V. INCREASING EMPLOYMENT: THE ROLE OF LATER RETIREMENT

Introduction

Pension systems and other benefit schemes reduce labour supply

Over the past decades early retirement has become more widespread in many OECD countries. If this trend reflected mainly increased income and higher preferences for leisure, it would not be a policy concern from a welfare point of view. But this is not the case. Earlier work by the OECD has shown that this development was to a good part caused by the institutional set up of pension systems and other benefit schemes which have encouraged people to withdraw from the labour market at a relatively early age.[1] Such distortions of labour-leisure decisions are problematic as they reduce labour supply, output and living standards. The problem will become even larger with ageing populations, as there will be more people in the relevant age groups affected by these distortions.

There are benefits and costs of retiring later

In light of the challenges arising from ageing populations, many OECD countries have recently changed their policies with respect to early retirement and they are now aiming to increase labour participation of older workers. Other measures to cope with ageing populations have been taken particularly in two areas*: i)* reducing the generosity of public pensions and, at the same time, enhancing the role of private pensions; *ii)* consolidating general government budgets and/or pre-funding of age-related expenditure. Reducing government debt levels and interest payments is intended to create "space" for future age-related public spending.

Delaying retirement increases output and government revenues…

Increasing the effective age of retirement would alleviate the burden of ageing populations. Assuming that those who retire later are in employment, delayed retirement raises the level of output, thereby increasing the resources available for consumption; this is the case even if older people, on average, have a lower productivity than the young. People would also pay more taxes (including social security contributions) on income from work, thereby improving public finances. Some argue, however, that with a shorter retirement period, people will save less as they need less wealth and lower savings will reduce the capital-labour ratio, productivity and real wages. Thus, delaying retirement would increase the wage base on which social security contributions are assessed because of higher employment, but would reduce it because of the decline in the real wage rate. The net long-run impact of delayed retirement on the rise in payroll tax payments could therefore be very small.[2] But such results of models depend heavily on the underlying life-cycle hypothesis of saving, which implies large demographic effects on private savings. The empirical

1. See S. Blöndal and S. Scarpetta, "The retirement decision in OECD countries", *OECD Economics Department Working Papers*, No. 202, Paris, 1998.
2. See L.J. Kotlikoff, K. Smetters, J. Walliser, "Finding a way out of America's demographic dilemma", *NBER Working Paper*, No. 8258, 2001.

literature on the size of such effects is, however, inconclusive. Simple correlations across countries between life expectancy at retirement age and private savings, or between changes in both variables, do not reveal any relationship. While this does not prove that saving is unaffected by the length of the retirement period, as other factors which are omitted may have outweighed such effects, it nevertheless suggests that the length of retirement may not be as important for saving, productivity and real wages as such models suggests.

… and may reduce government spending

As people draw their pensions later, they benefit from them over a shorter period of time. This could reduce pension expenditure, although this effect depends on the degree to which pension levels are linked to contributions (or, technically speaking, whether the system is actuarially neutral or not). For example sensitivity analysis by the OECD Secretariat indicates that if labour participation of older workers would increase by 10 percentage points between 2000 and 2050, relative to the base-case scenario, total old-age pensions (as a per cent of GDP) could be reduced (on average) by 0.6 percentage points.[3]

But retiring later may also involve costs, as older workers may have to be retrained and jobs and workplaces may have to be adjusted to their needs and abilities. It is, therefore, important to set an appropriate framework for labour market and wage-setting policies. Given recent reforms in pension systems and other benefit schemes, it is instructive to update the assessment of their possible effects on the decisions of older workers to retire. The OECD has recently reviewed early retirement incentives for 15 OECD countries. The new analysis includes the effects of recent pension reforms and also considers the effects of taxes on pension benefits. In the following, first the effective age of retirement is compared across countries and over time. Then recent policy reforms are described which countries have adopted towards delaying retirement. Finally, the chapter examines those incentives for retirement that still exist in pension systems and in other benefit schemes.

Various benefit schemes provide fiscal incentives to retire earlier

A main finding is that ordinary public old-age pension systems now do not generally give strong incentives to retire before the statutory age. To some extent this reflects policy measures to strengthen the link between the number of years of pension contributions and the eventual benefits so that pension systems are becoming more actuarially neutral. However, there are other pathways to withdraw from the labour market at a relatively early age, in particular by using special early retirement schemes, unemployment-related transfer schemes, disability pensions and occupational pensions. While some of these schemes have also been tightened more recently, they still provide important fiscal incentives to retire before the statutory retirement age.

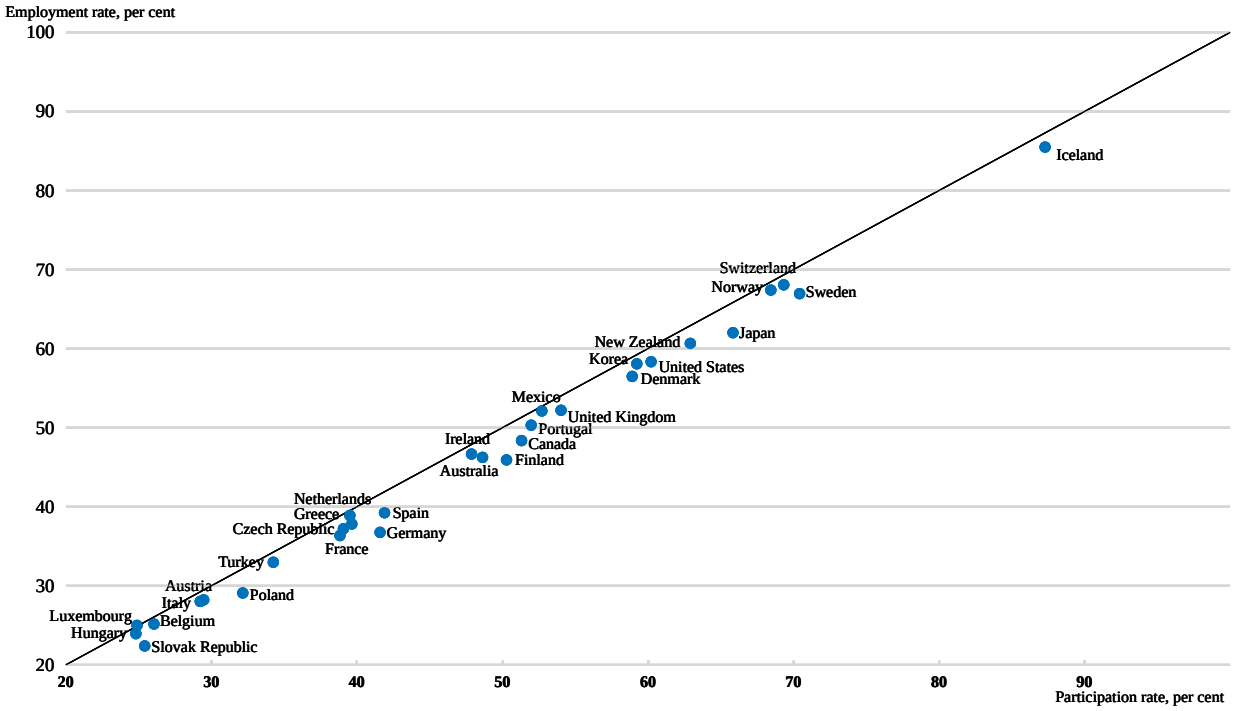
Reforms are warranted to increase supply and demand of older workers

Hence, further reforms are warranted to eliminate the distortions that provide for an early withdrawal from the labour market. But it is obviously not enough that labour supply increases, demand should also be there. Labour market participation of older people differs widely across countries and those with high participation rates also have high employment rates (Figure V.1). This could suggest that supply factors are the driving force for employment. However, the causal relationship between labour participation and employment is not always clear. Furthermore, during the transition to a "new equilibrium" with higher labour participation and higher

3. See T.T. Dang, P. Antolin and H. Oxley "Fiscal implications of ageing: projections of age-related spending", *OECD Economics Deaprtment Working Papers*, No. 305, Paris, 2001.

