In many countries, part-time work at older ages is rare: pension rules regarding the timing of retirement are rigid and workers face a binary choice: to retire or continue working. Moreover, mandatory retirement rules give employers the option to terminate contracts of older workers at a certain age,<sup>3</sup> though data limitations prevent us from knowing how often employers actually use mandatory retirement to let go of older workers.

From a government perspective, flexible retirement is a double-edged sword. On the one hand, it increases people's well-being and incentivise people to work longer than they would have otherwise. This can, in turn, increase workers future pension entitlements, which is particularly important for those with patchy careers and contribution histories. They would also keep contributing to economic growth and generating tax revenues. On the other hand, introducing flexible retirement might prompt individuals to retire early and into poverty if they underestimate their financial needs in retirement even if the rules are set in a way that is actuarially neutral (see Annex 2.A1). This might also happen to workers who draw a partial pension while still working and then find the final pension benefit at full retirement insufficient. Early-retirement options might not be socially equitable if only the better-off can afford to retire early while other workers still need to work.

This chapter starts in Section 2.2 by examining the context for flexible retirement policies, such as labour market participation and health status among older workers in OECD countries. Section 2.3 examines the various options for flexible retirement in OECD countries and discusses the impact of different forms on pension entitlements. Section 2.4 analyses attitudes towards flexible retirement among employees and employers and compares these preferences to how flexible retirement schemes operate in practice. A concluding section sets out policy recommendations. Full details of the rules that apply for retirement and for combining work and pensions are provided in Annex 2.A1 in the annex.

## 2.2. How do people work and retire in OECD countries?

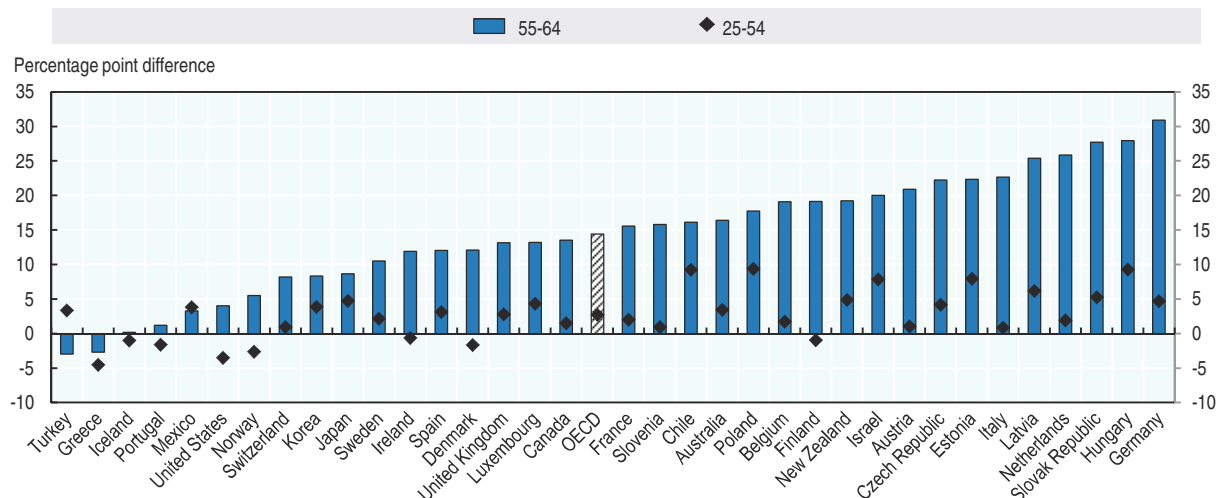
There are large differences in the way older people work and retire, not only differences over time but also between socio-economic groups, not only differences among older workers' labour market participation but also in terms of life expectancy. This has an effect on the effective age of labour market exit, the time spent in retirement and ultimately the scope for introducing or expanding flexible retirement options.

### ***Older workers constitute a larger proportion of today's labour force***

Since 2000, labour market participation among older individuals has increased significantly while unemployment among this group has remained low in most OECD

countries, even if the incidence of long-term unemployment remains high. The employment rate among individuals aged 55 to 64 grew by more than 14 percentage points, from 44.0% in 2000 to 58.4% in 2016 (Figure 2.1). For people aged between 25 and 54, it increased by far less – from 76.8% to 79.5%. Older workers are therefore catching up, but they still have below average employment rates. In contrast to historic trends, older workers' participation increased rather than declined in the aftermath of the global financial crisis (OECD, 2013).

**Figure 2.1. Growth of employment rates of older workers has been strong**  
Change in employment rates, 2000-2016, percentage points



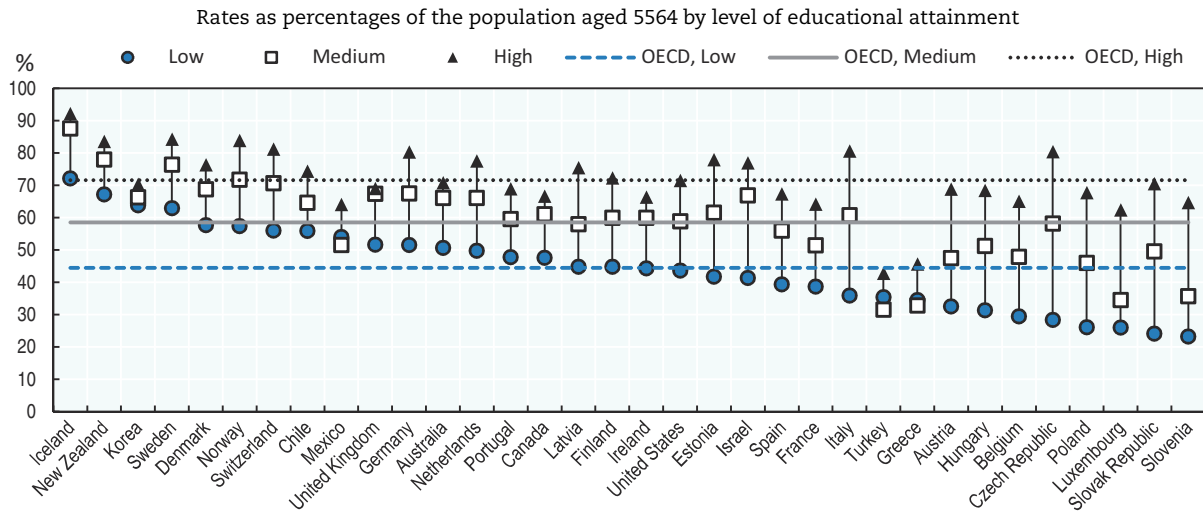
Source: OECD.Stats database, Labour Force Survey by gender and age.

StatLink <http://dx.doi.org/10.1787/888933633318>

On average, 55-64 year-olds at all levels of educational attainment experienced an increase in employment between 2000 and 2016.<sup>4</sup> However, significant differences exist between countries: employment rates increased more among the less educated than the highly educated in Denmark and Luxembourg, while the opposite occurred in Estonia, Italy, Korea and Poland.

However, despite this overall positive picture, older workers with low educational attainment are much less likely to be in employment than their better-educated peers, although employment rates among this cohort varies substantially across countries (Figure 2.2). In 2016, the average employment rate across OECD countries among 55-64 year-olds with low levels of education was 44%, compared with 59% and 72% among those with medium and high levels of education, respectively. Employment rates among older workers with low educational attainment were below 30% in Belgium, the Czech Republic, Poland, Luxembourg, the Slovak Republic and Slovenia. By contrast, they exceeded 60% in Iceland, New Zealand, Korea and Sweden.

Despite an overall increase in female labour force participation, older women still work less than men in most countries at all education levels. On average across OECD countries, the gender employment-rate gap among the 55-64 age group in 2016 was slightly higher for the less educated at 15 percentage points (p.p.) against 12 and 10 p.p., respectively, for the medium and highly-educated. The gender employment-gap exceeded 25 p.p. for the low-educated in Chile, Ireland, Italy, Mexico and Turkey.

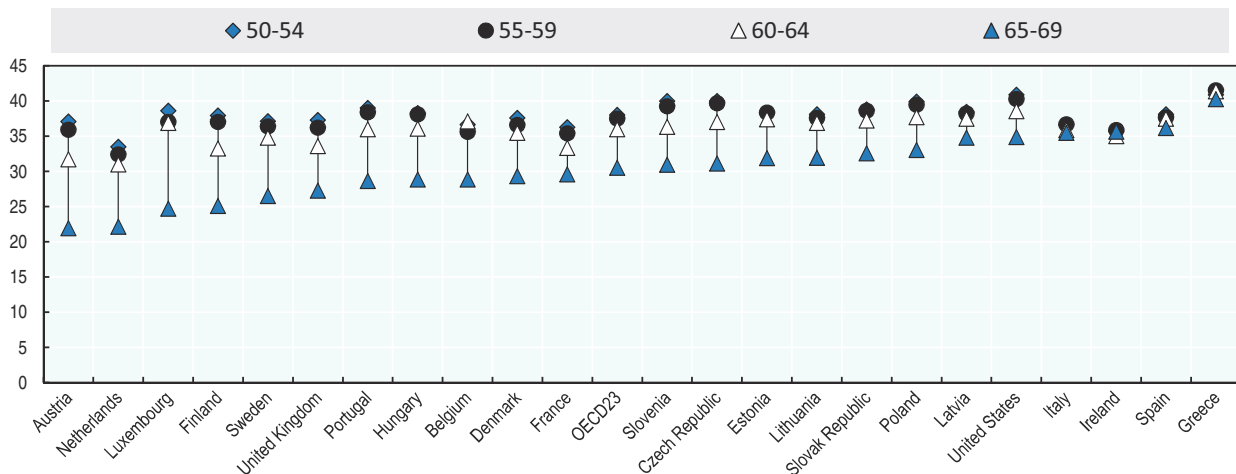
Figure 2.2. **Employment rates among older people rise with educational attainment, 2016**

Note: “Low” denotes below upper-secondary education, “Medium” upper-secondary and post-secondary non-tertiary education, and “High” tertiary education. 2015 data for Chile and Ireland.

Source: OECD (2017), “OECD Education at a Glance: Educational attainment and labour-force status” (dataset).

StatLink <http://dx.doi.org/10.1787/888933633337>

In most OECD countries, employed workers aged 60-64 work only slightly fewer hours per week on average than those aged 50-54 (Figure 2.3). The difference in hours worked between these two age groups exceeds four hours in only two OECD countries in the sample: Austria and Finland. In Hungary and the United States, 50-54 year-olds work about 38 and 41 hours per week on average, respectively, while those aged 60-64 report an average of 36 and 39 hours worked per week. At the same time, employment rates fall sharply in people's 50s and 60s in many OECD countries (OECD, 2018); the main changes in labour supply occur on the extensive margin and not on the intensive margin, meaning most older individuals stop working altogether rather than gradually reduce their working hours as they get older.

Figure 2.3. **Hours worked per week among employed workers, 2015**

Source: Calculations based on EU-LFS.

StatLink <http://dx.doi.org/10.1787/888933633356>

Only 21% of the age group 65-69 are in employment in 2016 across the OECD (Figure in Chapter 5). However, employment rates for this age group as well differ widely by country. Employment rates exceed 40% in Chile, Iceland, Japan, Korea and New Zealand. The rate in Iceland is highest, at 56%, whilst the lowest rates (of around 5%) are found in Belgium, Hungary, Luxembourg, Slovenia and Spain.

For those still in employment after the age of 65, the average number of hours worked per week declines significantly in most countries, suggesting a gradual withdrawal from the labour market. In Austria and the Netherlands, for example, individuals aged 65-69 worked about 22 hours per week in 2015 and in Luxembourg just under 25 hours. However, working hours among different age groups are similar in Italy, Ireland, Spain and Greece, indicating that people who remain in employment at older ages continue to work full-time. In most of these countries, the retirement age is 65 or lower; as a result, many older workers already exited the labour market.

The manner in which workers exit the labour market differs across socio-economic groups. In the majority of OECD countries, highly-educated prime-age individuals work longer hours than their loweducated peers (OECD, 2018). At older ages, the situation is different: there are numerous countries in which low-educated 65-69 year-olds work more hours per week than highly-educated coworkers of the same age, implying that highly-educated workers in these countries reduce their working hours at a faster rate than workers with low-educational attainment. This finding might suggest that less-educated workers are less often in jobs that can be adapted to phased-retirement programmes and/or are forced by financial circumstances to work longer hours at older ages than workers with higher educational attainment.

### ***Inequality in life expectancy remains high while healthy life expectancy has increased significantly***

Life expectancy at all ages has increased at a rapid pace around the world in recent decades. Life expectancy at age 65 increased by more than five years on average for both men and women over the last four decades. Over the period 2010-15, a 65-year-old woman could expect to live at least 22 more years on average in Korea, Australia, Switzerland, Spain, Italy, Chile, France and Japan but less than 19 more years in Hungary, the Slovak Republic, Latvia and Turkey. Women's longevity relative to men widened between 1960 and the mid-1980s but has levelled out since then (OECD, 2017a).

There are still large socio-economic differences in longevity. New OECD work shows that inequality in remaining life expectancy across socio-economic groups is much larger than previously estimated (OECD, 2017a). At age 65, highly-educated men can expect to live about 3½ years longer than men with low educational attainment. For women, the corresponding gap is lower, at 2½ years.

Furthermore, individuals with low educational attainment are at higher risk of disability, raising important questions for pension policy makers regarding whether longer-lived age cohorts will spend their extra years of life in good or bad health. If living longer simply means being ill or disabled for more years, it would not be realistic to expect workers to keep on working to older ages.

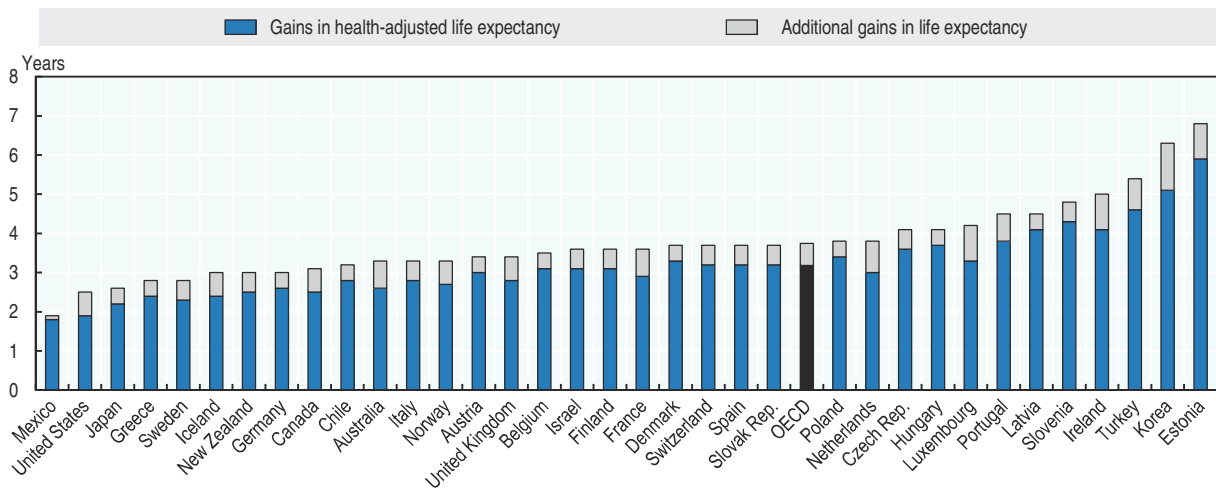
However, a large share (85%) of the gains in life expectancy at birth in OECD countries since 2000 is estimated to have been spent in good health, i.e. free of disability (Figure 2.4). This implies that the share of healthy years in total life years has been stable. Of course

with age, the share of healthy life years in remaining life expectancy decreases. In the 25 European OECD countries, on average, almost 40% of 50-year-old men's and 47% of women's remaining life expectancy was impaired by limitations on activities in 2014. Overall, the number of healthy life years has increased since 2005, but the ratio of healthy life years over remaining life expectancy at age 50 has only fallen slightly for both men and women (OECD, 2017a).<sup>5</sup>

Similar to the patterns observed for life expectancy, there are also large socio-economic differences in self-reported health (Figure 2.5). The gap in the share of people reporting good health between low and high-income individuals averages 19 percentage points in OECD

Figure 2.4. **Extra years of life expectancy have been largely in good health**

Total gains in life expectancy at birth, OECD countries, 2000-15



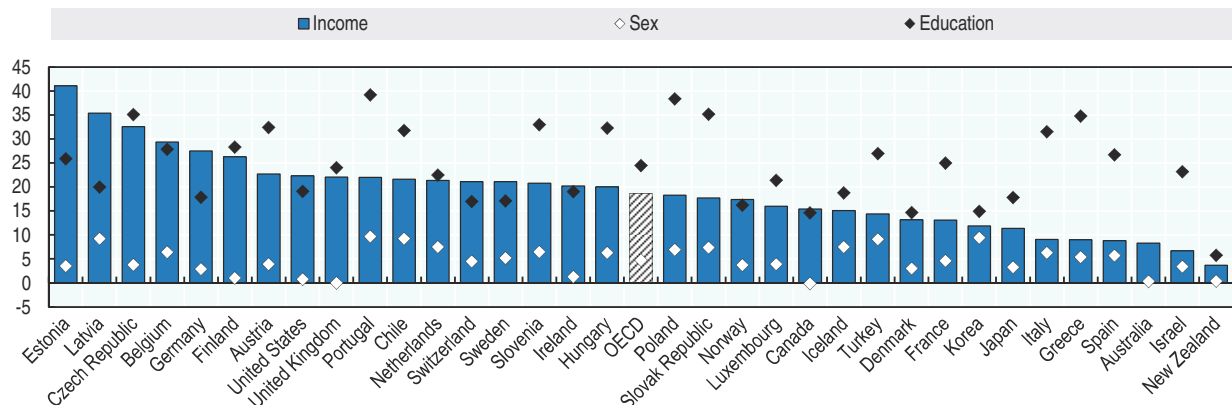
Note: Countries are ranked in ascending order of life expectancy gains. Health-adjusted life expectancy is defined as the number of years that people can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.

Source: OECD (2017a).

StatLink <http://dx.doi.org/10.1787/888933633375>

Figure 2.5. **Self-reported health differs widely by gender, income and education**

Difference in the share of population reporting good health based on income, gender and education, percentage points, 2015



Note: Gender is defined as the difference between men and women, income is the difference between the 5th income quintile and the 1st income quintile and education is the difference between high and low educated.

Source: OECD Health Statistics.

StatLink <http://dx.doi.org/10.1787/888933633394>

countries, reaching 41 percentage points in Estonia. The difference between individuals with low and high educational attainment is even larger, with an OECD average difference of 25 percentage points.

Men are more likely to report good health than women even though they are likely to die younger. This can be explained by a combination of cultural norms and higher incidence of non-fatal but disabling diseases among women at higher ages; men, by contrast, are more often affected by fatal illness (see for instance Espelt et al., 2010; Sarkeala et al., 2011).

Differences in health status, and therefore in life expectancy, influence people's capacity to work beyond a certain age. Highly-educated, high-income individuals will often find it easier to keep working, especially given that high-skilled occupations are typically associated with lower physical strain. Low-skilled workers, on the other hand, may find it hard or even impossible to continue work, in particular in occupations that impose a high degree of physical strain.

Differences in life expectancy also fuel inequality in retirement. As higher-educated people can expect to live longer past retirement age, they accumulate greater pension wealth relative to low-educated retirees, who receive benefits over a shorter period of retirement. Recent estimates for OECD countries show that a three-year difference in life expectancy at retirement between high and low earners equates to a 13% difference in pension wealth, compounding inequality in the level of monthly benefits between the two groups (OECD, 2017a).

Therefore, raising the retirement age would on average hit low earners harder than high earners because the increment would represent a larger share of their remaining life expectancy. However, OECD (2017a) shows that this relative impact due to longevity differences is small. If the effective retirement age were to be increased by three years between 2015 and 2060, the pension wealth – i.e. total discounted pension payments taking into account the length of the retirement period, and therefore life expectancy – of low earners relative to that of high earners would fall by an additional cross-country average of 1.2% only.

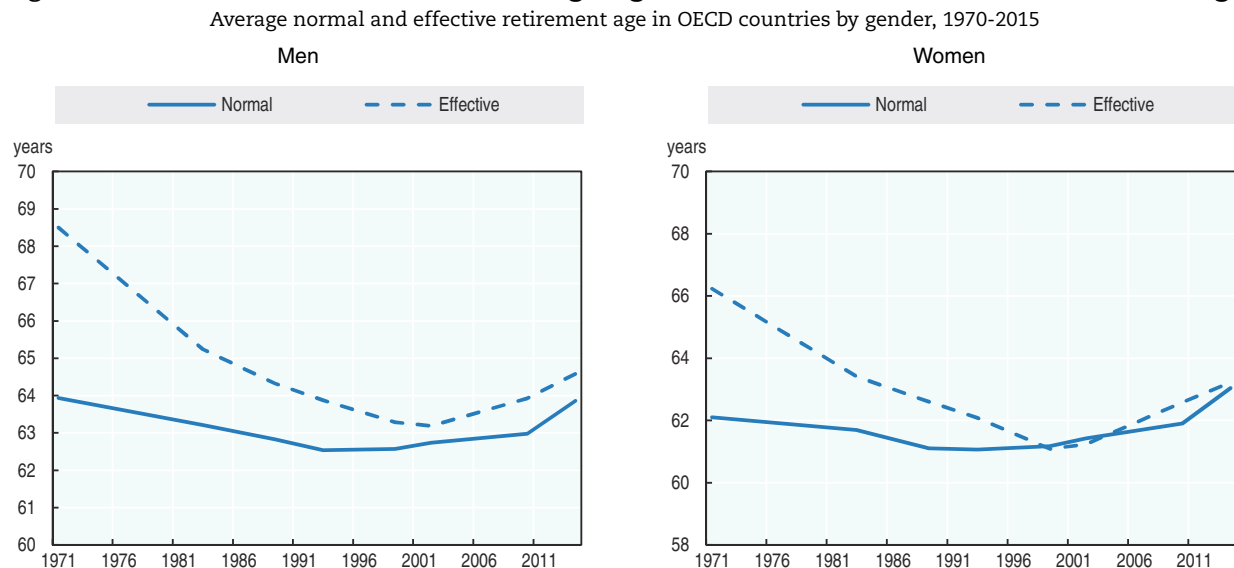
### ***Labour market exit ages fell sharply between 1970-2000, narrowing gaps with normal retirement ages***

Increasing life expectancy combined with rapid declines in effective retirement ages until the early 2000s caused a sharp increase in the length of individuals' retirement over recent decades. In the early 1970s, men and women in OECD countries could expect to spend on average 10.8 years and 14.7 years in retirement, respectively; these numbers have risen to 18.1 years for men and 22.5 years for women today. This trend threatens the financial sustainability of pension systems and has triggered policy efforts to extend working lives.


The average effective retirement age in OECD countries, calculated as the average age at which individuals exit the labour market<sup>6</sup> dropped by around five years for both men and women between the 1970s and the early 2000s (Figure 2.6). The steep decline was partly due to the maturing of pension systems: the coverage and adequacy of these systems improved significantly in the second half of the 20th century, leaving many older workers with sufficient pension entitlements to stop working at earlier ages. At the same time, many OECD countries introduced early retirement schemes in the mid-1970s and 1980s in order to free up jobs for younger workers.

However, the desired effects of early retirement on youth employment did not materialise and pension spending surged, jeopardising the financial sustainability of pension systems (Banks et al., 2010, Herbertsson and Orszag, 2003, Jousten et al., 2008,



Figure 2.6. **The rise in effective retirement age lags behind the rise in the normal retirement age**

Note: The effective retirement age is measured here as the average labour market exit age (see indicator 7.8).

StatLink  <http://dx.doi.org/10.1787/888933633413>

Kalwij et al., 2010). As a result early retirement routes were shut down and normal retirement ages were increased.<sup>7</sup> While effective retirement ages have recovered slightly recently, the average age of labour market exit remains well below its 1970 level (about four years below for men and three years for women).

Comparing the rules governing early retirement that existed in 2002, the reference year for the first edition of *Pensions at a Glance*, with those of today demonstrates the extent to which early retirement has been reduced. Since 2002, the early retirement age increased by around 14 months on average across OECD countries (Table 2.1), compared with an average increase of only eight months in the normal retirement age over the same period. The average gap between the early and normal retirement ages has thus narrowed by about six months due to the tightening of early-retirement rules.

Belgium increased the number of years of contribution required for an early pension from 30 in 2002 to 40 by 2016 (and 42 by 2019). The early retirement age was adjusted upwards most in Portugal, from age 55 in 2002 to the current level of 60 years. In Finland and Italy, it increased by about three years. In Japan, the Old-age Employees' Pension is currently available for individuals aged between 60 and 64 years but the eligibility age is gradually increasing to 65 by 2025 for men and 2030 for women.<sup>8</sup>

The effective retirement age has moved in the same direction as the normal retirement age, i.e. the age at which workers can access unreduced pension benefits, on average. The latter declined until the early 1990s for men, reaching a low of 62.5 years, compared with a high of 64 years in 1970 (Figure 2.6). For women the decline was smaller, from 62 years in 1970 to 61 years in the late 1980s. Since then normal retirement ages have increased steadily for both men and women but they only just reached the level for men seen in 1970, when life expectancy was much shorter and health conditions generally less favourable. For women, the normal retirement age exceeded its 1970 level (of 62 years) in 2010, with another one-year increase occurring by 2015. The relatively fast increase in retirement ages for women is a consequence of policies to equalise pension ages.

Table 2.1. **Earliest and normal (based on full careers) retirement ages in 2002 and 2016, men**

	2016		2002			2002		2016	
	Earliest	Normal	Earliest	Normal		Earliest	Normal	Earliest	Normal
Australia	55.0	65.0	55.0	65.0	Korea	55.0	60.0	57.0	61.0
Austria	61.5	65.0	62.0	65.0	Latvia	60.0	61.5	60.8	62.8
Belgium	60.0	65.0	62.0	65.0	Luxembourg		60.0		60.0
Canada	60.0	65.0	60.0	65.0	Mexico	60.0	65.0	60.0	65.0
Chile		65.0		65.0	Netherlands		65.0		65.5
Czech Republic	58.2	61.2	60.0	63.0	New Zealand		65.0		65.0
Denmark	60.0	65.0	60.0	65.0	Norway	62.0	67.0	62.0	67.0
Estonia	60.0	63.0	60.0	63.0	Poland		65.0		66.0
Finland	60.0	65.0	63.0	65.0	Portugal	55.0	65.0	60.0	66.2
France		60.0		61.6	Slovak Republic		60.0	60.0	62.0
Germany	63.0	65.0	63.0	65.0	Slovenia		60.0		60.0
Greece		58.0		62.0	Spain	61.0	65.0	61.0	65.0
Hungary		62.0		63.0	Sweden	60.0	65.0	61.0	65.0
Iceland	65.0	67.0	65.0	67.0	Switzerland		65.0	63.0	65.0
Ireland		66.0		66.0	Turkey		55.0		60.0
Israel		65.0		67.0	United Kingdom		65.0		65.0
Italy	60.0	65.0	62.8	66.6	United States	62.0	65.0	62.0	66.0
Japan	60.0	65.0	60.0	65.0	<b>OECD</b>	<b>61.0</b>	<b>63.6</b>	<b>61.9</b>	<b>64.3</b>

Note: Ages refer to labour market entry at age 20, with the normal retirement age being the earliest point to be eligible for all pension components without deduction. OECD average for earliest age uses the normal age for those countries where there is no early retirement option.

StatLink  <http://dx.doi.org/10.1787/888933633432>

On average, the gap between the effective retirement age and the normal retirement age has almost disappeared for women and is now less than nine months for men. However, the OECD average for the effective retirement age is heavily influenced by several countries with very high labour market exit ages, such as Chile, Korea and Mexico. In Chile and Mexico, high levels of informal employment generate low pension entitlements, which might force people to stay in the labour market into old age. In Korea many older people are not eligible for adequate earnings-related pension benefits due to the relatively recent introduction of the pension system.<sup>9</sup> Removing these three countries from the sample eliminates the difference between the effective and normal retirement ages for men and leads to a slightly lower effective than normal retirement age for women (63.0 vs 63.6 years).

Based on existing legislation, the average gap between the normal and early retirement age in OECD countries will remain constant over the next decades, thanks to offsetting adjustments to normal and early retirement ages. Some reforms are still being phased in in some countries where the gap between early and normal retirement ages will shrink further. For example, the normal retirement age in Belgium has remained at age 65 for full-career workers entering the labour force at age 20 but the early retirement age increased from age 60 in 2002 to age 62 in 2016 and will increase further to 63 by 2018. Meanwhile, the United States has kept the early retirement age constant (at age 62) but adjusted the normal retirement age from 65 to 66; this will increase over time to 67.

Even if the average gap between them remains constant, the normal and early retirement ages are both expected to rise, thanks to the policies implemented by many countries to link the retirement age and life expectancy. Workers will need to work later in life to achieve a full pension, with early retirement ages increasing over the long term. Full

details of both future normal and early retirement ages for workers starting their careers today are shown in Table 2.2.

Table 2.2. **Future normal retirement ages based on career starting at age 20 in 2016**

	Scheme	Early age	Annual reduction	Normal	Increase		Scheme	Early age	Annual reduction	Normal	Increase	
Australia	T	n.a.		<b>67</b>		Korea	DB	60	6.0%	<b>65</b>	7.2%	
	DC	60				Latvia	NDC/DC	63		<b>65</b>		
Austria	DB (ER)	62	5.1%	<b>65</b>	4.2%		T	n.a.		65		
Belgium	DB (ER)	63		<b>65</b>		Luxembourg	DB	60		<b>60</b>	n.a.	
	Min	n.a.		65		Mexico	T	n.a.		<b>65</b>		
Canada	Basic/T	n.a.		<b>65</b>	7.2% (Basic/T)		DC	Any age/60	-	65	-	
	DB (ER)	60	7.2%	65	8.4%	Netherlands	Basic	n.a.		<b>71</b>	n.a.	
Chile	Basic/T	n.a.		<b>65</b>			DB (Occ)			65		
	Men	DC	Any age	65		New Zealand	Basic	n.a.		<b>65</b>		
	Women	DC	Any age	60			DC	Flexible				
Czech Republic	DB	60	3.6-6%	<b>65</b>	6.0%	Norway	Min	67		<b>67</b>		
Denmark	Basic/T	n.a.		<b>74</b>	6.9%		NDC/DB	62				
	DC (ATP)	n.a.		74			DC (Occ)	62				
	DC (Occ)	69		74		Poland	Men	NDC/Min	n.a.	<b>65</b>		
Estonia	Points	62	4.8%	<b>65</b>	10.8%		Women	NDC/Min	n.a.	<b>60</b>		
	DC	62				Portugal	DB	n.a.		<b>68</b>		
Finland	Min	65	4.8%	<b>68</b>	4.8%		Min	n.a.		68		
	DB	65		68	4.8%	Slovak Republic	DB	66	6.5%	<b>68</b>	6.0%	
France	DB	62	5.0%	<b>63</b>	5.0%		DC	62		68		
	Points	57	4.0-7.0%	<b>64</b>		Slovenia	DB	n.a.		<b>60</b>	4-12%	
Germany	Points	63	3.6%	<b>65</b>	6.0%	Spain	DB	n.a.		<b>65</b>	2%-4%	
Greece	DB	62		<b>62</b>		Sweden	GARP	n.a.		<b>65</b>		
Hungary	Men	DB	n.a.	<b>65</b>	6.0%		NDC/DC	61				
	Women	DB	Any with 40 years	<b>65</b>	6.0%		DC (Occ)	55		65		
Iceland	Basic/T	n.a.		<b>67</b>	6.0%	Switzerland	Men	DB	63	6.8%	<b>65</b>	5.2-6.3%
	DB (Occ)	65	7.0%	67	8.0%		Women	DB	62	6.35-7.1%	<b>64</b>	4.5-5%
Ireland	Basic/T	n.a.		<b>68</b>	n.a.	Turkey	Men	DB	n.a.	<b>61</b>		
Israel	Men	Basic/T	n.a.	<b>67</b>	5.0%		Women	DB	n.a.	<b>59</b>		
	Women	Basic/T	n.a.	<b>64</b>	5.0%	United Kingdom	Basic	n.a.		<b>68</b>	5.8%	
	DC			67		United States	DB	62	5.0/6.7%	<b>67</b>	8.0%	
Italy	NDC	67.4		<b>71.2</b>			T	n.a.		65		
Japan	Basic/DB	60	6.0%	<b>65</b>	8.4%							

Note: DB = defined benefit; DC = defined contribution; n.a. = early retirement or deferral of pension is not available; Occ = occupational; T = targeted. Where pension ages for men and women differ they are shown separately. Benefits automatically adjusted for early and late retirement in DC schemes. Data rounded to one decimal place. The reference retirement age used in the modelling has been bolded.