Figure V.1. **Participation rates and employment rate for older workers (55-64), 2001**[1]

Men and women



1. 2000 for Austria.
Source: OECD.

employment, which in any case will take several years, unemployment could rise if the adjustment on the demand side is too slow. Therefore a number of specific issues need to be addressed to ensure that demand meets supply.

Wages should better adjust to productivity

Wages have to be sufficiently flexible to adjust to productivity; if productivity declines at a higher age and wages are not adjusted accordingly labour demand declines. However, where pensions are closely linked to wages just prior to retirement, there will be strong resistance to continue working for less, suggesting a need for reform of such pension systems. Furthermore, overly tight employment protection may be an obstacle to hiring of older workers and may have to be modified.

Improving life-long learning

Finally, training of older workers is also important. As individuals move towards retirement, investment in marketable skills tends to decline as the period over which the benefits from the associated improvements in productivity can be reaped becomes progressively shorter. In consequence, it is not surprising that the incidence of training falls with age.[4] A corollary is that if policy reforms manage to raise retirement ages this is, in itself, likely to raise incentives for life-long learning. Nonetheless, additional measures to support training of older workers may be needed

4. See *OECD Employment Outlook*, Paris 1999 and OECD, *Reforms for an Ageing Society: Social Issues*, Paris, 2000.

and some countries have taken steps in this direction. Hence there are a range of potential and pressing demand-side issues to be tackled if countries are to achieve the goal of significantly lengthening the period older workers spend in the labour market. But these are not examined in this chapter which focuses on supply-side financial disincentives facing older workers.[5]

Low effective retirement age in many countries

Employment rate of older people has fallen over the past decades

With a few exceptions, the standard age of retirement in public pension systems is currently 65.[6] However, in most OECD countries the effective average age of retirement is between around 60 and 63 and in a few countries (as France and Italy) it is below 60 (Table V.1). Only in the United States does the effective retirement age broadly correspond to the standard age of retirement (65) and in Japan and Korea workers retire on average only at the age of 69 and 67 respectively, which is four

Table V.1. **Average effective retirement age (men)**

	1970 to 1975	1980 to 1985	1990 to 1995	1994 to 1999
Australia	63.8	61.1	61.8	62.3
Canada	..	62.6	61.4	62.2
Denmark	..	64.7[b]	62.3	62.4
Finland	62.0	60.4	58.9	59.8
France	63.5	59.7	59.1	59.3
Greece	..	62.0[b]	62.9	61.7[a]
Italy	62.3	60.8	57.9	59.3
Japan	70.1	68.4	70.2	69.1
Korea	..	..	70.4	67.1
Netherlands	61.5[c]	58.7	59.6	61.6[a]
Norway	67.6[d]	66.3	63.2	64.2
Poland	..	..	..	60.6
Portugal	65.1[f]	62.7	64.7	65.3
Spain	64.7[d]	61.4	60.3	61.1
Sweden	64.7	63.6	62.5	63.3
Western Germany	62.8	62.2	60.1	60.5[a]
United Kingdom	..	62.3[e]	61.2	62.0
United States	64.2	63.7	63.6	65.1

a) 1993-1998.
b) 1983-1988.
c) 1971-1976.
d) 1972-1977.
e) 1984-1989.
f) 1974-1979.
Source: P. Scherer, "Age of withdrawal from the labour force in OECD countries", *Labour Market and Social Policy Occasional Papers,* No.49, OECD, 2002.

5. The OECD has recently launched a review to assess the strength of such demand-side barriers and possible policy responses.
6. The exceptions are France, where the retirement age is 60, and Norway and Korea where it is 67. The United States has begun in 2000 to move toward 67 until 2022.

and seven years later than the standard age of retirement.[7] In a number of countries, particularly in Europe, less than half of the male population at age 55 to 64 is currently working. Employment of older workers has fallen everywhere over the past few decades, although this trend appears to have come to a halt in many countries in the second half of the 1990s, but this could to some extent reflect favourable cyclical conditions during this period (Table V.2).

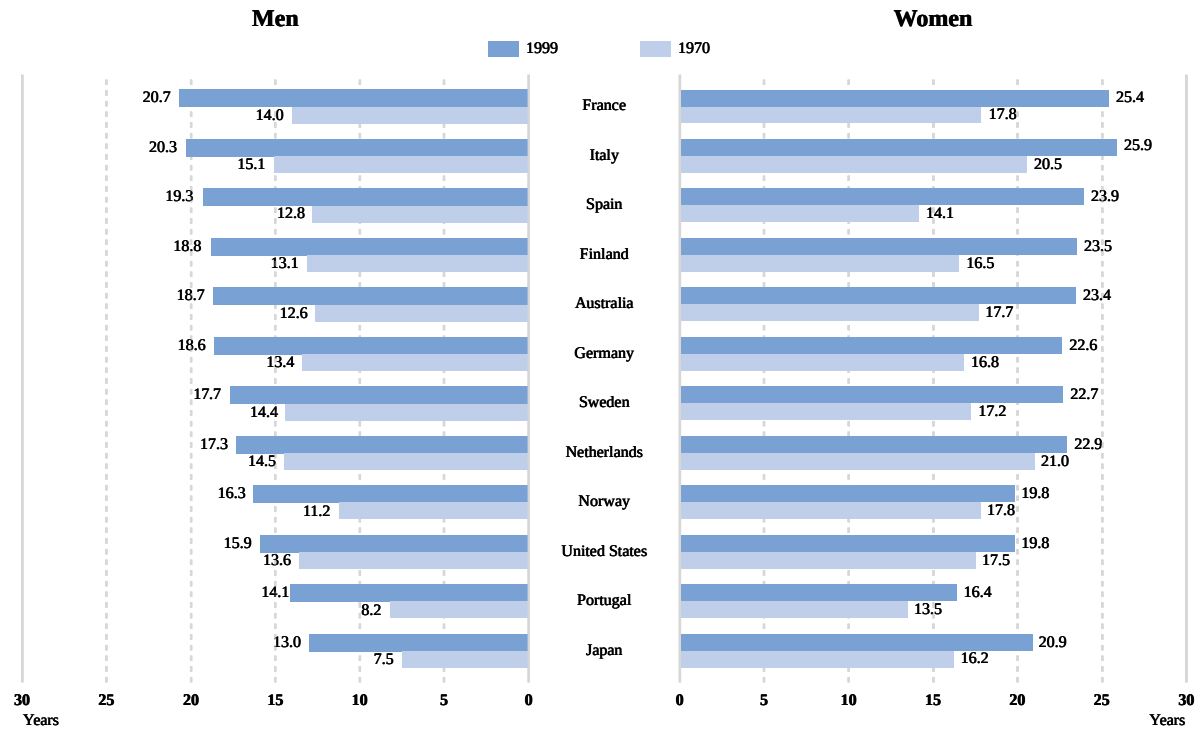
Table V.2. **Employment rates of older male workers**[a]