Source: See "Country Profiles" available at <http://oe.cd/pag>.

StatLink  <http://dx.doi.org/10.1787/888933633451>

The OECD average normal retirement age for men will reach 66 years, and the early retirement age just under 64 years, which is close to today's average normal retirement age. If projected increases to life expectancy are fully reflected in changes in retirement ages, as planned in several countries, even the early retirement age in Denmark would be estimated to be 69 in around 50 years' time, which is higher than the normal retirement age in any OECD country today. Likewise, the normal retirement ages for individuals starting their careers today in Italy and the Netherlands would be above 70.

### 2.3. What options exist for flexible retirement?

In recent years, the debate around flexible retirement has focused on ways to combine work and pensions so that workers can retreat gradually from the labour market. Several countries have introduced programmes that seek to extend working lives by reducing

working hours at older ages and using pensions to compensate for at least part of the loss of earnings.

Another dimension of flexibility relates to the choice of when to retire. Most pension systems already offer this flexibility by allowing for early retirement under certain conditions, such as reaching a threshold age, having started to work at a very early age, or having contributed for a certain amount of time. Early retirement commonly refers to stopping work before the normal retirement age and accepting lower monthly benefits to reflect the longer period over which pensions are paid, a shorter career and possibly a penalty for claiming early. However, several countries offer the possibility of claiming a pension early whilst continuing in employment. Often, earnings restrictions apply, and these constraints are usually stricter than those applied for earnings after the normal retirement age. For instance in Belgium, those taking the early-retirement pension can earn up to 50% of average earnings before the pension is reduced. Many countries also allow workers to defer retirement, i.e. to work beyond the normal retirement age, usually in exchange for benefit increases to reflect the shorter period of retirement.

Finally, some countries allow workers to retire within a certain age range, for example between 62 and 67 years old. Officially, these pension systems do not have a normal pension age and workers can choose freely. However, in most cases there exists a fixed age at which certain components of the pension system, such as means-tested safety nets or universal basic pensions, become available. This becomes the normal retirement age *de facto* and thus acts as an anchor for people deciding when to stop working. An example is Sweden, where workers can claim earnings-related pension benefits from age 61 but do not receive the guaranteed pension before the age of 65. Prior to the reform in the late 1990s all components of the pension system could be claimed early, with the effective labour market exit age being around 64 for men and 62 for women. However, since the introduction of the guarantee pension the effective exit age has increased steadily, reaching 65.8 for men and 64.6 for women in 2016.

Early and deferred retirement options are rarely considered flexible retirement, but they work in a very similar way to a pension age corridor. Both leave room for individual choice, especially if the actuarial adjustments for early and late retirement take into account longer or shorter contribution and retirement periods, which makes the distinction between these forms of retirement age flexibility blurry. This is by design the case for defined contribution schemes (either funded or notional) in which benefits are automatically adjusted to the chosen retirement age.

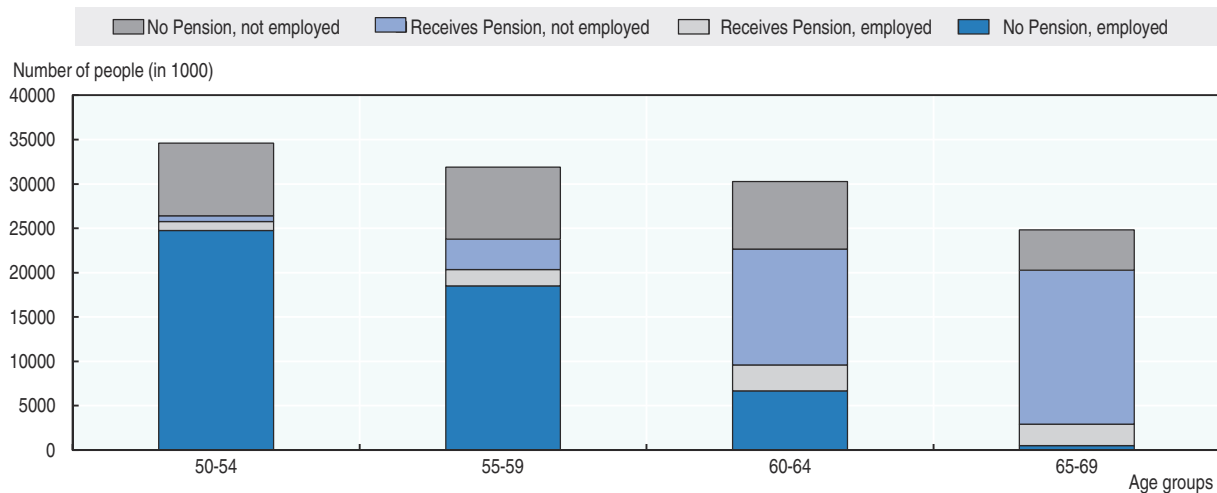
To better understand retirement patterns across OECD countries, a closer look at their pension rules is needed. The design of pension systems influences people's retirement decisions, also with respect to flexible retirement. The following sections will examine the options for three forms of flexible retirement on offer in OECD countries today and assess their impact on pensions.

### **Combining work and pensions**


Combining work and pensions is possible in most OECD countries but the conditions for doing so vary. All countries allow pensioners who have fully retired to engage in paid work but earnings from this employment can affect pension payments in different ways. These will depend on the design of a pension system and its individual components, as well as tax rules and rules governing possible withdrawal of pensions once earnings from work reach a certain level.

Analysis of an ad-hoc module of the European Labour Force Survey reveals that very few people received pensions while working in 2012. Figure 2.7 shows that around 70% of individuals aged between 50 and 55 were in employment but not receiving a pension. Most others were neither employed nor claiming a pension.

Figure 2.7. **Employed, retired and other not employed persons aged 50-69, EU-28, 2012**



Source: Eurostat, EU-LFS.

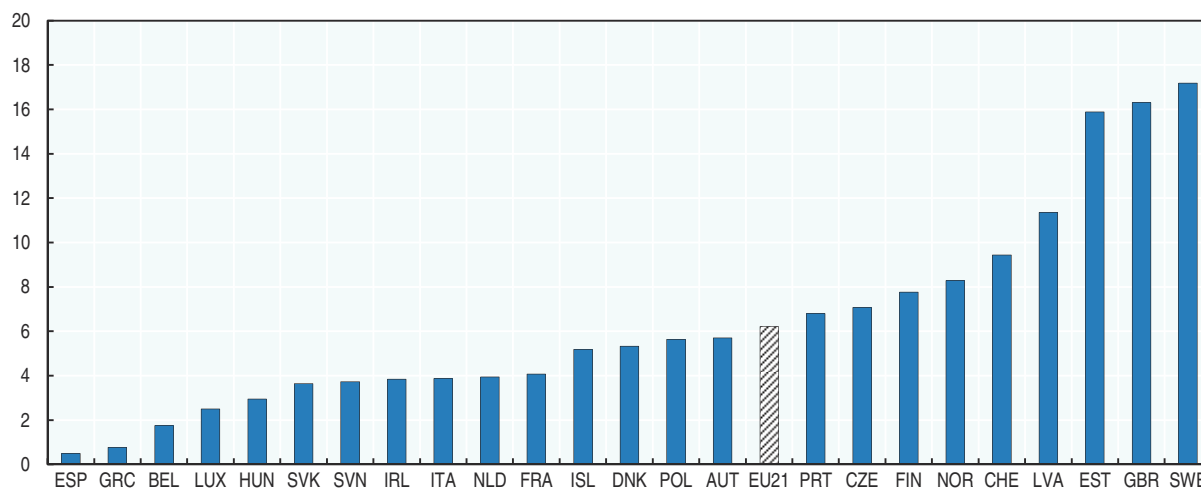
StatLink  <http://dx.doi.org/10.1787/888933633470>

Between age 60-64 or 65-69 about 10% of individuals combine work and pensions. Moreover, as individuals age, the share of those in employment and not in receipt of a pension declines, with a notable drop for the 60-64 age group when early and normal retirement ages start to apply. Between age 60 and 64, 43% are not employed and receive a pension. Only 22% of individuals remain in employment not claiming a pension. By the time individuals reach the 65 to 69 age bracket, there are still 10% who receive pensions while working but only 2% of individuals continue in employment without claiming a pension, which means that pure pension deferral is not very common. The remaining individuals aged 65 to 69 are not working, with 70% claiming a pension and 18% not claiming a pension. As a result, people combining work and pensions represent 19% of pensioners aged 60-64 and 12.5% of those aged 65-69.

Over the past decade, many EU countries have made it easier for retirees to work (Eurofound, 2012). Yet, the share of older people combining work and pensions remains limited, even though countries differ in this regards (Figure 2.8). More than 15% of individuals aged 55-69 years combine work and pensions in Estonia, Sweden and the United Kingdom, but this figure drops to less than 3% in Belgium, Greece, Luxembourg and Spain. On average, men more often combine work and pensions than women (OECD, 2018).

The characteristics of individuals combining work and pensions differ from those of other retirees. In France, for example, in 2016 3.4% of pensioners also worked (DREES, 2017). The average age of those combining work and pensions is 65 against 72 for all pensioners. Individuals combining work and pension are also generally more educated and in better health than other pensioners, although this results partly from their belonging to younger generations (and therefore their younger age). Some 90% of them worked just before getting their pensions against two-thirds among pensioners as a whole. While three-

Figure 2.8. **Older workers combining work and pension, 2012**  
Percentage of the population aged 55-69



Note: A person is on retirement when he/she receives an old-age pension (statutory scheme, occupational scheme, personal scheme or unknown scheme).

Source: Eurostat, EU-LFS, ad hoc module 2012 on transition from work to retirement.

StatLink  <http://dx.doi.org/10.1787/888933633489>

quarters of older workers have a permanent employment contract, this is the case for only half of those combining work with pensions. Likewise, two-thirds of those combining work and pensions work part-time, against one-fifth of non-retired older workers in total (DREES, 2017). According to Eurofound (2012), working retirees are often younger and male. Retirees are more likely to work if they are highly educated, live in urban areas or have a mortgage.

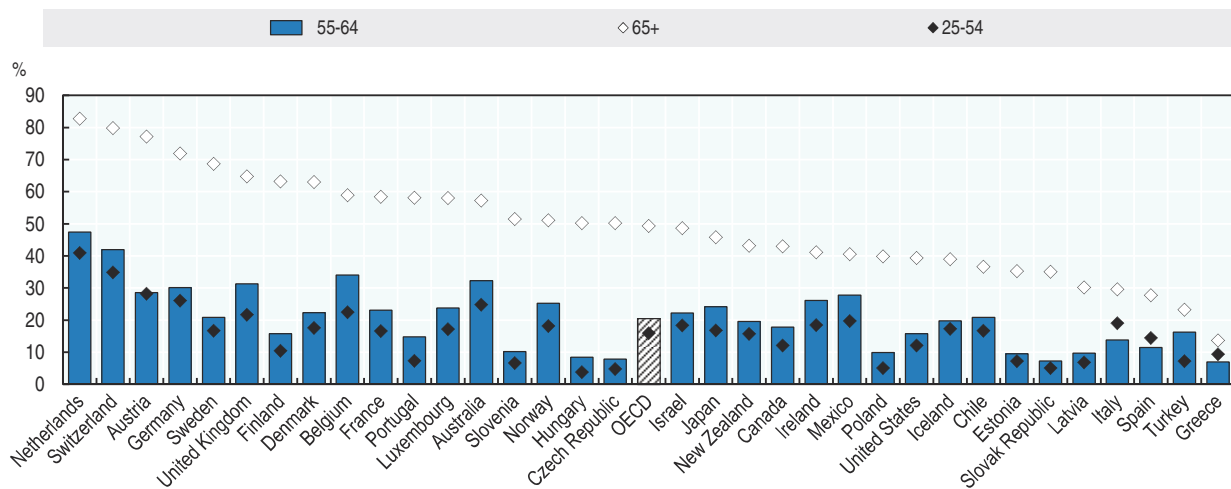
### Retiring “normally” and continuing to work

Among the 65+ group in employment, part-time work is common (Figure 2.9). On average across OECD countries, about half of those employed who are older than 65 are employed part time against 21% for the 55-64 and 16% for the 25-54 cohorts. Over the last 15 years, these average shares have been stable but part-time employment among the 65+ cohort increased sharply in Austria, Chile, Luxembourg and Slovenia.<sup>10</sup> However, as a share of the entire 65+ population this is still a small fraction since employment rates at these ages are low.

The simplest form of combining work and pensions is to claim a full pension at the normal retirement age and to continue working part-time beyond this age. No OECD country requires workers to stop working entirely at the normal retirement age. However, some countries limit how much pensioners can earn (Table 2.3) while others, such as Poland, require that the initial contract is terminated.

Seven OECD countries apply limits to post-retirement earnings, above which pension benefits are reduced. Danish pensioners can earn up to two-thirds of average earnings before their earnings-related benefit is reduced, and on top of this the means-tested supplement is reduced for earnings above 15% of the average wage. In Greece, the monthly pension benefit of an individual aged over the retirement age who continues to work is reduced by 60% if earnings are above the social security threshold. In Israel, there is a withdrawal rate of 60% for each shekel of earned income above 57% of the average wage up

Figure 2.9. Share of part-time employment in total employment in OECD countries by age groups in 2016



Source: OECD LFS statistics.


StatLink  <http://dx.doi.org/10.1787/888933633508>


Table 2.3. Rules for delaying retirement or working after pension age, 2016

	Retirement ages						Retirement ages				
	Normal men (women)	Max deferral age men (women)	Annual bonus	Have to retire	Earnings limit		Normal men (women)	Max deferral age men (women)	Annual bonus	Have to retire	Earnings limit
Australia	65	-	-	N	Y	Korea	61	66	7.20%	N	Y
Austria	65 (60)		4.20%	N	N	Latvia	62.75			N	N
Belgium	65			N	N	Luxembourg	60	65		N	N
Canada	65	70	7.2%/8.4%	N	N	Mexico	65			N	N
Chile	65 (60)			N	N	Netherlands				N	N
Czech Republic	63 (62.3)		6%	N	N	New Zealand	65	-	-	N	N
Denmark	65	NRA+10	(a)	N	Y	Norway	67	75		N	N
Estonia	63		10.80%	N	N	Poland	65 (60)			N	N
Finland	65		4.8%* /7.2%	N	N	Portugal	66.2	70	4%-12%	N	N
France	61.6		5%	N	N	Slovak Republic	62		6%	N	N
Germany	65		6%	N	N	Slovenia	62		6%	N	N
Greece	62	-	-	N	Y	Spain	65		2%-4%	N	Y
Hungary	63		6%	N	N	Sweden	65			N	N
Iceland	67	70	6%/8%	N	N	Switzerland	65 (64)	70 (69)	5.2%-7.5%	N	N
Ireland	66	-	-	N	N	Turkey	60 (58)			N	N
Israel	67 (62)		5%	N	Y	United Kingdom	65		10.4%	N	N
Italy	66.6 (65.6)			N	N	United States	66	70	8%	N	N
Japan	65		8.40%	N	Y						

Note: Ages refer to labour market entry at age 20, with the normal retirement age being the earliest point to be eligible for all pension components without deduction.

(a) Denmark: The increment for deferring the pension for a year is the ratio of the period of deferral to average life expectancy at the time the pension is drawn. For example, if population projections show life expectancy for a 68 year old to be 17.1 years, the increment for deferring for a year from age 67 would be  $1 / 17.1 = 5.8\%$ .

\* Finland: The deferral of 4.8% for the earnings-related component applies after age 68.

StatLink  <http://dx.doi.org/10.1787/888933633527>

to age 70, after which there is no earnings limit. Likewise in Japan, for ages 65-69, when the total income exceed JPY 460 000 (108% of average earnings), pension benefits starts to be reduced.<sup>11</sup>

In Korea pensioners aged 61 or over will only receive 50% of the pension if they have earnings above the average of those insured. In Spain, the pensions of individuals who

continue to work after age 67 are reduced by 50%. In Australia, there is no restriction to combining work and pension receipt of the defined contribution Superannuation guarantee component. However, when eligible to the means-tested Age Pension, the only public pension benefit, then a reduction is likely. Although a small amount of earnings are exempted from the income test in the calculation of the Age Pension earnings exceeding 14% of average result in a pension reduction, if there is no income from other sources.<sup>12</sup> France does not have an earnings limit, but since 2015, working retirees having fully withdrawn their pension do not earn additional pension entitlements from the defined benefit scheme even though they have to pay pension contributions, which then act as a pure tax on continuing to work.

In most countries, pensioners have no restriction on working. For example, Austrian retirees who claim the full pension at normal retirement age and continue to work, pensions are recalculated each year to take account of the additional contributions made. In New Zealand, the flat-rate universal pension is available at age 65 without any option for early or late claim. Retirees can continue working and estimates suggest that almost one quarter of those aged 65 and over do so (HLFS, 2016).

Since 2010, the Czech Republic has no restriction on the combined receipt of an old-age pension and income from work. Pensioners can also opt for partial retirement and receive half of their pension. Other countries also allow partial withdrawal of pension benefits. In Sweden, workers can combine part-time work with a partial pension. Pensions can be withdrawn partially at 25%, 50% or 75% of the full pension. In addition, it is possible to combine work with receipt of the guarantee pension. In the Netherlands, partial retirement withdrawal schemes are widely offered by employers. Employees can work fewer hours per week and receive part of their pension. This opportunity is rarely taken, but tends to be focused on early partial retirement.<sup>13</sup>

Partial withdrawal of pensions might be beneficial for part-time workers as a way to smooth income and consumption at older ages. Receiving for instance 50% of pension benefits and 50% of labour income from a part-time job might be preferable for a transition period. This should of course boost the full pension received at full retirement (in an actuarial neutral way). For defined contribution schemes – funded or notional – this can be arranged in a straight-forward manner; part of the pension funds are annuitised at the time of partial retirement while the rest is only annuitised at full retirement. For defined benefit schemes, the calculations do not have to be that much different; part of the pension entitlements are taken at the retirement age, while the other part is deferred and adjusted in an actuarially neutral way.

### ***Retiring early and continuing to work***

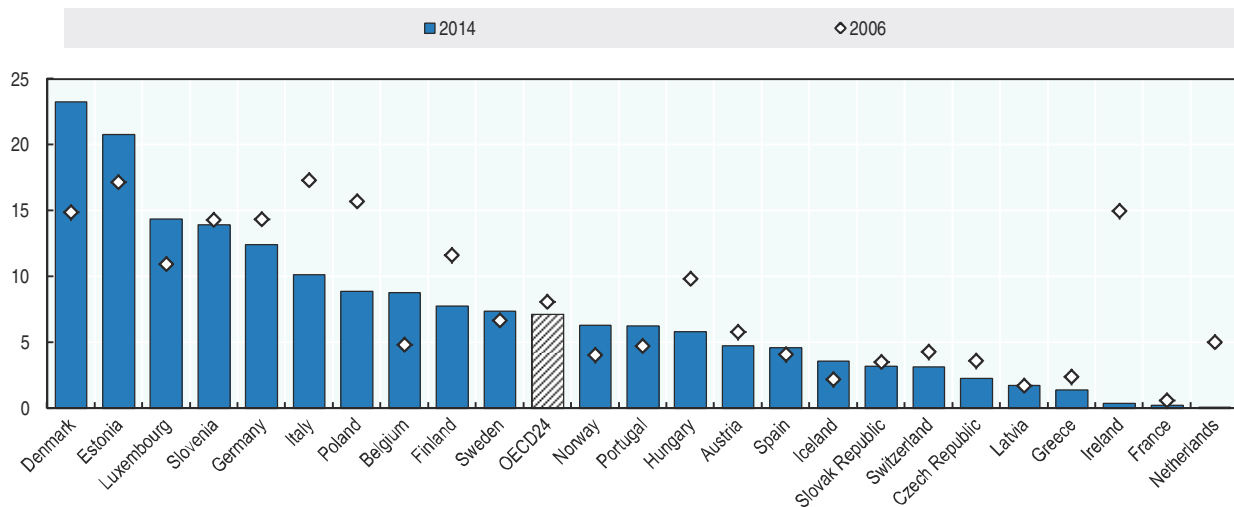
As discussed above, most countries have tightened early retirement programmes based on the definition used so far in this chapter. However, in order to investigate the relevance of early retirement schemes in individual countries survey data is required, which implies that the definition differs.<sup>14</sup> Analysis from Eurostat indicates that early retirement is still common in some countries (Figure 2.10). On average in 2014, in the 22 OECD countries reported in the figure, 7.7% of people receiving old-age pensions are in early retirement, down from 8.7% in 2006. The share ranged from 23.3% in Denmark to 0% in Turkey in 2014.<sup>15</sup> In Denmark, early-retirement programmes are channelled through voluntary unemployment insurance schemes and can therefore be considered early retirement for labour market reasons. However, the take-up rate of voluntary early-




retirement programmes is expected to decline as a consequence of reforms implemented since 2006 (OECD, 2015). According to the definition used here, early retirement decreased substantially in Ireland, Italy and Poland.

Figure 2.10. **Early retirement is still common in many countries**

Early retirement among persons who receive an old-age pension (%)



Source: Eurostat. Early retirement includes: anticipated retirement, early retirement due to reduced capacity to work, early retirement for labour market reasons.

StatLink  <http://dx.doi.org/10.1787/888933633546>

In most countries, the early claim of pension entitlements is possible for only part of the pension benefit, typically the (defined contribution) earnings-related portion; flat-rate or safety-net benefits are only available at the normal retirement age, almost by definition. In many countries with defined contribution schemes, at least part of the pension can be taken as a lump sum.

In the United Kingdom, for example, early retirement with a lump sum is possible from the age of 55 for men, ten years prior to the normal retirement age when the basic components can be claimed. In Ireland, individuals can retire at age 50 with the defined contribution pension but the basic pension cannot be claimed before the age of 66. However, in these two countries, the defined contribution schemes, although applicable to a significant proportion of the population, are not mandatory and so are not included in the calculations below. In Australia, there are so-called Transition-To-Retirement Pensions (TRIPs) that let workers move from full-time to part-time work and complement their income with the pension.<sup>16</sup> In the Netherlands, combining work and partial pensions before the retirement age is often part of the same schemes that allow combining work and pensions after the retirement age. The earliest age differs by employers, but can be as early as 55. However, the basic pension is only available at the normal retirement age.

Eleven countries – beyond those with mandatory defined contribution schemes – allow combining work and early pension receipt (the rules for normal and early retirement ages are summarised in Table 2.4): Austria, Belgium, Canada, the Czech Republic, Finland, France, Germany, Greece, Japan, Norway and the United States.<sup>17</sup> If people make pension contributions for work while receiving an early-retirement benefit, pensions are either recalculated each year to reflect these new contributions, or once the pension is eventually claimed.

Table 2.4. **Early and normal (based on full careers) retirement ages for those retiring in 2016**

	Scheme	Early age	Able to combine work and early retirement	Normal		Scheme	Early age	Able to combine work and early retirement	Normal
Australia	T	..		65	Japan	Basic/DB	60	Y	65
	DC	57		..	Korea	DB	57		61
Austria	Men DB (ER)	62.0	Y	65	Latvia	NDC/DC	60.75		62.75
	Women DB (ER)	59.9		60		T	..		67.75
Belgium	DB (ER)	62	Y	65	Luxembourg	DB	60		60
	Min	..		65	Mexico	T	..		65
Canada	Basic/T	..		65		DC	Any age/60		65
	DB (ER)	60	Y	65	Netherlands	Basic	..		65.5
Chile	Basic/T	..		65		DB (Occ)			65
	Men DC	Any age		65	New Zealand	Basic	..		65
	Women DC	Any age		60	Norway	Min	67	Y	67
Czech Republic	Men DB	60	Y	63		NDC/DB	62		67
	Women DB	60		62.3	Poland	Men NDC/Min	..		66
Denmark	Basic/T	..		65		Women NDC/Min	..		61
	DC (ATP)	..		65	Portugal	DB	60		66.2
	DC (Occ)	60		65		Min	..		66.2
Estonia	Points	60		63	Slovak Republic	Men DB	60		62
	DC	62		..		Women DB	60		62-58.25 <sup>1</sup>
Finland	Min	63	Y	65	Slovenia	Men DB	..		60
	DB	63				Women DB	..		59.75
France	DB	61.6	Y	61.6	Spain	DB	61		65
	Points	56.6		61.6	Sweden	Basic	..		65
Germany	Points	63	Y	65		NDC/DC	61		..
Greece	DB	62	Y	62	Switzerland	Men DB	63		65
Hungary	Men DB	..		63		Women DB	62		64
	Women DB	Any with 40yrs		63	Turkey	Men DB	..		60
Iceland	Basic/T	..		67		Women DB	..		58
	DB (Occ)	65		67	United Kingdom	Men Basic (SP)	..		65
Ireland	Basic/T	..		66		Women Basic (SP)	..		63
Israel	Men Basic/T	..		67		T (PC)	..		63
	Women Basic/T	..		62	United States	DB	62	Y	66
Italy	Men NDC	62.8		66.6		T			65
	Women NDC	61.8		65.6					

Note: The normal retirement age is calculated assuming labour market entry at age 20. DB = defined benefit; DC = defined contribution; .. = early retirement or deferral of pension is not available; Occ = occupational; T = targeted. Where pension ages for men and women differ they are shown as Men/Women. – = benefits automatically adjusted for early and late retirement in DC schemes.

1. France: Combining partial work and early pension is possible from age 60. 2. Slovak Republic: For women with children the pension age is reduced dependent on the number of children.

Source: See "Country Profiles" at <http://oe.cd/pag>.

StatLink  <http://dx.doi.org/10.1787/888933633565>

Limitations and eligibility criteria for combining work and receiving early pension vary widely across countries. In Austria, early retirees can only make up to 11% of average earnings before the early pension is fully withdrawn. In Belgium, by contrast, early retirees can earn up to 50% of average earnings before the pension is gradually reduced. In the Czech Republic, individuals can receive half of the pension whilst working, with the total accrual factor increasing by 1.5 percentage points for each six months of work. France has in place a gradual retirement programme, which applies both an earnings and hours condition: the number of hours worked can be between 40% and 80% of full-time work with the pension reduced proportionally, and the combined income from pension and work income cannot exceed the individual's last wage prior to early retirement. In Germany, for those with annual earnings above EUR 6 300 (13% of average wage), the full pension is reduced by 40% of the additional earnings. In Greece, early retirees can have a combined

pension and employment income of 40% of average earnings; thereafter pensions are reduced by 60% against employment income. Likewise in Japan, for ages 60-64, when the total income of monthly pension and standard remuneration exceed JPY 280 000 (two-thirds of average earnings), pension benefits start to be reduced. Further details of the rules that apply can be found in Annex 2.A1 in the annex.

Table 2.4 shows the different rules that govern early retirement in OECD countries in 2016 (this complements the summary presented in Table 2.1). For example, in Chile women can retire from the defined contribution scheme at age 60 but have to wait until age 65 for the means-tested element (if entitled to a low pension) to obtain their full pension. Likewise, individuals in Canada can retire with their mandatory earnings-related pension from the age of 60 (though with a reduction) but neither the basic nor means-tested pensions are available before the age of 65.

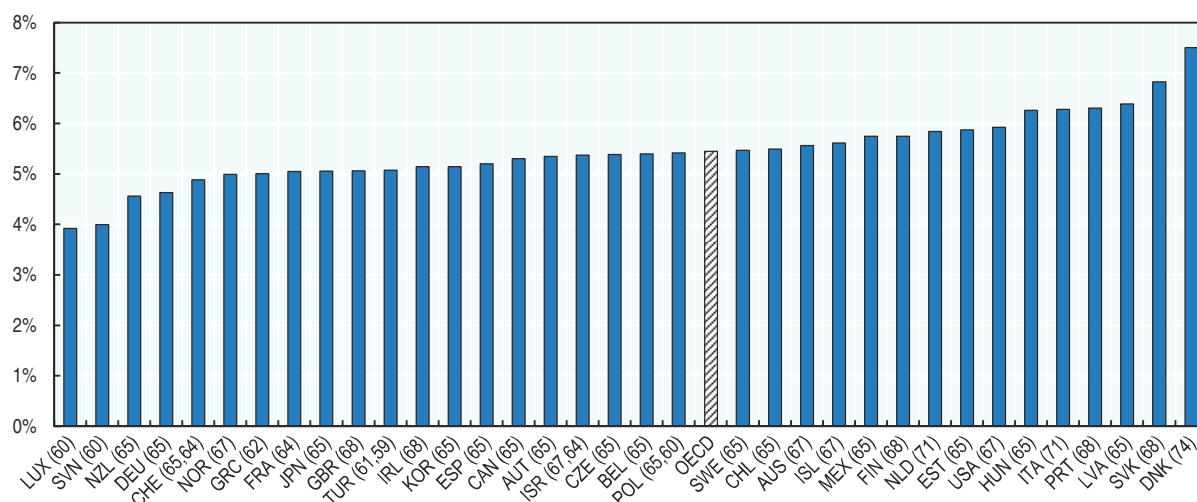
Given the variety of rules described above it is useful to examine in more detail, using OECD pension models, the impact of various flexibility options on pension benefits. Sections 2.3 and 2.4 show the consequences of late and early retirement on replacement rates, where there are more and fewer years of contribution, respectively. First, the next section examines the concept of “actuarial neutrality” to provide a benchmark to compare bonuses and penalties from longer or shorter contribution periods.

### **Actuarial neutrality**

When individuals work past the retirement age they should receive a higher pension benefit compared to the benefit they would have received at the normal retirement age. Conversely, when retiring before the normal retirement age pensions should be lower. Actuarial neutrality is a central concept for the assessment of the size of this bonus or penalty and thus for the assessment of work incentives around retirement ages (see Annex 2.A1 for details). Actuarially neutral pension schemes ensure that at a given age (e.g. at retirement age) a worker is (actuarially) indifferent between retiring and working an extra year. A bonus on accumulated entitlements for deferring the receipt of pensions that is larger than implied by actuarial neutrality provides financial incentives to work longer but is costly for the pension provider. Reciprocally, a bonus that is lower than would be consistent with actuarial neutrality acts as a disincentive to continue working.


The actuarially neutral bonus depends on the retirement age, mortality rates, the discount rate and the indexation of pension in payments, but not on the other parameters used to compute pension benefits (see Annex 2.A1).<sup>18</sup> It is therefore unrelated to what pension systems actually deliver. On average across countries, actuarial neutrality implies a bonus of about 5.5% on past entitlements for each year of deferral (Figure 2.11).

Part of the cross-country variation relates directly to differences in the retirement age. For example, in both Luxembourg and Slovenia the long-term normal retirement age is 60, leading to a long period of pension receipt, and so a low actuarially neutral bonus or penalty, of about 4%, is needed to balance the system. Conversely, in Denmark the long-term retirement age is estimated to be 74 years as the increases in pension age are designed to result in an average of only 14.5 years in retirement, meaning that a much larger penalty or bonus, of about 7.5%, is required to ensure actuarial neutrality at that age. Similarly, for a given retirement age, a longer retirement period (i.e. longer remaining life expectancy) implies a lower neutral bonus: at age 65, it is 5.2% in Spain versus 6.4% in Latvia.

Figure 2.11. **Actuarially neutral annual bonus on past entitlements at the normal retirement age**

Note: Normal retirement ages are in parenthesis on the x-axis.

Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933633584>

The level of the actuarially neutral bonus or penalty refers to past entitlements and thus does not depend on pension rules that are associated with contributions and used to determine the initial benefit levels. As discussed above, the only pension parameters that matter are the retirement age and the indexation of pensions in payment. By contrast, the impact of working an extra year or retiring one year earlier, relative to the baseline case, on pension benefits depends on the design of the pension systems.

Every year of extra (missing) contributions generally increases (decreases) pension entitlements, in the form of accumulated assets in a defined contribution scheme or additional rights in a defined benefit scheme. Some, but not all, countries offer additional bonuses (Table 2.3). As explained above, actuarial neutrality implies a bonus of about 5.5% on past entitlements on average across the OECD for each year of deferral. However, by working an additional year, higher accruals or increased referenced earnings used to compute the pension lead to a higher pension before any bonus is applied. Therefore, pensions might increase by much more than 5.5% per year of deferral even if the system is designed in an actuarially neutral way.

For example, in a simple defined benefit scheme with a retirement age of 65 and a full career from age 20 the benefit will increase by  $1/45 = 2.2\%$  based on the additional year of contribution before the bonus is applied. If actuarially neutral, this would lead to an overall increase of  $7.7\% (= 2.2\% + 5.5\%)$  on average. However, not all defined benefit schemes accrue entitlements after the normal retirement age. In the United States, for example, deferring pension receipt by one year generates a bonus of 5% whether this year is spent working and contributing or not. In a defined contribution scheme – whether funded or not – pensions are automatically increased through both the accumulation phase (higher savings) and the payment phase (lower remaining life expectancy), resulting in higher annuities.