	1970[b]	1980[c]	1990[d]	1995	2000
Australia	..	66.6	59.2	55.3	58.5
Austria	..	..	..	42.9	40.2
Belgium	..	47.7	34.3	34.5	35.1
Canada	..	71.3	60.3	53.7	57.7
Czech Republic	..	..	..	51.1	51.7
Denmark	..	63.1	65.6	63.2	61.9
Finland	72.5	55.0	46.3	34.9	43.7
France	74.0	65.3	43.0	38.4	38.5
Germany[e]	78.9	64.1	52.0	48.2	48.2
Greece	..	..	58.4	58.9	55.3
Hungary	..	..	33.3	27.1	33.2
Iceland	..	..	92.6	88.8	94.2
Ireland	82.4	72.3	59.5	59.3	63.0
Italy	47.8	39.0	35.4	44.7	40.9
Japan	84.8	82.2	80.4	80.8	78.4
Korea	..	77.5	76.3	78.8	68.2
Luxembourg	..	37.9	42.9	35.1	37.9
Mexico	..	..	85.1	77.9	79.8
Netherlands	..	60.9	44.2	41.1	50.0
New Zealand	..	..	53.9	62.9	68.3
Norway	82.9	79.5	70.7	70.0	73.1
Poland	..	..	44.3	42.5	36.7
Portugal	..	74.2	65.0	57.7	62.5
Slovak Republic	..	..	..	38.1	35.4
Spain	82.7	71.5	57.2	48.4	55.2
Sweden	84.1	77.5	74.4	64.4	67.8
Switzerland	..	..	85.2	79.0	77.0
Turkey	..	..	58.8	58.4	51.0
United Kingdom	..	62.6	62.4	56.1	59.8
United States	80.7	69.7	65.2	63.6	65.6

a) Employment of male workers at age 55 to 64 as a percent of male populations of the same age, except for Italy: 60-64 instead of 55-64.
b) 1971 for Ireland, 1972 for Norway and Spain.
c) 1981 for Ireland, 1983 for Belgium, Denmark and Luxembourg, 1984 for United Kingdom.
d) 1991 for Canada, Iceland and Mexico, 1992 for Hungary and Poland.
e) Western Germany before 1991.
Source: OECD.

7. The average effective age of retirement as used here has been calculated as a weighted average of the various retirement ages where the weights are the probability of (net) withdrawal from the labour force at these particular ages. See P. Scherer, "Age of withrawal from the labour force in OECD countries", *Labour Market and Social Policy Occasional Papers*, No. 49, 2002.

Figure V.2. **Life expectancy at effective retirement age in 1970 and 1999**



Source: OECD.

People spend more and more years in retirement

While the average effective age of retirement has declined, life expectancy has increased. In consequence, people are now drawing on pensions for a much longer period than before. In a number of OECD countries, life expectancy at the average effective retirement age is now 18 to 20 years, about five to six years longer than it was 30 years ago (Figure V.2). As life expectancy is projected to increase further, the length of retirement would continue to rise if retirement is not delayed.

How policies affect retirement

There are often important disincentives to continue working…

People generally retire when they have the incentives to do so, *i.e.* when retirement income is high enough and when the financial incentive to continue working is matched by the disutility of continue working. The overall fiscal incentive to retire can be separated into two components (see Box V.1). The first component is the replacement rate – *i.e.* the pension a person receives as a percentage of the working income prior to retirement. The higher the replacement rate, the higher the incentive to retire. Replacement rates as calculated here consider only benefits from public old-age pension schemes and the other benefit schemes as described below but no other income which people may have in retirement and which is in some cases considerable.[8] The second component is the change in net pension wealth from working

8. See OECD, *Ageing and Income, Financial Resources and Retirement in Nine OECD Countries*, Paris, 2001.

Box V.1. How to measure the incentives for early retirement

The overall incentive from policies to retire can be separated into two components. The first is the replacement rate and the second is the change in net pension wealth. The replacement rate is the income out of work as a proportion of expected income in work. A relatively high replacement rate ensures that people have enough resources to support an adequate standard of living in retirement. A high replacement rate available before the normal retirement age already provides a strong incentive to retire earlier. There are various ways of calculating replacement rates for pension systems. One approach is to compare directly current pensioners' incomes with those of workers, or with general living standards (GDP per capita). This approach provides information on the relative living standards of pensioners, although other sources of income (capital income and – if pensioners continue working – labour income) should also be considered, in order to obtain a fuller picture.[1]

But, the replacement rate, as calculated by this approach, may be incomplete as a measure of the work disincentive of the current pension system faced by a typical older worker. This is because current pension payments are affected to some extent by past rules of pension systems, which may have changed, and by individual characteristics of current pensioners which may be different from those of a typical older worker.

A second approach – which is adopted here – is to calculate pension benefits for illustrative workers with particular characteristics (such as level of income, number of working years etc.). The parameters of the current pension system (in these calculations including recent reform measures that have not been fully implemented) such as accrual rates, minimum pensions, indexation rules, eligibility requirements, etc.) are then applied to calculate pension benefits. Benefits are calculated net of tax so that special tax treatments often provided to pension benefits are considered. Pension benefits can be related to the individual net earnings just prior to retirement to arrive at a replacement rate for an illustrative worker.

This second approach provides a better measure for the impact of pension rules on the retirement decision of older workers. With this approach it is also possible to assess the combined effect of pension systems and other welfare systems such as unemployment programmes or disability pensions. For example, one can examine how replacement rates evolve if older workers use these benefits to bridge the time until they receive old-age pensions.

A drawback of the replacement rate is that it ignores dynamic effects. The decision to continue working and/or to retire also depends – at a given replacement rate – on how much is gained or lost by continuing to work. If the pension accrual rate is positive (*i.e.* the would-be pensioner earns more pension rights), working longer increases future pensions. But working longer also entails costs of paying additional contributions and drawing pensions for a shorter period of time. Net pension wealth is a summary measure for these effects. It corresponds to the present value of the future stream of pension payments that the person can expect to receive from working an additional year, net of all future contributions to the pension system. Pension wealth does not change if the additional contributions by working another year and the foregone pension due to this delayed retirement are exactly matched by an increase in the value of the pension received over the remaining (shorter) retirement period. In this case the discounted value of additional future pension streams corresponds to the additional pension contributions so that the pension system is actuarially fair. With such a system, there is no incentive to retire earlier. But, if pension wealth falls with an additional year of work, continuing working carries an implicit tax so that there is an incentive for the individual to retire. If, on the other hand, pension wealth increases by working an additional year, there is a subsidy to delay retirement.

In the particular cases shown here, the individual is assumed to have a full work career before reaching the normal retirement age and to be earning an average wage. Simulations for lower and higher earnings (50 and 150 per cent of an Average Production Worker wage) have also been carried out but are not shown here. Incentives to retire early tend to be above-average at 50 per cent of earnings, reflecting the effect of pension minima in many national pension systems which increase replacement rates in the period of pre-retirement. At higher income levels the incentives tend to be below average, reflecting various ceilings in the calculation of benefits.