### **The effect of working longer on pension benefits**

The maximum duration of pension deferral beyond the normal retirement age currently ranges from three years in Iceland to eight years or more in Denmark, France and

Norway (Table 2.3 above). Luxembourg has a deferral period of five years but, given the low retirement age, this means deferring only until age 65. Workers can work beyond these periods but their pension benefits are not increased further if they already have a full contribution history.

The impact of retiring later on pension benefits varies by component of the pension system. Basic pension systems, such as those in Ireland and New Zealand, pay the same benefit whether people work beyond the pension age or not. In such cases, the system is totally flexible after the retirement age, in the sense that it creates no incentive or disincentive to work longer or part-time. At the same time, however, there is no possibility to smooth pension payments, for example by claiming lower initial benefits and combining these with labour income, offset by higher benefits when fully retired.

In Canada, Denmark, Japan and the United Kingdom (amongst other countries), deferring pensions pays a 6-8% basic pension bonus for each year of deferral, in addition to higher earned entitlements when working; the bonus can be partially offset as income-tested benefit components are withdrawn, which is the case in Canada and Denmark.

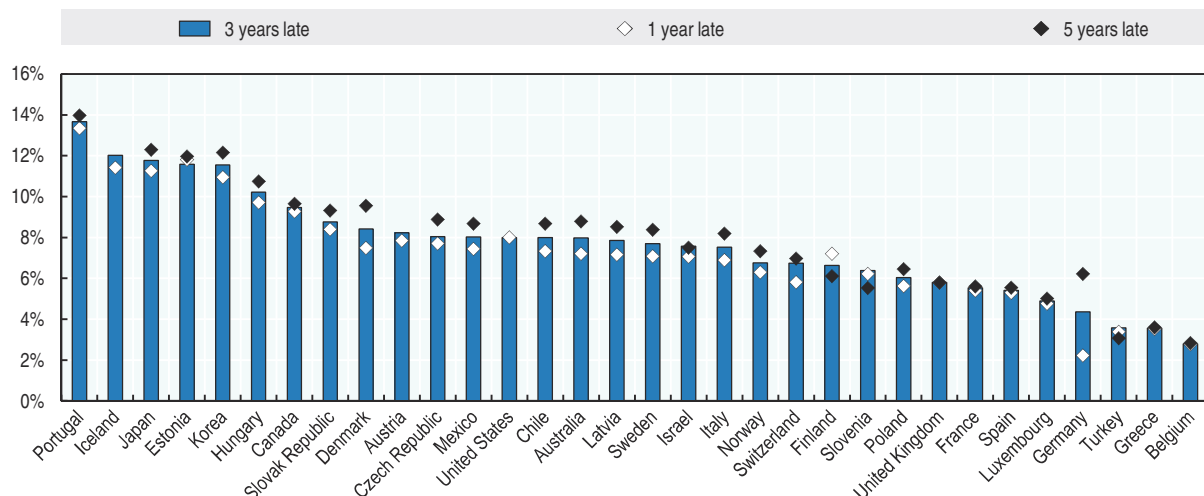
The effect of deferred retirement in earnings-related pension schemes differs across countries. In Portugal, pensions are increased by 4% for each year of deferral beyond the normal retirement age for people who have contribution careers of 15 to 24 years and by an annual 12% for careers of more than 40 years. In Switzerland, the first year of deferral increases the pension by 5.2% whilst the fifth year of deferral would increase it by 7.5%, giving a cumulative deferral of 31.5% for a five-year period. In funded or notional defined contribution components, the bonus is implicit in the calculation of the annuity: the monthly pension benefit is higher because the retirement period is shorter.

Deferring a pension increases pension levels in many countries significantly. Figure 2.12 shows the impact of deferring pensions and continuing to work for a full-career worker on annual benefits summed over all pension schemes.<sup>19</sup> In Australia, Chile, Italy, Latvia and Mexico, which all have defined contribution schemes – whether funded or not – the effect is close to 8%. Across OECD countries, the combined overall increase – from the deferral rate, additional entitlements and benefit indexation – averages about 7.5% per year of deferral, and depends only slightly on the length of the deferral.

Five countries record a large impact on pensions, with bonuses much larger than implied by actuarial neutrality: Estonia, Iceland, Japan, Korea and Portugal. The largest impact is evident in Portugal, as additional entitlements while working add to the bonus described above.<sup>20</sup> In Japan, both the basic and earnings-related components are increased by 8.4% for each year of deferral; adding in the effect of extra contributions and indexation of pension in payments results in an overall increase of around 11.5%. Korea offers a lower deferral rate of 7.2% but higher accrual rates, also resulting in an overall increase of 11%.<sup>21</sup> In these five countries, the large bonuses are potentially costly for the pension system.


In most countries, workers have therefore no financial disincentives to defer pensions once they become eligible to full pensions. There are a few exceptions, though; Belgium and Turkey have no bonus for late retirement, for example. Moreover, under the baseline full-career case from age 20, there is also no bonus in Greece until workers reach the age of 67. Deferring pensions (while working) generates a small increase in benefits in Germany at least for the first years.<sup>22</sup> In France the 5% bonus in the main scheme is activated not only by postponing retirement receipt, but also conditional on an individual continuing to contribute. Moreover, there is no additional entitlement beyond the bonus while in the

Figure 2.12. **Impact on annual total benefits when working and deferring pensions by up to five years after the normal retirement age, full-career average earners**



Note: Figures for three and five years late have been annualised, so a 6% increase shown in the chart means a total of 18% for three years and 30% for five years. It is not possible to defer the basic pensions in Ireland, the Netherlands or New Zealand so they are not included in the chart. In France, the one-year bonus applied to the occupational pension, between 10 and 30% depending on the length of deferral, has been spread across the entire retirement period based on the annuity factor.

Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933633603>

occupational scheme a large bonus will apply from 2019 and be limited to one year of payments.

Whether the limited financial benefit from postponing retirement effectively generates disincentives to continue working depends on the extent of limitations on combining work and pensions. If there is no restriction, individuals who work beyond the retirement age can draw their pension and combine it flexibly with earnings.

### **The financial impact of early retirement**

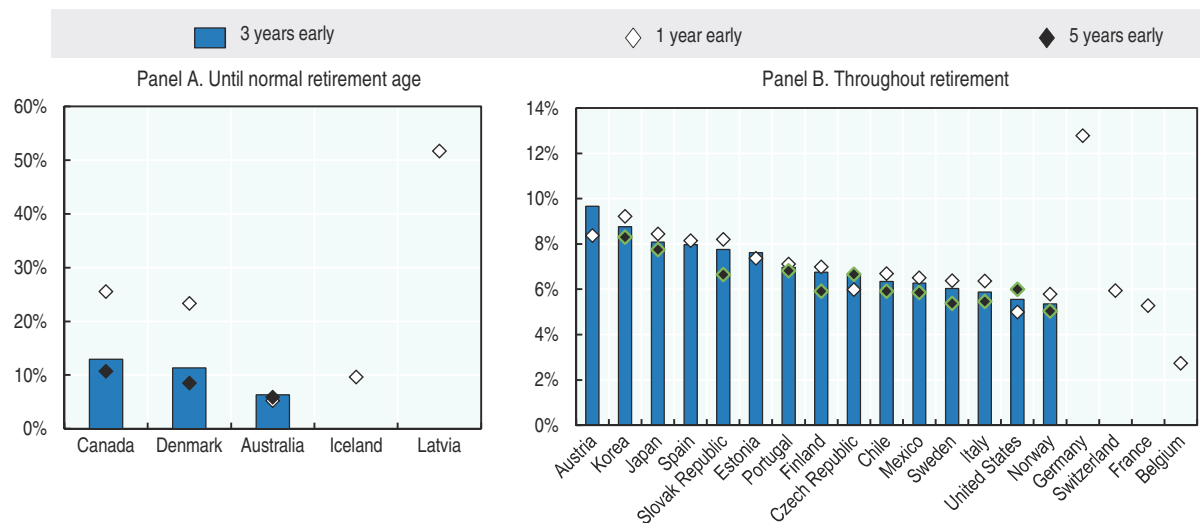
The impact of early retirement on future pension benefits differs between pension systems and between individual components within these systems. Usually, basic pensions are not available before the normal retirement age and old-age safety nets are never accessible at younger ages.

Some countries have no flexibility: early retirement is not possible under any circumstance in the mandatory pension systems of Hungary, Ireland, Israel, Luxembourg, the Netherlands, New Zealand, Poland, Turkey or the United Kingdom. While receiving an early pension is not possible in these countries, past entitlements are not affected by the decision to retire early. In addition, for the baseline case in *Pensions at a Glance*, early retirement is not relevant in Greece or Slovenia.<sup>23</sup> The analysis that follows excludes both sets of countries.

Not every component of the pension system is available early in Australia, Canada, Denmark and Iceland. In Australia, the Age Pension (the means-tested tax-financed component) will not be available until age 67 whereas the defined contribution component is available from age 60. Individuals claiming their pension for example at age 62 will have a 30% lower pension entitlement (or about 6% per missing year) of what they would have received if they had continued working until the normal retirement age.<sup>24</sup> The same


mechanism applies in the other three countries in this group; Figure 2.13 (Panel A) shows the impact.<sup>25</sup> Across this group, individuals' potential to retire flexibly is limited unless they can draw on savings or other assets, even though their pension entitlements are unaffected by the decision to retire early (i.e. there is no impact on pension wealth, which implies actuarial neutrality, see Annex 2.A1).

Figure 2.13. **Negative impact on annual total benefits when claiming pensions by up to five years early, full-career average earners**



Note: Figures for three and five years late have been annualised, so a 6% decrease shown in the chart means a total of 18% for three years and 30% for five years. In Latvia, shown in Panel A, there is a very strong disincentive to retire early; this is possible only two years before the retirement age, with the earnings-related pension reduced by 50% for up to two years.

Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888933633622>

Among other countries, the pension penalty for retiring before the retirement age tends to be similar for countries with similar pension systems (Figure 2.13, Panel B). In Chile and Mexico, which both have defined contribution schemes, the benefit decreases by slightly more than 7% per anticipation year for full-career average earners. The lower monthly pensions obtained upon retiring earlier are offset by the longer period of overall benefit receipt.<sup>26</sup>

Many countries have built financial disincentives to early retirement into their pension system.<sup>27</sup> This applies in particular to Austria and Korea, which have instituted rules that also act as strong barriers to flexible early retirement. In Korea, for example, the penalty for each year of early retirement is 6% for the earnings-related component on top of lower contributions. Germany is a special case: the early retirement reduction is calculated on the basis of the number of years prior to the (future) statutory retirement age of 67 while the normal retirement age is 65 based on the assumption in this analysis of a full career from age 20.<sup>28</sup> Belgium is the only country where early retirement generates a relatively small loss in benefits, though it is only possible to retire two years before the normal retirement age. This is because there is no penalty at all to retiring early, just one or two missing years of contribution.

While an individual choosing to retire early might face a significant financial penalty, the costs associated with early retirement for the pension provider are limited in most countries. In the 14 countries on the left of Panel B from Korea to Norway, the average impact of retiring three years earlier on benefits is a loss of 7% per year of anticipation, or

21% in total. In these countries and Australia (in Panel A), this allows older workers to choose the retirement age flexibly – with adjustments of benefits – several years before the normal retirement age without financially encouraging early retirement or overly penalising early retirees. In Austria, penalties are somewhat larger.

## 2.4. You can't always make the choices you wished for

Surveys confirm that workers would like greater flexibility in deciding when to retire, yet combining work and pensions is still uncommon. There are several possible explanations for this divergence between people's stated preferences and what they do in reality.

### **Surveys show that flexible retirement is popular in many countries**

In the European Union, almost two-thirds of citizens say it appeals more to them to combine a part-time job and partial pension than to fully retire (Eurofound, 2016). However, enthusiasm for combining work and pensions differs across countries. In France only 15% of survey respondents aspired to continue working past retirement while 43% of Japanese respondents indicated they were considering to continue working after the official retirement age (Aegon Center for Longevity and Retirement, 2015). Meanwhile, 77% of employers in the United States say that many employees at their company plan to continue working either full-time or part-time after the retirement age (TCRS, 2016).

Employers' support for flexible retirement differs across countries. In the United States 81% of employers say their company is "supportive" of employees working past 65.<sup>29</sup> In Finland, where the statutory retirement age for the national pension is 65, 70% of employers and 86% of employees found the lower age limit of age 63 for flexible retirement acceptable in 2011 (Tuominen, 2013). However, 21% of the employers found the lower age limit too high versus 3% of the employees, suggesting that employers might use flexible retirement to phase out older workers. More generally, in Finland interviews showed that 19% of retired individuals would have liked to continue working, but 11% said that the employer would not have accepted that (see mandatory retirement in Section 4.2). Many employers stated that they are sceptical about the ability of people to work beyond 68. In the Netherlands, a recent survey found that the majority of employers in industry, services and the public sector were worried about the ability of workers with health problems to work longer (Van Dalen et al., 2017). At the same time, three-quarters of employers were in favour of a more flexible retirement age.

A crucial question for policy makers aiming to extend working lives in light of population ageing is how flexible retirement will affect people's labour market participation. Offering greater flexibility through the pension system might lead some workers to continue in employment while receiving retirement benefits but it might also entice those who work full-time and retire late at the moment to reduce their working hours. The impact of flexible retirement on total hours worked across the economy is therefore ambiguous; overall, recent flexibility reforms seem to have failed to increase the overall labour supply of older workers (Börsch-Supan et al., 2017).

A German survey (GfK, 2017) found that three quarters of respondents were not planning to retire later despite the introduction of flexible retirement (*Flexirentengesetz*). Only 6% indicated they planned to retire later in response to the new arrangements.<sup>30</sup> Among women and individuals with low educational attainment, this was even lower



(3.5% and 4%, respectively). Both groups typically have lower pension entitlements and are more likely to have interrupted careers. Late and/or phased retirement should be especially attractive for these groups in theory, but the survey suggests otherwise.

Allowing a gradual withdrawal of pension benefits while continuing to work might make flexible retirement more attractive. Based on an old study in the United States, 40% of survey respondents expressed an interest in phased retirement (Brown, 2005). About three-quarters of those interested indicated that phased retirement would encourage them to work past their normal retirement age. In the United Kingdom, 55% of survey respondents in the would support a system of partial early pensions in return for a lower pension when they retire in full (Berry, 2011). However, in the Netherlands, the majority of respondents still prefers full retirement at the retirement age over gradual retirement (Van Soest et al., 2006; Elsayed et al., 2015). But phased retirement is the second most frequently preferred option before late or early full retirement.

### **Wishes vs reality**

While employers recognise that many of their staff want to retire more flexibly, few have programmes in place to support a gradual exit from employment. Only 39% of employers offer flexible time schedules in the United States (TCRS, 2016). In Europe, 78% of people over 55 cited a lack of opportunities to gradually retire by reducing hours worked as an important reason to stop working altogether (Eurobarometer, 2012). Using HRS data for the United States, Szinovacz and Davey (2005) find that nearly one third of older workers perceived their retirement as forced, linking it to health limitations, job displacement, and care obligations.

Combining work with receiving a partial pension in countries where this is permitted is also rare. In the United States such schemes have the potential to reach 2.5 million government employees. However, to date very few agencies chose to make it available to their employees (OECD, 2018). In the Netherlands, only 12 000 employees used phased retirement in 2014 even though it is widely available.<sup>31</sup>

In France, phased retirement (*Retraite progressive*, created in 1988) is possible at age 60 for those having at least 150 quarters of paid work (OECD, 2014). Although the number of pensioners working part-time more than doubled between 2015 and 2016, they still represent only a very small fraction of total pensioners (0.08% in 2016) in part due to the lack of information about the programme (DREES, 2015). Moreover, in 2016, 70% of the new beneficiaries had not reached the statutory retirement age of 61 years and 7 months (for people born in 1954) (Eurofound 2016).<sup>32</sup>

One reason why the reality of people's retirement decisions diverge from their preferences could relate to changing expectations. Prime age workers might not have a clear view of the possible benefits they can receive when getting closer to the official retirement age. For instance, employment decreases after age 62 in the United States, when workers can draw their public pensions; they also become eligible for Medicare when they turn 65. Given the relatively low unemployment rates in this age group, the drop in employment means that most people withdraw completely from the labour market. In Japan, workers who, in their 50s, expect they will receive a high pension benefit are more likely to be retired in their 60s than those expecting to receive low pension benefit (Usui et al. 2015). In addition, the drop in employment rates in OECD countries coincides with an age at which wages tend to decline (Blundell et al., 2016).<sup>33</sup> Lower wages from working part-time has an added

negative effect on pensions. Yet financial considerations cannot explain the limited use of flexible retirement in all OECD countries: in many, financial incentives to retire early or disincentives to continue to work after the retirement age are limited (Section 2.3). The sudden drop in employment and the limited use of flexible retirement seem to be influenced by other factors than financial incentives.

The fixed costs associated with employment, both for the employer and the employee (Piggott and Woodland, 2016), could also partially explain the limited use of part-time work to gradually retire.<sup>34</sup> An employer often has to provide a desk and office space and incur administrative and training costs for retaining staff while employees face time and/or monetary costs associated with commuting to work (which might become even more burdensome at older ages), work clothing and work lunches.

Mandatory retirement – allowing the employer to set an age at which an employee has to retire – is still in place in many OECD countries. The United Kingdom, Denmark and Poland are the only European OECD countries that abolished mandatory retirement ages while with four non-European countries, Australia, Canada, New Zealand and the United States (the latter with very limited exceptions) have also done so.<sup>35</sup> In Finland and Sweden, mandatory retirement still exists from age 68 and 67, respectively. Other examples include Iceland, France and Portugal from age 70, and Norway from age 72. This means that in many OECD countries the employer needs to create a new contract (or at least renew an existing contract) in order to continue working after the mandatory retirement age set by the employer. However, due to data limitations, it is unclear how often mandatory retirement ages prevent older workers from continuing to work when they want to.

Age limits on employment specified by some collective labour agreements remain a barrier to working at an older age and send out the signal that the ability to work diminishes at an arbitrarily set age. Suitability for employment should be based on choice, competence and health rather than age (OECD, 2017a). In 2013, the European Parliament recommended that European Union member states “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, 2013).

However, ending mandatory retirement altogether is certainly not without controversy (OECD, 2017a). Employers in particular often argue that their businesses could not run as efficiently without mandatory retirement. As it is difficult to measure the performance of workers, mandatory retirement can be used as a convenient mechanism for parting with less productive workers, especially in countries where employment protection rules are rigid.

Health at older ages declines on average; this deterioration might make work more difficult or sometimes even impossible for certain workers (e.g. Schofield et al., 2017). Older workers might exit the labour market before the statutory retirement age if they become eligible for disability benefits. Moreover, health status affects productivity, which might reduce demand for older workers if wages are not sufficiently flexible. But if wages are flexible, declining health might also lead to labour market exit through lower participation through a supply-side effect.

Finally, it could be that preferences change at older ages. The preference for leisure could increase for several reasons: because someone’s spouse is retired (Warren, 2015), to spend more time with grandchildren, to travel or – related to health discussed above – to recover from sickness.

## 2.5. Conclusion

Rigidly set retirement ages might not be beneficial for society as a whole. Flexible retirement is therefore an important topic for policy makers. More flexible forms of retirement in which the timing and speed of labour market withdrawal can be adjusted might benefit those who want to work part-time at older ages, gradually withdraw their pension entitlements and better smooth their income from work and pensions. More generally, greater flexibility has the advantage of providing different options to better match individual preferences.

A pension system can be considered flexible if there are limited obstacles to combining work and pension receipt and if people can choose their age of retirement. Postponing retirement should be sufficiently rewarding to compensate for lost pension years while retiring a few years before the normal retirement age should not be overly penalised. However, flexibility should be conditional on ensuring the financial balance of the pension system, which implies that pension benefits should be actuarially adjusted in line with the flexible age of retirement.

Surveys indicate there is considerable interest in more flexible forms of retirement. However, reality differs from stated desires. In Europe about 10% of individuals aged 60-64 or 65-69 combine work and pensions which represents about one in five and one in eight pensioners, respectively. Moreover, about 50% of workers older than 65 work part-time on average in OECD countries: this share has been stable over the past 15 years. The share of part-time work after age 65 ranges from little over 10% in Greece to more than 80% in the Netherlands, where part-time work is more common at all ages.

Combining work and pensions after the official retirement age is possible in all OECD countries. However, disincentives are in place in several of them. Australia, Denmark, Greece, Israel, Japan, Korea and Spain apply earnings limits to the amount that people can earn while receiving pensions, beyond which pension benefits are reduced. These earnings limits mean that labour income is taxed more, which creates obstacles to retirees working while receiving their earned pension entitlements. Moreover, in France working retirees do not earn any additional pension entitlements on top of their full pensions even though they have to pay pension contributions. Removing such obstacles is important to make combining work and pensions more attractive. More generally, in order to efficiently promote more gradual forms of retirement, conditions to withdraw partial pensions should not depend on the amount of work and labour income after the normal retirement age.

While eleven countries allow combining work and early pension, beyond those with mandatory defined contribution schemes, there is limited flexibility in the provision of gradual retirement schedules by pension providers. Only in several countries including Australia, the Czech Republic, France and the Netherlands are early partial-retirement schemes widely available. For countries that currently have early retirement schemes, flexibility would be enhanced by greater opportunities to withdraw partial pensions, without being conditional on labour market outcome. In that case, pension providers should ideally offer different schedules for pension payments. For example, a share of pension entitlements could be withdrawn at an early retirement age and the remainder at the full retirement age. The amount of the early component should then be computed based on actuarial principles. This requires a high level of transparency in the communication of accrued entitlements by pension providers and of the different available schedules so that people have the information needed to assess the consequences of their decisions. Whether

pensioners would benefit from such a framework to combine work and pensions depends on their capacity to make well-informed choices to avoid jeopardising their final retirement incomes. Financial literacy plays an important role in that respect.

There could, however, be a conflict between different objectives, even if benefits are properly adjusted as a function of age or remaining life expectancy. On the one hand, partial withdrawals of pensions increase opportunities for older workers and allow them to smooth income at older ages. On the other, such flexible arrangements before the normal retirement age might actually provide incentives to work less at a still early stage. Indeed the evidence so far does not support the case that flexible retirement increases total hours worked.

Significant barriers to flexible retirement also exist outside the pension system, especially in the labour market or in cultural acceptance of part-time work, which limit people's freedom in deciding when and how to retire. Removing these obstacles requires correctly identifying their determinants and assessing whether addressing them would serve the general interest.

Pension entitlements increase in the vast majority of countries when retirement is postponed, and the financial disincentives to work after the normal retirement age are limited. In Estonia, Iceland, Japan, Korea and especially Portugal, the financial incentives to continue working after the retirement age are large for full-career workers and go beyond the increases that would be justified to compensate for the shorter retirement period. By generating higher benefits, this de facto provides great flexibility for workers, but also implies that working longer after a full career is costly for the pension provider in these countries. In Belgium, Greece and Turkey, by contrast, postponing the withdrawal of pensions only increases pension benefits by a small amount, making late retirement less attractive, while in Ireland, the Netherlands and New Zealand it is not possible to defer the basic pensions. If there is no restriction to combine work and pensions, as in all of these five countries except Greece, individuals who work beyond the retirement age can draw their pension and combine it flexibly with earnings.

Flexibility to retire fully before the normal retirement age is strongly restricted in more than half of OECD countries. There is no early retirement at all in the mandatory pension systems of Hungary, Ireland, Israel, Luxembourg, the Netherlands, New Zealand, Poland, Turkey or the United Kingdom. In another fifteen countries (Australia, Chile, the Czech Republic, Estonia, Finland, Italy, Japan, Korea, Mexico, Norway, Portugal, the Slovak Republic, Spain, Sweden and the United States) retiring a few years early is allowed and pension benefits are reduced in line with what is justified by actuarial principles. Among countries where it is possible to draw benefits from all components of the pension system before the normal retirement age, this results in large pension reductions in Austria, Germany and Latvia; in Belgium, by contrast, the impact is small. In countries with individual defined contribution – funded or non-financial – accounts, pension benefits are automatically adjusted with age: flexibility to choose one's retirement age is thus a characteristic of the pension system. However, in practice that choice can be more or less constrained depending on the early age at which it is possible to start withdrawing pensions.

Chile, the Czech Republic, Estonia, Italy, Mexico, Norway, Portugal, the Slovak Republic and Sweden offer flexible retirement for the baseline case used in the OECD pension models (full career from age 20 until the age of full pension entitlement). These countries allow: combining work and pensions flexibly after the retirement age, in particular without any earnings limitations; reward postponing retirement; and, do not heavily penalise

retiring early. In Italy and the Slovak Republic, however, people entering the labour market today will only be offered flexibility at ages higher than 67 and 66 years, respectively. Moreover, providing flexibility through high bonuses and low penalties imposes cost on pension providers. From an actuarial standpoint, late retirement is very costly in Estonia and Portugal.

Even if pension rules are set such that benefits are adjusted with age in an actuarially neutral way to reflect a shorter or longer expected retirement period, some people might underestimate their future needs and retire too early with insufficient future pensions. Given short-sighted behaviours, there is a trade-off between greater autonomy left to individuals and income adequacy throughout retirement. Policies that de facto restrict early flexible retirement might therefore be needed. Hence, the early retirement age should be set high enough to make sure that individuals accumulate sufficient pension entitlements.

## Notes

1. Using Gallup World Poll data they analyse France, Germany, Greece, Italy, Portugal, Spain, Sweden, Turkey, United States and the United Kingdom.
2. Surveys confirm a persistent perception of age discrimination (Eurobarometer, 2015; Australian Human Rights Commission, 2015; Ipsos Reid, 2012) and field experiments confirm this notion (Drydakis et al., 2017, Carlsson and Eriksson, 2017).
3. See Section 2.4.
4. See *OECD Education at a Glance Database*.
5. Data on healthy life years at different ages – equivalent to an indicator of disability-free life expectancy – are available from the statistical office of the European Union (Eurostat, 2016).
6. The average effective age of retirement is measured as the average age of exit from the labour force for workers aged 40 and over. In order to abstract from compositional effects in the age structure of the population, labour force withdrawals are estimated using changes in labour force participation rates rather than labour force levels. These changes are calculated for each (synthetic) cohort divided into five-year age groups. As it is not necessarily the case that individuals who exit the labour market automatically claim a pension this indicator will underestimate the effective retirement age, but can nevertheless act as a proxy.
7. However, early retirement is not the only pathway out of the labour market. Unemployment, disability and special programmes for specific sectors or jobs also allow for early exit. In recent year, rules concerning access to disability and unemployment schemes have been tightened, and sector-specific programmes have been phased out. Even though these programmes are important in explaining part of the rise in the effective retirement age, the rest of the chapter will focus on flexible choice for retirement rather than avenues into retirement for specific work-related reasons.
8. The eligibility age is gradually being raised from 60 to 65 years (between 2001 and 2013 for men and between 2006 and 2018 for women) for the flat-rate component and from 60 to 65 years (between 2013 and 2025 for men and between 2018 and 2030 for women) for the earning-related component.
9. In Chile for men the effective retirement age is 71.3 years while the normal retirement age is 65 (2016), for Korea it is 72.0 vs 61 and for Mexico it is 71.6 vs 65. Excluding these three countries leads to an average effective retirement age of 64.5, almost equal to the normal retirement age in 2016 (64.3). Also for women, these three countries have higher effective retirement ages. Chile 67.7 vs 60; Korea 72.2 vs 61 and Mexico 67.5 vs 65.
10. Source: OECD LFS statistics.
11. It is possible to combine pension benefits with employment after reaching the firm-specific retirement age. If pension recipients keep working after reaching the pensionable age, an earnings test is applied (*ZaishokuRoureiNenkin*) to reduce their pension benefits in earnings exceed certain amounts. Even though workers over 70 are not required to make pension contributions, the same scheme for ages 65-69 will be applied for these workers.
12. This is in addition to the standard tax-free threshold and tax credits applying to all sources of income,

13. [http://cao.minszw.nl/pdf/175/2017/175\\_2017\\_13\\_238455.pdf](http://cao.minszw.nl/pdf/175/2017/175_2017_13_238455.pdf).
14. See the note Figure 2.10.
15. In Turkey no general early retirement scheme exists. Only workers in specific industries and people with disability can retire early but other workers cannot claim pensions before the eligibility ages (see "Country Profiles" at <http://oe.cd/pag>).
16. In the United States, employers are allowed to introduce phased retirement, allowing employees to shift from full-time to part-time work while receiving partial retirement benefits.
17. Germany and Austria also have rules that enable older workers to work part-time while maintaining their wage. Wages are subsidised in these cases as long as the employer hires a younger person in addition.
18. The overall rate decreases with the generosity of indexation of pensions in payments. This is because, for example, price indexation tends to lower the value of future benefits relative to wage indexation.
19. In Iceland and the United States, deferral is only possible for three years.
20. This full-career criterion is important as it ensures that the individual is not only eligible for the full pension but also for the maximum deferral rate. In Portugal, the 12% deferral rate implies that the pension would increase by 60% if deferred for five years; this would result in an average earner having a gross pension equivalent to nearly 120% of their previous earnings, though this would mean a career length in excess of 50 years.
21. Not each component of the pension system is increased at the same rate. For example the points pension in Estonia increases by 10.8% each year in addition to the contribution impact, whereas the DC scheme increases based on contributions, returns on pension assets and the pricing of annuities incorporating a lower remaining life expectancy, but still results in an annual increase of over 9% for each year of deferral. In Iceland, the occupational scheme increases by 8% (and the basic components by 6%) for every year of deferral.
22. In Germany the legislated future retirement age is 67, and this is the point after which the deferral bonus of 6% is applied. However, as this analysis assumes labour market entry at age 20 a full career is reached at age 65 after 45 years of contributions, meaning that the increase for the first two years of postponed retirement is only from the extra contribution.
23. Indeed, the OECD pension models assume in the baseline that workers enter the labour market at age 20 and work continuously until the normal retirement age (i.e. the age at which a full, unreduced benefit can be claimed). Under this assumption, early retirement does not apply in these countries as the normal and early-retirement ages coincide, i.e. there is no penalty at that age for any component of the mandatory pension system.
24. However, when these early retirees reach the normal retirement age they will become eligible for the means-tested component, the value of which is dependent on their assets at that time: the replacement rate at normal retirement age will be more closely aligned with that of full-career retirees.
25. In Canada and Denmark, retiring one year early would reduce the benefit by around 25%. In Iceland it is only reduced by 10%. The same would also be true for many other countries, when considering the means-tested components, but, as they are not applicable for full-career average earners, they are not relevant in this instance.
26. In Norway and Sweden there is no associated direct penalty with early retirement as the pension schemes are primarily NDC and DC and so the accumulated assets are simply smaller because of the reduced number of years of contribution. This would lead to lower annual benefit payments because of the longer duration of payment, with the benefit adjustment being close to neutrality.
27. That is, the penalty for retiring early is greater than implied by actuarial neutrality, i.e. than warranted by maintaining financial balances for pension providers over time.
28. Based on this assumption, individuals can retire with a full pension without penalty at age 65, as they will have a full 45-year career. However, when an individual retires one year earlier at age 64 they will only have 44 years of contributions and so will not be eligible for the full pension upon reaching age 65. For them, the statutory retirement age of 67 applies. This means that they are retiring three years before and so the total negative impact on benefit is thus  $3.6 * 3 = 10.8\%$  in addition to the missing year of contribution. The reduction for each year, if retirement is taken two years early, would be 5.5% as the additional penalty is only 3.6% plus one further missing year of contribution and one additional year of benefits.