1. Mean disposable income of pensioners is generally around 75 to 85 per cent of income before retirement. See OECD, *Ageing and Income, Financial Resources and Retirement in Nine OECD Countries*, Paris, 2001.

an additional year. Working an extra year implies foregoing one year of pension and paying additional contributions, with often little or no increase in future pensions (depending on pension accrual rates). The difference in pension wealth between two adjacent years of age indicates whether working an additional year is financially worthwhile with regard to future pensions. If net pension wealth remains constant, the system is neutral but if it falls, the pension system poses an implicit tax on continuing working. An individual's decision on whether to retire or not depends on both the replacement rate and the change in net pension wealth. For example, even if

the implicit tax on continuing working is high, a low replacement rate may imply that people cannot afford to retire and thereby acts to discourage retirement.

… and they have increased over time

Previous OECD work using this basis for analysis found that policies were causing marked disincentives to continue working after a certain age and that these disincentives have increased significantly over the past three decades. This was mainly due to the lowering of standard retirement ages and the increase in pension replacement rates combined with a low "return" on additional pension contributions paid when continuing working as this did not lead to correspondingly higher future pension benefits (*i.e.* an implicit tax on continuing working). Furthermore, governments have provided various alternative pathways to withdraw from the labour market such as special early retirement schemes, unemployment-related benefits and disability schemes which increase overall replacement rates and implicit tax rates. The negative impact of implicit tax rates on the effective retirement age is supported by an econometric analysis that sought to take better account of the complexity of the retirement decision process.[9] By using pooled cross-country time-series regressions, covering 15 countries over the period 1971-95, this earlier OECD study found that these policies contributed significantly to the decline in employment of older male workers, although the deterioration of labour market conditions in many countries also played a significant role.[10]

Policies towards delaying retirement

Distortions to labour-leisure decisions should be removed

If, because of the effect of ageing, people should not be encouraged to leave the labour market prematurely, governments should reduce distortions to labour-leisure decisions which reduce labour supply.[11] Policies are now moving in this direction and various measures have been legislated and phased in gradually – although sometimes with a long delay. The following only describes those policies targeted directly at premature withdrawal of older workers. Other measures, such as direct or indirect cuts in pension replacement rates, may also increase the effective retirement age as with lower pensions people may continue to work longer to sustain a higher living standard.[12] Policies to increase labour supply of older workers can be grouped under three categories: *i)* increasing the earliest and/or the standard age of retirement; *ii)* increasing the link between contribution years and benefits; and *iii)* tightening non-pension transfer programmes which permit an early withdrawal from the labour market.

Raising the earliest and/or the standard retirement age

Official retirement ages should be increased…

Reforming normal old-age pension systems by raising the earliest age of retirement or the standard age at which a full pension is paid could be an efficient way to delay retirement, but only if at the same time the other pathways to early

9. See S. Blöndal and S. Scarpetta, *op. cit.*
10. According to these estimates, the decline in the standard retirement ages in France (from 65 to 60), in Ireland from (70 to 66) and in Sweden from (67 to 65), reduced labour force participation of older workers in these countries by 5.5, 4.4 and 2.2 percentage points, respectively.
11. As a general rule, governments should reform policies that distort the decisions taken by private individuals. In this specific case, ageing makes the rule especially compelling.
12. Only a few countries have cut replacement rates directly (such as Germany) but a number of countries have changed indexation or increased the number of years of contributions to base pensions, all of which are indirect ways to reduce replacement rates.

retirement are blocked. A number of countries have changed retirement ages. New Zealand has progressively increased the standard retirement age from 60 to 65. Canada has introduced a flexible retirement age from 60 to 70. In the United States, the standard age of retirement has been increased from 65 to 67, but this change will be fully phased in only by 2022. Italy and Hungary have also raised the standard age of retirement (from 60 to 65 and from 60 to 62, respectively). Japan and Korea (where the retirement age for the state pension is 65 and 60, respectively) have increased the retirement age for flat-rate benefits from 60 to 65 and in Japan the age for the income-related pension will also increase at a later date. In Finland a flexible retirement age between 62 and 67 is planned. Iceland has raised the retirement age of public sector workers. Belgium, Germany, United Kingdom, Australia, Austria, Hungary and Italy (for new entrants) have increased the retirement age of women so that it will be equal to that of men (sometimes after a long phasing-in period). But Denmark went in the other direction by lowering the normal retirement age from 67 to 65, although conditions for early retirement were tightened at the same time.

Reducing the implicit tax on continuing working

… and pension systems should be more neutral

Measures have been taken to make pension systems more neutral (or actuarially fair), so that if people retire later (and contribute more), their pensions will be increased accordingly. This reduces or eliminates the implicit tax on continuing working. The most radical reforms in this respect were implemented in Sweden, Italy, Poland and Hungary where public pensions are being progressively transformed from defined benefit systems to Notional Defined Contribution systems (NDC). In these systems pension benefits depend on accumulated contributions; these are registered in notional individual accounts which are transformed into an annuity at retirement; the replacement rate declines with average longevity and working longer increases the individual replacement rate. The level of benefits also depends on the administratively fixed (*i.e.* the notional) rate of interest. If this is set at the rate of growth of the contribution base (the wage bill), the replacement rate is reduced to a level where pension expenditure is adjusted to revenues so that the system is sustainable over the longer run (but not necessarily in the short-term). But, in practice, the formulae used in NDC systems to calculate pensions do not necessarily guarantee fiscal sustainability, so that further adjustments may be needed in the future.[13] Other countries (as Germany, Finland, France and Iceland)[14] which are still running Defined Benefit (DB) systems have also reduced the implicit tax rates by increasing pension accrual rates so that the replacement rate increases more if people work longer. Australia is following a somewhat different

13. See D. Franco, "Italy: a never-ending pension reform", paper presented at the NBER-Kiel Institute Conference in March 2000; O. Settergren, "The automatic balance mechanism of the Swedish pension system – a non-technical introduction", in: *Wirtschaftspolitische Blätter*, 4/2001; H. Oksanen, "Pension reforms: key issues illustrated with an actuarial model", European Economy, *Economic Paper*, No. 174, 2002. For Poland and Hungary there remains a "pay-as-you-go" component to the pension system. See A. Burns and J. Cekota, "Coping with population ageing in Hungary", *OECD Economics Department Working Papers*, No. 338, Paris, 2002.
14. Germany has introduced benefit reductions for early retirement and benefit increases for late retirement. Finland has raised the rate at which benefit rights are accrued for persons age 60-64 and Iceland has raised the accrual rate for workers over 65. France has extended the contribution period (in private sector markets only) for access to a full pension (from 37½ years to 40 years).

approach by granting a tax-free bonus for people working after the standard pension age. Spain also introduced tax incentives for workers above 65. The forthcoming pension reform in Finland includes a significant increase in the accrual rate to encourage work beyond 62 years.