29. 81% indicate they strongly or somewhat agree with the statement: “My company is supportive of its employees working past 65”.
30. Others indicated they either planned to retire later anyway or that they did not know.
31. *Financieel Dagblad*, 15 May 2014, “Pensioen in deeltijd slaat maar niet aan”, [https://fd.nl/frontpage/export/pro/pensioen\\_fd/25419/pensioen-in-deeltijd-slaat-maar-niet-aan](https://fd.nl/frontpage/export/pro/pensioen_fd/25419/pensioen-in-deeltijd-slaat-maar-niet-aan).
32. 60% of them were women.
33. Moreover, in the United States many firms provide defined benefit pensions – and did so especially in the past – and pension levels are sometimes a function of a worker’s last salary. In such schemes a decline in working hours, and thus in earnings, can have a negative effect on pension benefits. Conversely, in the United Kingdom most DB pensions are calculated on a full-time equivalent basis. Moving from full-time to part-time at the end of their careers will not reduce worker’s pension benefits in the United Kingdom unless the hourly wage decreases.
34. However, restrictions on part-time work should become less stringent in a more service oriented economy as the fixed cost of work drop compared to a more manufacturing focused economy (Börsch-Supan et al., 2017).
35. For instance in the United States, the 1986 prohibition on mandatory retirement contained exemptions for certain types of employment, including for firefighters, police officers, top executives and policy making officials who receive substantial retirement benefits, and tenured faculty members. Mandatory retirement for tenured faculty was permissible at the age of 70 until the exemption was repealed at the end of 1993. For more information, See: [www.eeoc.gov/eeoc/history/35th/thelaw/adea\\_amendments\\_1986.html](http://www.eeoc.gov/eeoc/history/35th/thelaw/adea_amendments_1986.html). Mandatory retirement also may exist where age is a “bona fide occupational qualification” for the position, which generally has been found in public safety positions such as pilots. Other federal laws also have imposed mandatory retirement ages for certain federal government employment, including for air traffic controllers, federal law enforcement positions, most foreign service officers, and military personnel.

## References

- Aegon Center for Longevity and Retirement (2015), *The New Flexible Retirement*, Aegon.
- Australian Human Rights Commission (2015), “National Prevalence Survey of Age Discrimination in the Workplace 2015”.
- Banks, J. et al. (2010). “Releasing Jobs for the Young? Early Retirement and Youth Unemployment in the United Kingdom”, *Social Security Programs and Retirement Around the World: The Relationship to Youth Employment*, University of Chicago Press, pp. 319-344.
- Berry, C. (2011), “Gradual Retirement and Pensions Policy”, International Longevity Centre, London.
- Blundell, R., E. French and G. Tetlow (2016), “Retirement Incentives and Labor Supply”, *Handbook of the Economics of Population Aging*, Vol. 1, pp. 457-566.
- Börsch-Supan, A. et al. (2017), “Dangerous Flexibility – Retirement Reforms Reconsidered”, MEA Discussion Paper, No. 03-2017.
- Brown, S.K. (2005), “Attitudes of Individuals 50 and Older Toward Phased Retirement”, AARP Knowledge Management, AARP Research.
- Carlsson, M. and S. Eriksson (2017), “The Effect of Age and Gender on Labor Demand. Evidence from a Field Experiment”, No. 2017:8, IFAU-Institute for Evaluation of Labour Market and Education Policy.
- DREES – Direction de la recherche, des études, de l’évaluation et des statistiques (2017), “Cumul emploi-retraite: deux personnes sur trois travaillent à temps partiel”, *Études et Résultats*, No. 1021, Paris.
- DREES (2015), “Retraites : le recul de l’âge minimal a peu d’effet sur les motivations de départ”, *Études et résultats*, No. 902.
- Drydakakis, N. et al. (2017), “Inclusive Recruitment? Hiring Discrimination against Older Workers”, *IZA Discussion Paper*, No. 10957, <http://ftp.iza.org/dp10957.pdf>.
- Duval, R. (2003), “The Retirement Effects of Old-age Pension and Early Retirement Schemes in OECD Countries”, *OECD Economics Department Working Papers*, No. 24, OECD Publishing, Paris, <http://dx.doi.org/10.1787/308728704511>.
- Elsayed, A. et al. (2015), “Gradual Retirement, Financial Incentives, and Labour Supply of Older Workers: Evidence from a Stated Preference Analysis”, *IZA Discussion Paper*, No. 9430.

- Espelt, A. et al. (2010), "Disability Among Older People in a Southern European City in 2006: Trends in Gender and Socioeconomic Inequalities", *Journal of Women's Health*, Vol. 19(5).
- Eurobarometer (2015), *Special Eurobarometer 437 Discrimination in the EU in 2015*, European Commission.
- Eurobarometer (2012), *Special Eurobarometer 378 on Active ageing*, European Commission.
- Eurofound (2016), *Extending Working Lives Through Flexible Retirement Schemes: Partial Retirement*, Publications Office of the European Union, Luxembourg.
- Eurofound (2012), *Income from work after retirement in the EU*, Publications Office of the European Union, Luxembourg.
- European Parliament (2013), *Resolution of 21 May 2013 on an Agenda for Adequate, Safe and Sustainable Pensions*, Strasbourg.
- Eurostat (2016), "Healthy Life Years Statistics", [http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthy\\_life\\_years\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthy_life_years_statistics).
- GfK (2017), *Frage des Monats August – Flexirentengesetz*, Classic Bus 2017 083 August 2017.
- Herbertsson, T. and M. Orszag (2003), "The Early Retirement Burden: Assessing the Costs of the Continued Prevalence of Early Retirement in OECD Countries", *IZA Discussion Paper*, No. 816, July.
- HLFS (2016), "New Zealand Household Labour Force Survey, June 2016", Table 4, People employed, unemployed and not in labour force, published by Statistics New Zealand.
- Ipsos Reid (2012), "Three-Quarters (74%) of Canadians Think that Workplaces Discriminate Against Older Workers who are Looking for Jobs; Half (51%) Feel Similarly About Young Workers", [www.ipsos-na.com/download/pr.aspx?id=11807](http://www.ipsos-na.com/download/pr.aspx?id=11807).
- Jousten, A. et al. (2010), "The Effects of Early Retirement on Youth Unemployment: The Case of Belgium", *Social Security Programs and Retirement Around the World: The Relationship to Youth Employment*, University of Chicago Press, pp. 47-76.
- Kalwij, A., A. Kapteyn and K. de Vos (2010), "Retirement of Older Workers and Employment of the Young", *De Economist*, Vol. 158:4, pp. 341-359, <http://dx.doi.org/10.1007/s10645-010-9148-z>.
- Nikolova, M. and C. Graham (2014), "Employment, Late-life Work, Retirement, and Well-being in Europe and the United States", *IZA Journal of European Labor Studies*, Vol. 3:5, pp. 1-30.
- OECD (2018), *Working Better with Age and Fighting Unequal Ageing in the United States*, forthcoming, OECD Publishing, Paris.
- OECD (2017a), *Preventing Ageing Unequally*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264279087-en>.
- OECD (2017b), *Education at a Glance 2017: OECD Indicators*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/eag-2017-en>.
- OECD (2015), *Ageing and Employment Policies: Denmark 2015: Working Better with Age*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264235335-en>.
- OECD (2014), *OECD Employment Outlook*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/empl\\_outlook-2014-en](http://dx.doi.org/10.1787/empl_outlook-2014-en).
- OECD (2013), *OECD Employment Outlook*, OECD Publishing, Paris, [http://dx.doi.org/10.1787/empl\\_outlook-2013-en](http://dx.doi.org/10.1787/empl_outlook-2013-en).
- Piggott, J. and A. Woodland (2016), *Handbook of the Economics of Population Aging*, Elsevier.
- Queisser, M. and E. Whitehouse (2006), "Neutral or Fair?: Actuarial Concepts and Pension-System Design", *OECD Social, Employment and Migration Working Papers*, No. 40, OECD Publishing, Paris, <http://dx.doi.org/10.1787/351382456457>.
- Sarkeala, T. et al. (2011), "Disability Trends Among Nonagenarians in 2001-2007: Vitality 90+ Study", *European Journal of Ageing*, Vol. 8(2), pp. 87-94.
- Schofield, D.J. et al. (2017), "Working Beyond the Traditional Retirement Age: The Influence of Health on Australia's Older Workers", *Journal of Aging & Social Policy*, Vol. 29(3), pp. 235-244.
- Szinovacz, M.E. and A. Davey (2005), "Predictors of Perceptions of Involuntary Retirement", *The Gerontologist*, Vol. 45(1), pp. 36-47.
- TCRS – Transamerica Center for Retirement Studies (2016), *All About Retirement: An Employer Survey, 17th Annual Retirement Survey*, Transamerica Center for Retirement Studies.



- Tuominen, E. (2013), "Flexible Retirement Age in Finland: The Evaluation of the Finnish Flexible Retirement Scheme in Light of Employer and Employee Surveys", *Finnish Centre for Pension Working Papers*, No. 03/2013, 27 P.
- Usui, E., S. Shimizutani and T. Oshio (2015), "Are Japanese Men of Pensionable Age Underemployed or Overemployed?", *RIETI Discussion Paper Series*, No. 15-E-099, Research Institute of Economy, Trade and Industry, [www.rieti.go.jp/en/](http://www.rieti.go.jp/en/).
- Van Dalen, H., K. Henkens and J. Oude Mulders (2017), "Werkgevers willen flexibele AOW voor hun werknemers", *Me Judice*, 9 oktober.
- Van Soest, A., A. Kapteyn and J. Zissimopoulos (2006), "Using Stated Preferences Data to Analyze Preferences for Full and Partial Retirement", *DNB Working Paper*, No. 081, De Nederlandsche Bank, Research Department.
- Warren, D. (2015), "Retirement Decisions of Couples in Australia: The Impact of Spousal Characteristics and Preferences", *Journal of the Economics of Ageing*, Vol. 6, pp. 149-162.

### **Database references**

OECD Education at a Glance Database, [http://stats.oecd.org/Index.aspx?DataSetCode=EAG\\_NEAC](http://stats.oecd.org/Index.aspx?DataSetCode=EAG_NEAC).

## ANNEX 2.A1

## *Actuarial neutrality and financial incentives in pension systems*

Actuarially neutral pension schemes ensure that at a given age (close to the retirement age) a worker is financially neutral (“indifferent”) from an actuarial perspective between retiring and working an extra year. Actuarial neutrality is therefore a central concept to work incentives around retirement ages. There are two main interrelated but different definitions, capturing changes in pension benefits at the margin. According to the first (see e.g. Duval, 2003), the pension system is neutral if the cost in terms of foregone pensions and contributions paid for working an additional year is exactly offset by an increase in future benefits. According to the second (see e.g. Queisser and Whitehouse, 2006), the system is actuarially neutral if the present value of accrued pension benefits for working an additional year is the same as in the year before (meaning that the present value of the benefits increases only by the additional entitlements earned in the additional year). The main difference between the two definitions is that contributions paid and the benefits earned during the additional year are not considered in the second one.

Essentially, for simplification reasons, as the purpose here is mainly to provide reasonable orders of magnitude, this box uses the definition by Queisser and Whitehouse (2006). Overall, the present value of accrued pension benefits is best captured by the pension wealth, which is the most comprehensive indicator measuring cumulated pension payments (see indicator 4.11). It is defined at time or age  $t$  as the discounted flows of pension benefits,  $b_\tau$ , expressed by:

$$PW_t = \sum_{\tau=t} \frac{b_\tau s_\tau^t}{(1+r)^{\tau-t}}$$

where  $s_\tau^t$  is the probability of survival to age  $\tau$  conditional on being alive at age  $t$ . Pension benefits are assumed to rise during retirement at an indexation rate  $u$ . Pension wealth is then equal to:

$$PW_t = b_t \sum_{\tau=t} \frac{(1+u)^{\tau-t} s_\tau^t}{(1+r)^{\tau-t}} \equiv b_t * AF_t$$

In other words, cumulated pensions are the product of the initial pension benefit and the annuity factor (AF), which is equal to  $AF_t = \sum_{\tau=t} \frac{(1+u)^{\tau-t} s_\tau^t}{(1+r)^{\tau-t}}$ .

Actuarial neutrality states that the present value of *accrued* benefits is not modified by working an additional year. That is, the pension wealth  $PW_t$  obtained when retiring at time  $t$

based on accrued benefits  $b_t(1+u)^{\tau-t}$  for all  $\tau \geq t$  is equal to the pension wealth from these entitlements when deferring retirement by one year, i.e.  $\tilde{b}_{t+1}(1+u)^{\tau-t-1}$  for  $\tau \geq t+1$ . Obviously, the benefit received in that case  $\tilde{b}_{t+1}$  should be greater than  $b_{t+1} = b_t(1+u)$  obtained when retiring earlier to compensate for giving up the first pension benefit  $b_t$ . The main objective here is to estimate the annual bonus  $x$  that needs to be paid on pension benefits for postponing retirement by one year, i.e.  $x_t = \frac{\tilde{b}_{t+1}}{b_{t+1}} - 1$ .

The pension wealth obtained for deferring retirement by one year is equal, conditional on surviving until  $t+1$ , to  $PW_{t+1} = \tilde{b}_{t+1} * AF_{t+1}$ . However, for the decision of working one extra year at time  $t$ , the pension wealth has to be calculated at time  $t$ , which is denoted  $PW_{t+1}^t = \frac{PW_{t+1} * s_{t+1}^t}{1+r}$ . Actuarial neutrality imposes that  $PW_t = PW_{t+1}^t$  which implies that:

$$b_t * AF_t = \frac{s_{t+1}^t * \tilde{b}_{t+1} * AF_{t+1}}{1+r} \Leftrightarrow \tilde{b}_{t+1} = b_t(1+u) \frac{1+r}{1+u} \frac{AF_t}{s_{t+1}^t * AF_{t+1}} \quad (\text{actuarial neutrality condition})$$

Simple maths link the annuity factors across time as follows:  $AF_t = AF_{t+1} * s_{t+1}^t \frac{1+u}{1+r} + 1$  by noting that  $s_r^t = s_r^{t+1} * s_{t+1}^t$ . The actuarial neutrality condition can then simply be rewritten as:

$$\tilde{b}_{t+1} = b_{t+1} \frac{AF_t}{AF_t - 1}$$

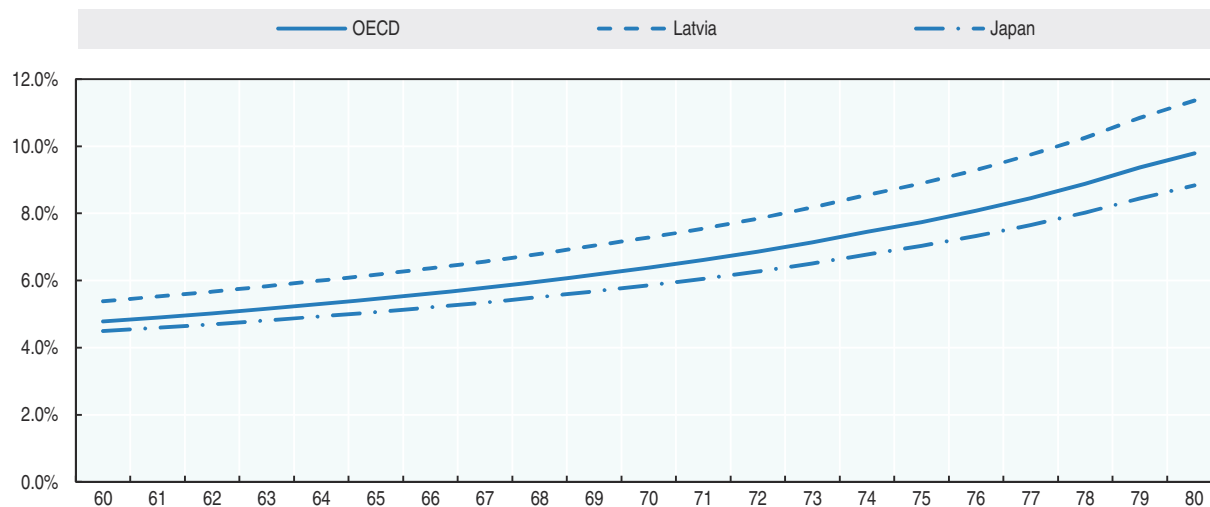
And the actuarially-neutral bonus rate for deferring retirement at age  $t$  by one year is  $x_t = \frac{1}{AF_t - 1}$

What influences the bonus rate which ensures actuarial neutrality at a given age is therefore the parameters that determine the annuity factor. The main determinants are the set of mortality (or survival) rates from that age and therefore the retirement age is an important factor the discount rate and the indexation rate. If the indexation rate is equal to the discount rate, then the annuity factor at age  $t$  simplifies into remaining life expectancy at that age. The longer the remaining life expectancy (and more generally the lower the mortality rates) the lower the bonus rate consistent with actuarial neutrality as giving up pension payments for one year by deferring retirement can be offset over a longer period. Hence, because remaining life expectancy decreases with age, the bonus rate should increase with age to avoid work disincentives (or ensure actuarial neutrality). This is an important result.


Likewise, the lower the discount rate the higher the annuity factor and the lower the bonus rate as future payments have greater present values. For a given set of mortality rates and discount rate, the higher the indexation rate the lower the bonus rate because the foregone pension payments has then less relative value compared with the highly indexed future flows.

To illustrate the influence of age, Figure 2.A1.1 computes the bonus/penalty rate for delaying/anticipating retirement in an actuarial neutral way assuming both price indexation of pension benefits and a real discount rate of 2% consistent with the OECD pension model. The estimates are calculated for the average OECD country. For the cohort having entered the labour market at age 20 in 2016 (the 1996 birth cohort) projected (cohort) life expectancy is 86.7 years at birth, 87.3 at age 20, 89.8 at age 65 and 92.6 at age 80 on average. The average annual bonus/penalty rate for delaying/anticipating retirement by one year is 6.5% between age 65 and 75, increasing from 5.4% at age 65 to 7.7% at age 75.

Figure 2.A1.1. **Bonus (penalty) for deferring (anticipating) retirement by one year at a given age (x-axis) for OECD average, Japan (high LE) and Latvia (low LE)**



Note: Price indexation of pension benefits, mortality rates of 1996 birth cohorts.

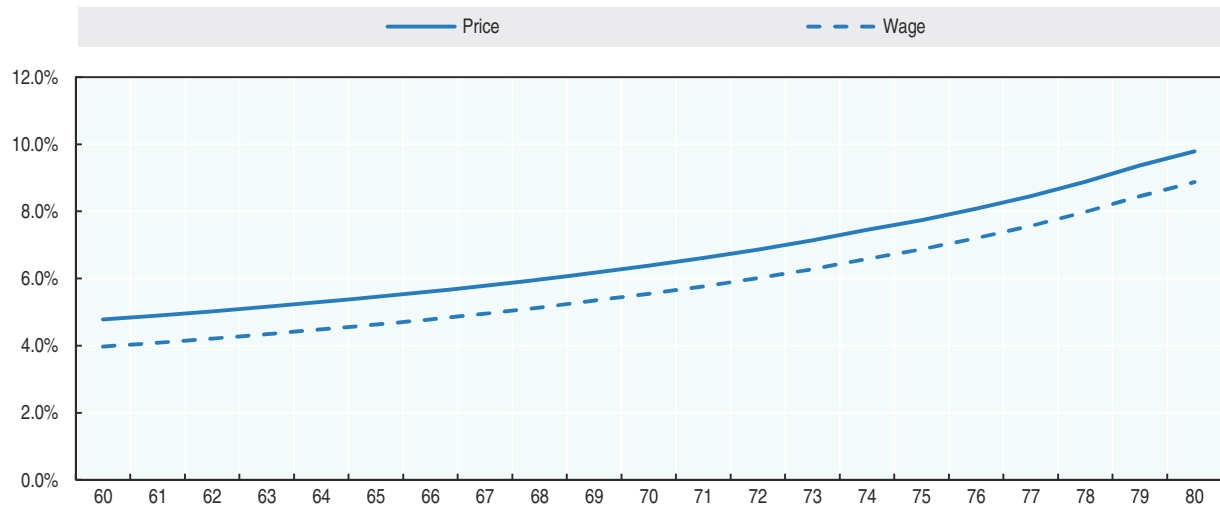
StatLink  <http://dx.doi.org/10.1787/888933633641>

To show the impact of differences in mortality rates, Figure 2.A1.1 also shows the case of the two countries with the lowest and highest remaining life expectancy at age 65, Latvia and Japan, respectively. Compared with 6.5% between age 65 and 75 for the OECD average, the average actuarial neutral bonus/penalty rate is 5.9% for Japan and 7.4% for Latvia.


Finally, Figure 2.A1.2 shows the impact of the indexation rule by reporting the bonus/penalty rates ensuring neutrality for price and wage indexation. For wage indexation, the OECD pension model assumption is taken, i.e. an annual real-wage growth of 1.25%. Moving from price to wage indexation lowers the bonus rate by about 0.8 percentage point for the average country. With wage indexation, the neutral rate increases from 4.6% at age 65 to 6.9% at age 75.

It is important to remember that these estimations relate to accrued benefits and do not include additional entitlements generated by postponing retirement. For example, if one assumes that the accrual rate for pension benefits is 1% for each year of additional contribution – a reasonable number based on indicator 3.6 – then the annual bonuses above should be increased by 1 percentage point to infer the impact on pensions actually paid.

Figure 2.A1.2. **Bonus (penalty) for delaying (anticipating) retirement by one year at a given age (x-axis) depending on the indexation of pension benefits**



Note: OECD average mortality rates for the 1996 birth cohort.

StatLink  <http://dx.doi.org/10.1787/888933633660>

## ANNEX 2.A2

### *Main rules of pension penalties, bonuses and combining work and pensions*

Table 2.A2.1. **Main rules of pension penalties, bonuses and combining work and pensions**

	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Australia	65	57 for superannuation	-	-	-	N	The Age Pension is reduced if annual income from other sources exceeds a threshold known as the "income free area". This is adjusted annually in July. In 2016-17, the fortnightly income free areas were AUD 164 for a single pensioner and AUD 144 for a member of a couple (or AUD 292 for a couple combined). The Age Pension has a "Work Bonus" income test concession designed to encourage people of pension age to continue to work. It allows pensioners to earn up to AUD 250 a fortnight without it being assessed as income under the income test. Pensioners who earn less than AUD 250 in a fortnight can accrue the unused amount of fortnightly concession up to AUD 6 500 to offset future employment income. The combination of the Work Bonus and the pension income free area, allows a single pensioner with no other income to earn up to around AUD 10 764 each year without it affecting their pension. An assets test also applies. Almost 42% of all pensioners have their benefits reduced by the means test and are therefore on part-rate Age Pension. Within this group 57% have their pension reduced as a result of the income test and 43% as a result of the assets test. About 58% of pensioners are on the maximum rate Age Pension. In July 2016, the pension asset test thresholds for homeowners were AUD 209 000 for a single pensioner and AUD 296 500 for a couple combined. For non-homeowners the thresholds were AUD 360 500 for a single pensioner and AUD 448 000 for a couple combined. Assets above these amounts reduce the pension by AUD 1.50 per fortnight for every AUD 1 000 above the amount, for a single pensioner and for a couple combined. The family home is exempted from the asset test. The Australian Government announced changes to the assets tests in the 2015-16 Budget to rebalance the assets test parameters so as to improve the targeting and long-term sustainability of the pension system. Starting from 1 January 2017, the changes provided an increase in assets test thresholds. The new amount of assets (excluding the family home) pensioners can hold without any impact on their pension under the asset test is AUD 250 000 for a single home owner and AUD 375 000 for a home owner couple. For non-homeowners, the thresholds were increased to AUD 450 000 for a single non-home owner and AUD 575 000 for a non-home owner couple. The changes also increased the taper rate from AUD 1.50 to AUD 3.00 per fortnight, so that pension is reduced by AUD 3 per fortnight for every AUD 1000 over the assets test thresholds. The assets test exemption for the family home was not affected by the changes.

Table 2.A2.1. **Main rules of pension penalties, bonuses and combining work and pensions (cont.)**

	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Austria	65 (60)	62	5.10%	68m/63w	4.20%	N	If earnings are above EUR 415.72 per month the pension is fully withdrawn for early retirement. Unlimited earnings after retirement age.
Belgium	65	62 (with 40 years)	-			N	For retirees aged 65+ or with a working career of at least 45 years (activity level of at least 1/3 FTE per year), there are no restrictions. For combining a retirement pension with earnings, there is a limitation applied for the earnings of retirees aged below 65 and with less than 45 years of career. For annual earnings under EUR 22 521 (single) or EUR 27 394 (with a dependent child), the pensions will not be reduced. Above these ceilings, the pension will be reduced by 35% if earnings are below 200% of the ceiling and the pension will fully be suspended if the earnings are more than 200% of the ceiling.
Canada	65	60 (CPP)	7.20%	70	7.2% (OAS), 8.4% (CPP)		CPP post-retirement benefit/QPP retirement pension supplement: Paid to pensioners who continue to work. For the CPP, contributions on pensionable employment income are mandatory for pensioners aged 60 to 64 and voluntary for those aged 65 to 70. Employer contributions are mandatory for employees aged 65 to 70 who chose to contribute. For the QPP, contributions are mandatory for pensioners of any age.
Chile	65 (60)	Any age (DC) if pension is at least 80% of the PMAS and 70% of average income over last 10 years.				N	
Czech Republic	63m/62.3w	60	3.6%(1st year), 4.8% (2nd), 6% (3rd+)		6%	N	It is possible to combine pension receipt while continuing to work (from 2010 granted pension (total accrual factor) has been increased by 0.4% for each 360 days of work while receiving full pension) and to receive half old-age pension. Combination of half old-age pension and work increases the total accrual factor by 1.5% for each 180 days of work.
Denmark	65	60 (DC occ)		NRA+10	Depends on life expectancy at the time pension is drawn.	N	The benefit may be reduced for annual earnings (from work) greater than DKK 316 000 for an unmarried pensioner. The supplement is reduced for total income greater than DKK 69 800 a year for an unmarried pensioner or DKK 140 000 a year for each person in a married couple.
Estonia	63	NRA-3	4.80%		10.80%	N	It is possible to combine work and pension receipt. In this case, contributions are again paid and the pension is recalculated annually. Persons receiving the early pension must cease all gainful activity.



Table 2.A2.1. **Main rules of pension penalties, bonuses and combining work and pensions (cont.)**

	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Finland	65	63	4.8% (national old-age pension)		7.2% (national), 4.8% (ER after 68)	N	After taking the old-age pension, earnings accrue additional pension and the accrual rate is 1.5% per year until the age of 68
France	65.6 (61.6 with 41.6 years)	61.6 (ER), 56.6 (Occ)			5%	N	There are two different schemes allowing to combine work and retirement: <i>Retraite progressive</i> : Wage and pension can be combined starting from the legal age of retirement (62 for the generation born in 1955) or the age of 60 for those who have contributed at least 150 quarters. The insured reduces the number of working hours (40% to 80% of effective work) and receives the corresponding share of wage combined with a share of old-age pension. The insured keeps contributing and pensions are recalculated to reflect these new contributions. <i>Cumul emploi-retraite</i> : Someone who has retired can work and combine wage and pension without limit if the full rate retirement conditions are fulfilled (legal retirement age + number of years of contribution; or legal age without penalties). Wage and pension can be combined up to a certain limit if the insured does not meet those conditions. In both cases, working retirees do not earn additional pension entitlements.
Germany	65y5m (65 with 45 years)	63	3.60%		6%		For employees with annual earnings up to EUR 6 300, the full pension is paid; for those with annual earnings above EUR 6 300, the full pension is reduced by 40% of the additional earnings. After age 67 the combination of work and pensions isn't subject to an earnings test.
Greece	67 (62 with 40 years)	62	6% (For those whose right to the reduced amount of old age pension is established after 19/8/2015, there is an extra 10% reduction, until they reach the legal retirement age. After reaching the new standard retirement age, the extra reduction ceases.)	-	-	N	Pensioners younger than age 55 are not permitted to work and receive a pension at the same time. Pensioners aged 55 or over may work but their pension is earnings-tested. Cumulation with earnings from work is possible: For pensioners who undertake a job (as employed or self-employed) which is subject to compulsory insurance of EFKA, main and supplementary gross pensions are paid reduced by 60% during the employment period. Income test: Limit on overall net annual income (salaries and pensions) of EUR 6 824.45; total annual personal taxable income, EUR 7,961.87; and total annual family taxable income, EUR 12 389.65.
Hungary	63	Any age for women with 40 years			6%		Payment of pensions for people working in the public sector is suspended. For pensioners below statutory retirement age, the pension payment is suspended until the end of the year once the annual earnings reach 18 times the minimum wage.
Iceland	67	65		70			
Ireland	66	-	-	-	-	N	

Table 2.A2.1. **Main rules of pension penalties, bonuses and combining work and pensions (cont.)**

	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Israel	67 (62)	-	-		5%		There are limits on the earnings from work for pensioners until age 70 for men. For women this age will increase gradually, reaching 70 years in 2020.
Italy	66.8 (65.8)	62.8 (61.8)	1%-age point			N	
Japan	65	60	6%		8.40%	N	For ages 60-64, when the total income of monthly pension and standard remuneration exceed JPY 280 000, pension benefits will start to be reduced depending on combined amount of monthly pension and standard remuneration. For ages over 65, when the total income exceeds JPY 460 000, pension benefits will start to be reduced depending on combined amount of monthly pension and standard remuneration. Workers over 70 are not required to pay contributions.
Korea	61	57	6%	NRA+5	7.20%	N	Pensioners above age 61 with earnings higher than the average insured will receive 50% of the pension and see the benefit increase by 10% according to the age increase. This is known as the "active old-age pension. Pensioners aged between 61 and 65 and that are working can chose either the "deferred pension" or the active old-age pension". Income and earnings test: If younger than age 66, taxable monthly income or earnings from gainful activity must not exceed KRW 2 105 482.
Latvia	62.75	NRA-2					
Luxembourg	65 (60 with 40 years)	60				N	The pension benefit has to be claimed at age of 65, unless qualifying conditions are not fulfilled at that date. However, it is possible to combine work and pension benefits receipt without reductions in the pension benefit
Mexico	65	60				N	
Netherlands	65.5						
New Zealand	65	-	-	-	-	N	
Norway	67	62		75		N	It is not possible to combine work and pension without an earnings test. Income test: The supplement is reduced by 50% of income in excess of an exemption amount.
Poland	65 (60)	-	-			N	It is possible to combine work and pension receipt. However, an employment contract has to be ended before the withdrawal of a full pension is possible. The pensioner can thereafter continue to work based on a new contract and receive the full pension. There are some restrictions that apply to the combination of earned income and pension income if a person is working and receiving a pension before reaching the statutory retirement age, or if a person is also a recipient of a disability pension and has been recognised as partly incapable of work. Income (including pension benefits) is subject to taxation.

Table 2.A2.1. **Main rules of pension penalties, bonuses and combining work and pensions (cont.)**

	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Portugal	66.2	-	-	70	4%-12%		
Slovak Republic	62	NRA-2	6.50%		6%	N	For individuals that combine pension benefit withdrawal with work the pension benefit is recalculated automatically every year or upon request when the individual eventually retires, adding one half of the points earned during that period.
Slovenia	60 (59.75)		3.6%		4%		
	Normal retirement age	Early retirement age	Penalty	Maximum retirement age	Bonus	Have to retire	Limit to combining work and pensions
Spain	65y4m (65 years with 36y6m contributions)	NRA-2 with 35 years	6%-8%		2%-4%	N	Partial retirement is possible from age of 61 years and four months in 2016, with a new employee. In 2027, once the reform is completed, partial retirement will be possible at 63 with 36 years and six months contributed, or 65 years with more than 33 contributed years and less than 36 years and six months) or from 65 years and two months in 2014 (without substitution). Both the new and the partially retired employee will contribute fully to the pension system. Prior to the reform, the partially retired only contributed proportionally to the number of days effectively worked. Since March 2013, it is possible for individuals above the normal retirement age to combine retirement benefit receipt and work. However in these cases the amount of the pension benefit is reduced by the 50%.
Sweden	65	61 (earnings-related)				N	
Switzerland	65 (64)	63m/62w	6.80%	NRA+5	5.2%-31.5%		People do not continue to contribute after 65 under the public pension scheme
Turkey	60 (58)	-	-				
United Kingdom	65 (63)	-	-		5.80%		
United States	66	62	6.66% for 3 years then 5% for last two	70	8%	N	It is also possible to combine work and pension receipt subject to an earnings test. For beneficiaries who are receiving benefits in a year before the year they reach their NRA, the pension is reduced by 50% of earnings in excess of USD 15 720. Benefits are reduced by \$1 for every \$3 of earnings above USD 41 880 in the year the insured reaches the full retirement age. For workers who have reached their NRA, there is no benefit reduction based on earnings.





**From:**  
**Pensions at a Glance 2017**  
OECD and G20 Indicators

**Access the complete publication at:**  
[https://doi.org/10.1787/pension\\_glance-2017-en](https://doi.org/10.1787/pension_glance-2017-en)

**Please cite this chapter as:**

OECD (2017), “Flexible retirement in OECD countries”, in *Pensions at a Glance 2017: OECD and G20 Indicators*, OECD Publishing, Paris.

DOI: [https://doi.org/10.1787/pension\\_glance-2017-5-en](https://doi.org/10.1787/pension_glance-2017-5-en)

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org). Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at [info@copyright.com](mailto:info@copyright.com) or the Centre français d'exploitation du droit de copie (CFC) at [contact@cfcopies.com](mailto:contact@cfcopies.com).