Reducing early retirement incentives in other schemes

Alternative pathways towards early retirement should be blocked

Replacement rates and implicit tax rates on continuing working have also been high where there is relatively easy access to alternative pathways to withdraw from the labour market. In the past special early retirement pensions, unemployment-related benefits and disability schemes have often been used to bridge the time until people are entitled to receive the normal old-age pension.[15] These schemes have offered relatively high replacement rates and have at the same time imposed an implicit tax on continuing working. Furthermore, generous private occupational pension schemes in combination with severance payments of firms have also stimulated early retirement. In order to delay retirement a number of countries (such as Germany, Belgium, Italy, Finland, Netherlands, Hungary, United Kingdom and Canada) have started to tighten access to early retirement pension, disability benefits and/or unemployment-related schemes and/or making these less generous and strengthening job-search requirements for older unemployed workers. But, some countries went in the other direction by introducing an early retirement scheme (Norway) or making the existing system more generous and accessible to unemployed older workers (Spain).

Incentives for early retirement still exist, even after recent reforms

Policies are now moving in the right direction but more remains to be done

Both above-mentioned components of the overall fiscal incentive to retire, the replacement rate and the implicit tax rates have been calculated including recent reform measures. The new analysis includes measures which have been legislated including those that have been not yet fully implemented. Calculations have been carried out for all ages between 55 and 70 for a full-career worker with average earnings (APW).[16]

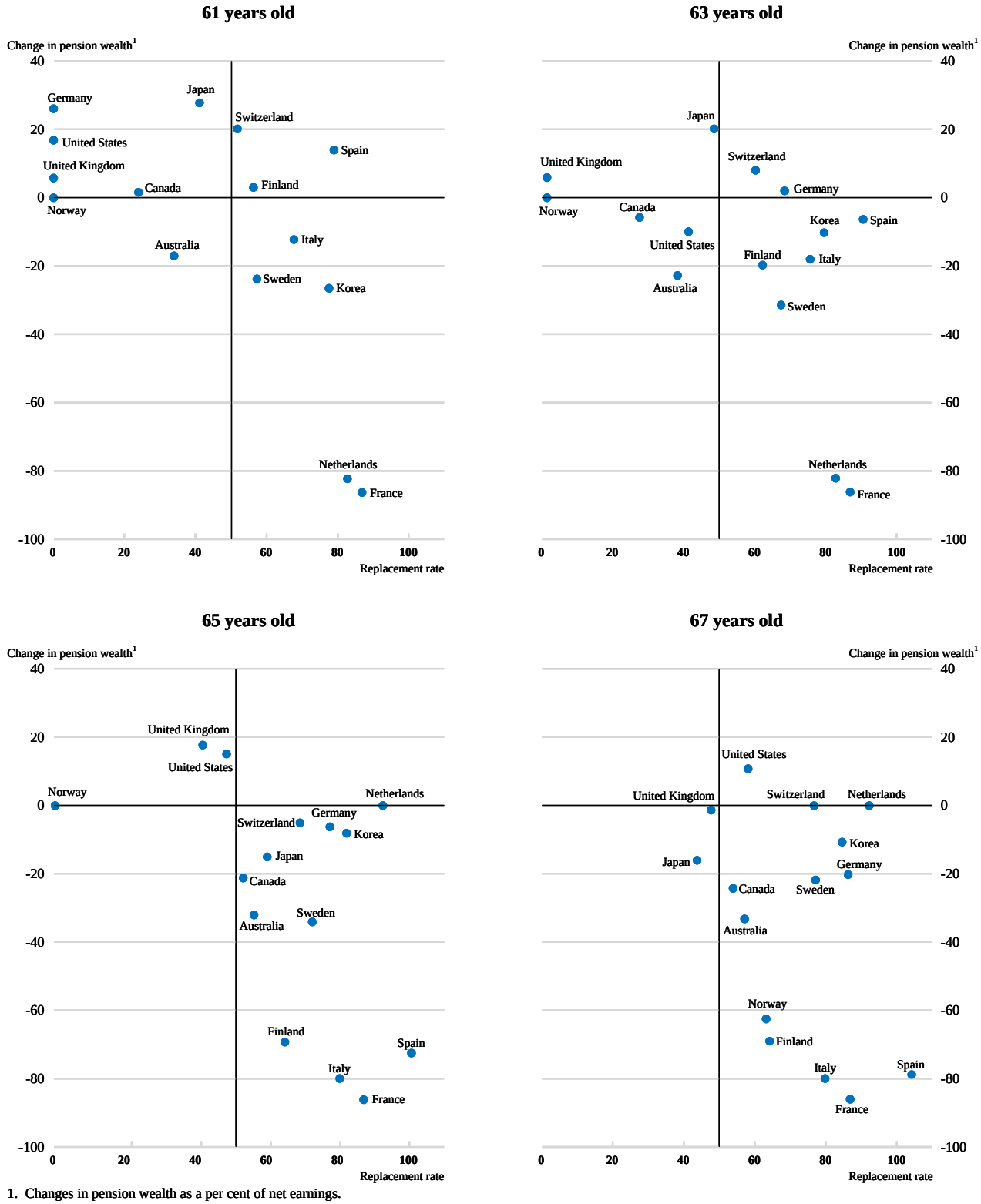
Retirement under normal old-age pension system

Pension systems are not neutral

The calculations show that before the age of 60 there are almost no incentives to retire from the regular old-age pension system. The only exceptions are Italy, where the earliest retirement age is 57 and the replacement rate is above 50 per cent, and Australia, where individuals can draw on their mandatory savings from 55 on. Figure V.3 shows the replacement rate and the change in pension wealth (relative to net-of-tax earnings per year) for a worker (with average earnings and a full working career) at the

15. Such early withdrawal of older workers from the labour market was sometimes conditioned upon their length of unemployment, their employer replacing them with an unemployed person, or their location in regions of high unemployment.
16. Calculations have also been carried out for workers with lower and higher earnings but are not presented here. As the focus is on a single worker with a full working history the approach does not consider that work/leisure decisions may be determined on a household basis taking into account income of other family members.

Figure V.3. **Replacement rates and change in pension wealth under regular retirement schemes by age**



1. Changes in pension wealth as a per cent of net earnings.
Source: OECD.

ages of 61, 63, 65 and 67. Where replacement rates are low (for example below 50 per cent) the incentive to retire at those ages is low. With higher replacement rates (above 50 per cent) the incentive to retire increases. This is reinforced if continuing working leads to a fall in net pension wealth (*i.e.* an implicit tax) which is the case in countries which are located in the lower right hand side quadrant in Figure V.3. As can be seen from this Figure as workers are approaching the age of 65 more countries are placed in this quadrant where the incentives to retire are relatively strong; in some countries significant incentives to retire exist already at the age of 61 and 63.

Retirement under special provisions

Implicit tax of all welfare programmes should be reviewed

As mentioned above, old-age pension systems are only one path for withdrawing from the labour market. Other schemes, such as special early retirement schemes, unemployment benefits, disability pensions and private occupational pensions are other channels whereby individuals can withdraw from the labour market before the regular retirement age is reached. Such programmes exist in most countries, but they are more widely used in some than in others. Entitlement conditions play a critical role in determining to what extent such programmes can be used to exit the labour market. If these conditions are relatively lax high replacement rates and implicit tax rates can provide strong disincentives to continue working. The results presented here for illustrative purposes for selected countries suggest that these schemes still provide relatively strong incentives to retire well before the statutory retirement ages. This is the case because individuals receive a pension over a longer period. In addition, they often accumulate their old-age pension rights (although sometimes at reduced rates) in many of these programmes even though they are not working, *i.e.* they obtain a higher pension for free. When they switch onto full retirement benefits their replacement rates are higher than they would be if only the years of work were taken into account.

Unemployment and other early retirement programmes

Unemployment related-schemes interact with pension schemes

Incentives arising from unemployment programmes for Finland, Germany, the Netherlands and the United Kingdom are shown in Figure V.A.1 in the Appendix along with separate early retirement arrangements that are available to older workers following redundancy for France and Spain.[17] For unemployment, Figure V.A.1 shows the replacement rate in the year that the person becomes unemployed as well as the change in the pension wealth associated with working an additional year. It is assumed that each individual will remain unemployed until retirement can be taken and use all the available programmes over the pre-retirement period.[18] These can differ from country to country but could include mixes of unemployment benefits, unemployment pensions, unemployment assistance and social assistance.[19] For each

17. For France, it includes the programme under the Fonds national de l'emploi. For Spain, this concerns "jubilación anticipada".
18. The replacement rate averaged over the entire pre-retirement period should be lower than the rate in the first year of unemployment as individuals move from unemployment benefits to social assistance. But, this difference would tend to narrow with age: individuals falling unemployed at 55 are more likely to fall onto social assistance than those falling unemployed at, say, age 59.
19. For example, in the case of Germany, the individual falling unemployed at 55 would have first, an unemployment benefit at 60 per cent (single person rate) for 26 months, and then the income-tested unemployment benefit at 53 per cent before moving on to social assistance benefit. The unemployment benefit increases to 32 months for those 57 and over.

programme the benefit levels as well as the rules for accumulating old-age pension rights are taken into account in calculating pension wealth.

… and provide strong incentives to retire early

The results for unemployment benefits indicate that initial replacement rates are high, generally above 60 per cent with the exception of the United Kingdom where it is only around 20 per cent.[20] Changes in pension wealth are negative although only marginally so in the case of the United Kingdom reflecting the low level and flat rate nature of the benefits. Changes in pension wealth become more sharply negative for those individuals falling unemployed after 59-60 as at this stage early retirement arrangements under the old age benefit system become available. The special early retirement arrangements for redundant workers are available from 57 in the case of France and 60 in the case of Spain. For France there are high and stable replacement rates from this age and the change in pension wealth from an additional year of work is strongly negative through the pre-retirement period, indicating a clear incentive to retire. Replacement rates for Spain are also high for workers falling unemployed at 60 but, in contrast to France, replacement rates rise steeply for each additional year of work. As a result, the change in pension wealth from an additional year of work is positive and there is an incentive to delay retirement on the basis of this measure.

Disability pensions

Disability pensions are often used as a pathway towards early retirement

The impact of disability systems on retirement incentives was evaluated for Finland, Germany, the Netherlands, Norway and the United Kingdom. The calculations assume that the individual becomes disabled (or becomes classified as disabled) at the specified age and remains so until the earliest date when retirement benefit can be obtained. As in the case of unemployment, the replacement rate is the rate at the time the individual is classified as disabled at the age specified. This rate is around 30 per cent for the United Kingdom. Replacement rates are around 60 per cent for all other countries except the Netherlands where it is above 80 per cent.[21] The change in pension wealth is significantly negative in all countries through the period, although, less so for the United Kingdom, reflecting the lower level of benefit. As a consequence, disability schemes encourage early retirement (Figure V.A.2 in the Appendix). The relatively high inflow of older workers to disability pensions in some countries may therefore reflect such incentives to retire rather than differences in health problems. For example, in 1999 inflows to disability programmes in both age-groups 55 to 59 and 60 to 64 were above-average in Norway, Sweden, Portugal and Germany and in the age-group 55 to 59 in addition in Austria, the United Kingdom and Australia, three countries in which women can retire regularly before age 65.[22]

20. However, as noted, the replacement rate averaged over the overall pre-retirement period would be lower than this.
21. Disability benefits tend to be constant over time and are thus less likely to change than for unemployment benefits (which can be exhausted). In the Netherlands benefits do, however, change over time, thus significantly reducing the replacement rate for those people whose disability occurred early in life. For a person age 35 at the time a disability benefit is granted, the replacement rate can go down to as low as 55 per cent, although collective agreements sometimes would ensure a 70 per cent replacement rate throughout the period until age 65.
22. See OECD, *Transforming Disability into Ability, Policies to Promote Work and Income Security for Disabled People*, forthcoming.

Private occupational pensions

Occupational pensions also help to retire earlier…

As mentioned above private employer-employee arrangements can also permit earlier retirement, in the absence of access to public insurance and transfer programmes. These private arrangements exist in many countries under various forms (lump sum redundancy payments or "bridge pensions" until the individual becomes eligible for public pensions). They are particularly important in countries with significant (but not mandatory) company and occupational pension schemes, such as Canada, the United Kingdom and the United States. Calculations have thus been made for these countries alone for "typical" pension arrangements and the results are shown in Figure V.A.3 in the Appendix.[23] This, however, can only give very broad orders of magnitude of overall replacement rates and changes in pension wealth and masks considerable variation across enterprises or industries. Taking 60 as the earliest retirement age, replacement rates vary considerably in the examples chosen, ranging from around 45 per cent in the United States to over 70 per cent in the case of the United Kingdom. However, replacement rates increase sharply to around 90 per cent in the United States at 62 when individuals become eligible for the Social Security pension.[24] There are substantial increases in benefits in all countries for those delaying retirement until 65. Changes in pension wealth for an additional year worked are generally positive through the early retirement period but become sharply negative after 65.

… in particular when more generous in case of redundancies

However, in many cases firms offer improved conditions for early retirement in the case of redundancies, for example by waiving the actuarial reduction in pensions for earlier retirement such that pension benefits are closer to the levels the individual would have had at 65.[25] To assess the possible impact of such a measure, the replacement rates and changes in pension wealth have been calculated for the United Kingdom and Canada on the basis of no actuarial adjustment for earlier retirement. A comparison of the results with and without actuarial adjustment suggest, that waiving the actuarial adjustment can provide a considerable incentive towards early retirement: the replacement rate is higher and the changes in pension wealth become negative in the United Kingdom, from about 60, and in Canada from 62.

Conclusions

A broad policy approach can help…

Future demographic trends reinforce the need for governments to roll back existing incentives for early retirement. Measures to this end need to be integrated within a broad policy approach aimed at reforms to both pension systems and other social programmes, so as to reduce discouragement of labour market activity in later life. This policy should ensure that the implicit tax on income from working an additional year is

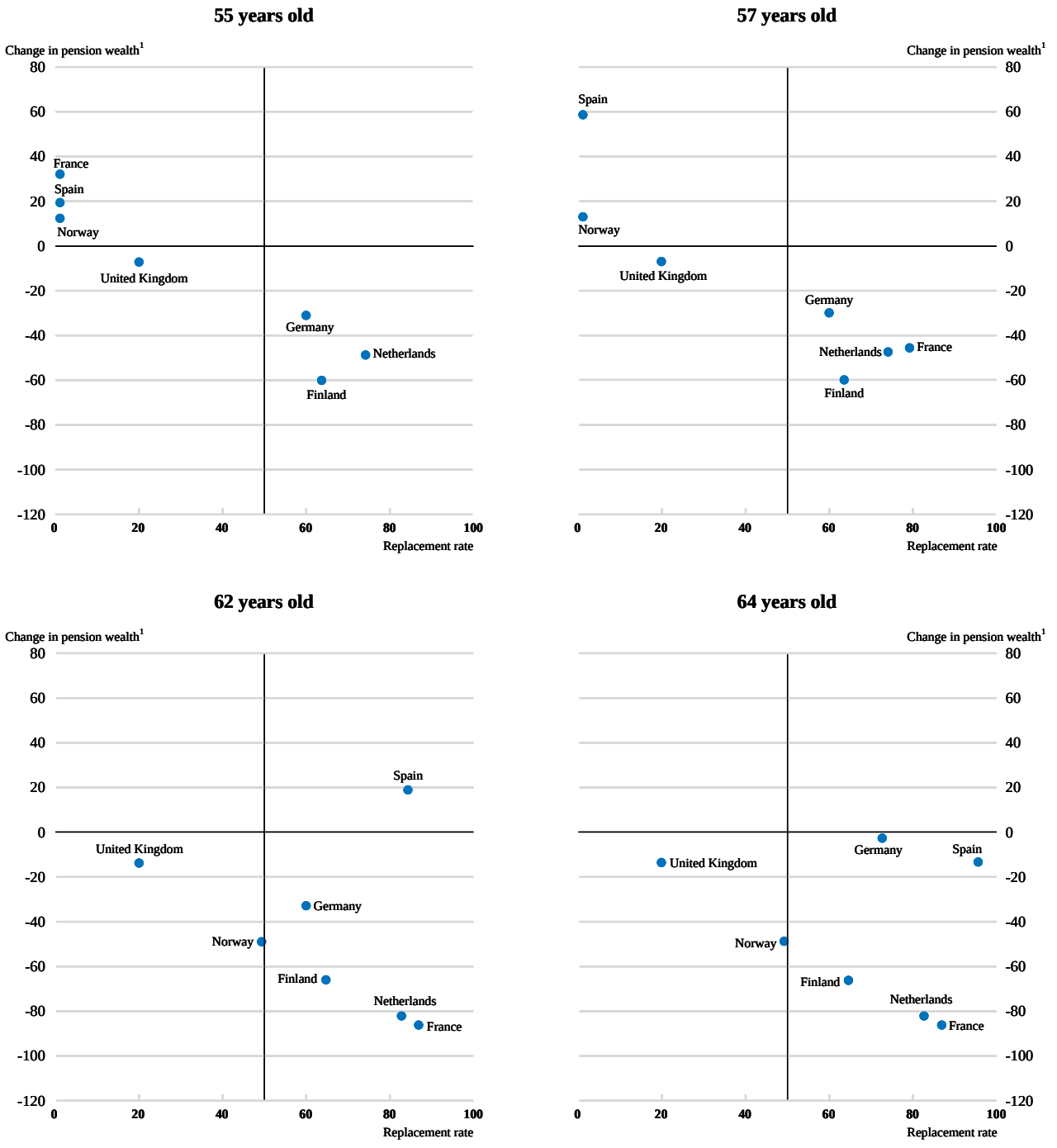
23. These calculations are based on the assumption that early retirement is possible from 60 with full retirement at 65.
24. Note that the values on a pre-tax basis are considerably smaller. This reflects the relatively generous tax provisions for the retired in the United States.
25. For example, some companies in the United States have adjusted their benefit formula to increase the incentive to retire early at specific ages. In some "early out" arrangements, all employees of a certain class and number of years of service are offered an additional sum of money for retiring. While employees are not obliged to take this offer they typically do so. See OECD, *Reforms for an Ageing Society*, Paris, 2000.

close to zero and that replacement rates are consistent with both adequate income in retirement (particularly at the bottom of the income scale), the maintenance of appropriate work incentives and longer-term fiscal sustainability.

… to better cope with ageing

This analysis has shown that policies are now shifting in the direction of no longer discouraging employment of older workers. However, important incentives for an early withdrawal from the labour market are still in place, particularly in continental Europe, where employment of older workers is currently relatively low. Thus, further measures are urgently needed to make pension systems neutral with respect to the age of retirement and to tighten eligibility conditions for unemployment benefits and disability pensions and to remove tax incentives for early occupational pensions. Such policies need to be combined with improving framework conditions for job creation in general and working conditions for older workers in particular. This would help to better adjust the effective retirement age to rising life expectancy and to alleviate the pressure from ageing populations on government budgets and on living standards of both younger and older generations.

Appendix Figure V.A.1. **Replacement rates and change in pension wealth under unemployment and other schemes by age, average production worker wage**

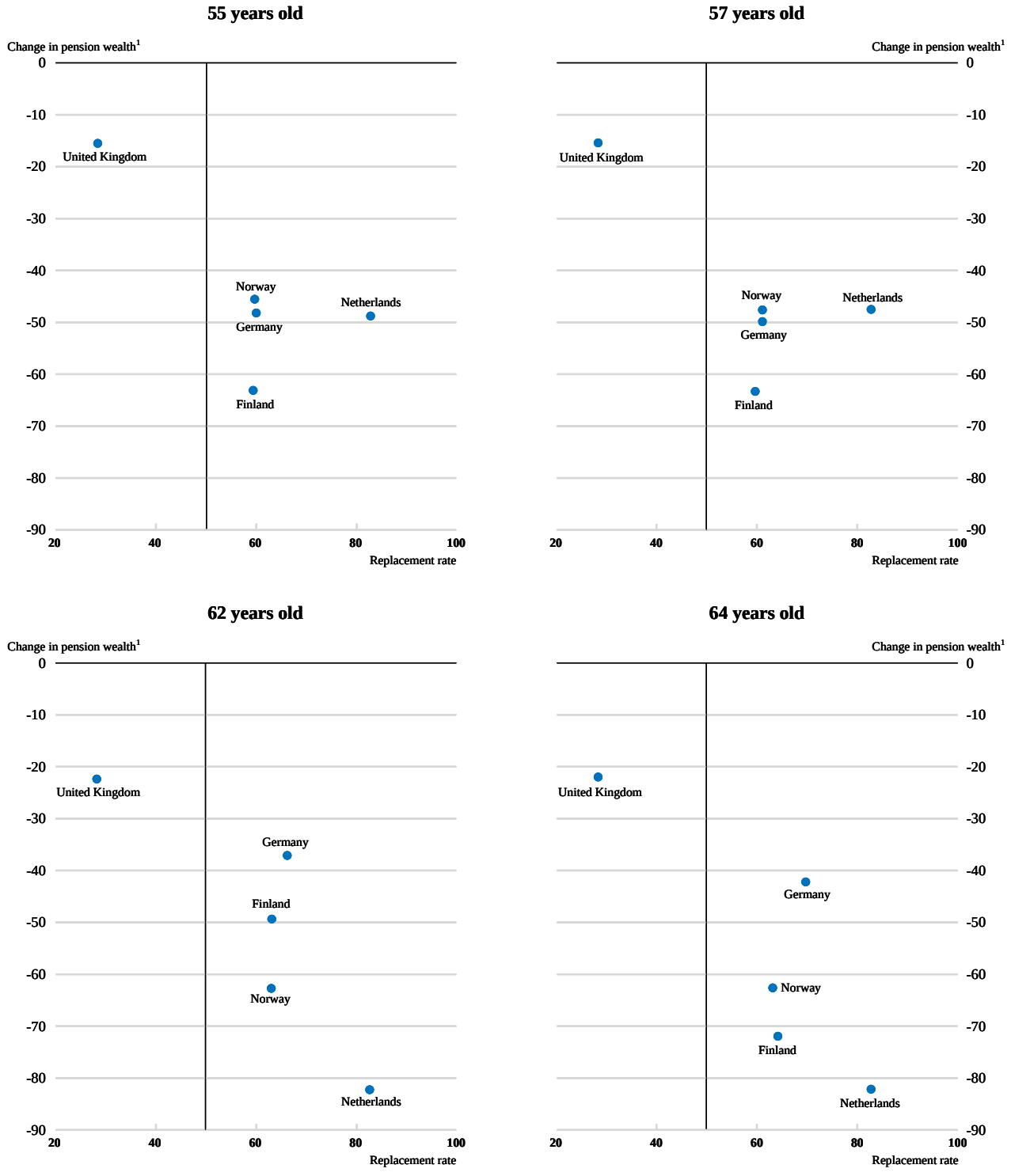


Note: For unemployment (Finland, Germany, the Netherlands and Norway) the replacement rate refers to the unemployment benefit at the time the person falls unemployed relative to the preceding wage.Replacement rates and pension wealth are calculated for individuals falling unemployed at each age.
The estimate of pension wealth assumes that the individual continues on unemployment benefit until they are exhausted. If this occurs before earliest age for receipt of for old-age retirement benefits is reached, the individual is assumed to fall back on unemployment assistance or social assistance benefits (which are normally income tested) at a lower replacement rate for the intervening period.For the special early retirement schemes (France and Spain), the method follows that indicated under the regular retirement schemes.

1. Changes in pension wealth as a per cent of net earnings.

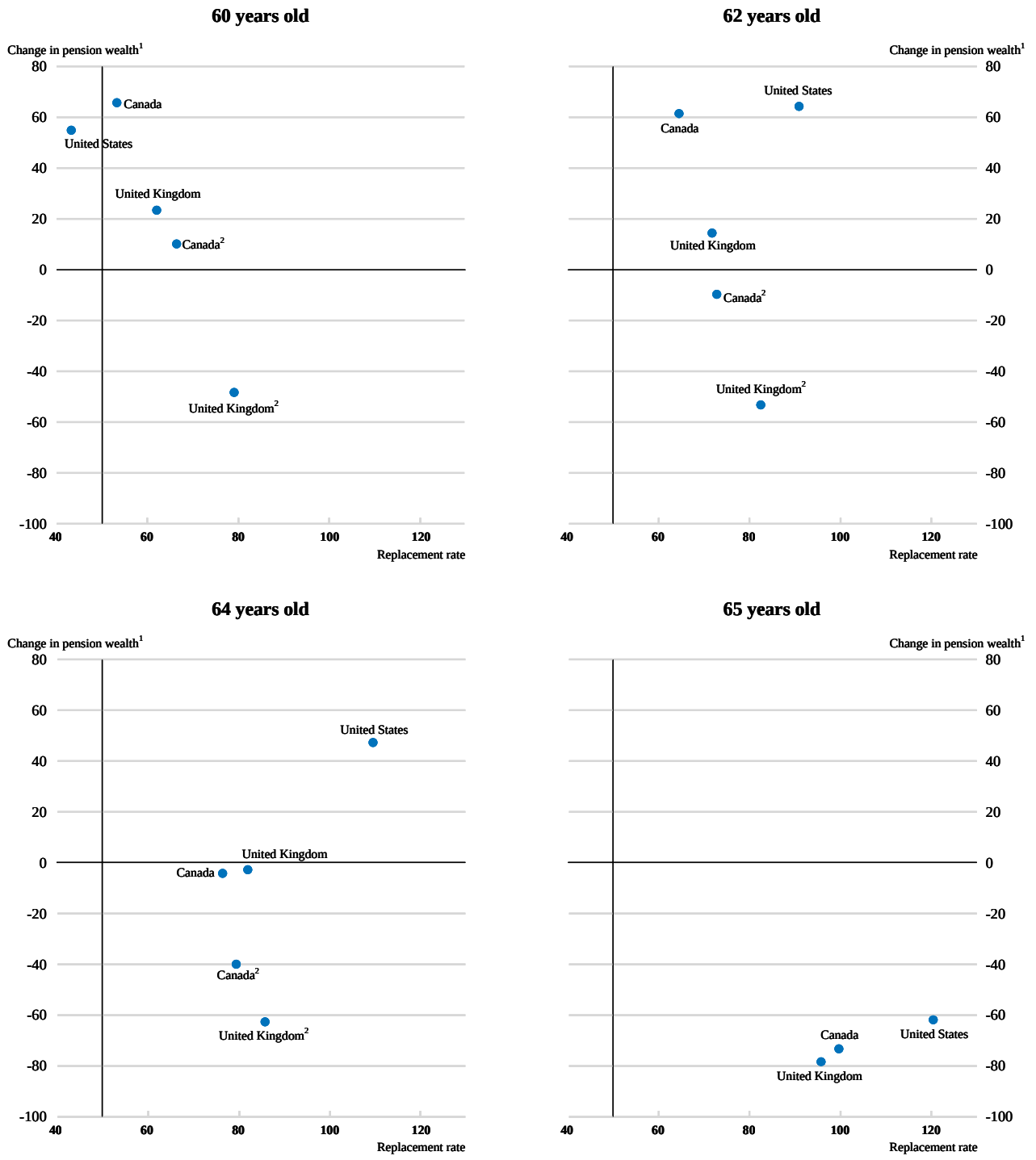
Source: OECD.

Appendix Figure V.A.2. **Replacement rates and change in pension wealth under disability schemes by age, average production worker wage**



Note: The replacement rates is the rate assuming that the individual is classified as disabled at that age.
For pension wealth, the individual is assumed to remain disabled until the earliest age at which old-age retirement benefits can be obtained and then switch to the old-age benefits.
1. Changes in pension wealth as a per cent of net earnings.
Source: OECD.

Appendix Figure V.A.3. **Replacement rates and change in pension wealth under occupational pension schemes by age, average production worker wage**



Note: The replacement rates and pension wealth take into account both the benefits from the public old-age retirement schemes and occupational pensions. Individuals are assumed to have worked their entire careers for the same firm and obtain a defined benefit pension on the basis of a "standard" scheme.
1. Changes in pension wealth as a percent of net earnings.
2. For Canada and the United Kingdom, the calculations have also been made allowing for no actuarial adjustment for retirement before the normal retirement age of 65. This provides a rough indication of the impact of one kind of measure used by firms to ease the effects of redundancy on their staff.

Source: OECD.

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$	US dollar	.	Decimal point
¥	Japanese yen	I, II	Calendar half-years
£	Pound sterling	Q1, Q4	Calendar quarters
€	Euro	Billion	Thousand million
mbd	Million barrels per day	Trillion	Thousand billion
. .	Data not available	s.a.a.r.	Seasonally adjusted at annual rates
0	Nil or negligible	n.s.a.	Not seasonally adjusted
–	Irrelevant