Key Results

Pension wealth relative to individual earnings before retirement measures the total discounted value of the lifetime flow of all retirement incomes in mandatory pension schemes at retirement age. For average earners, pension wealth for men is 8.9 times and for women 9.8 times annual individual earnings on average in OECD countries. Gross pension wealth relative to annual individual earnings is higher for women because of their longer life expectancy. The main determinants of differences across countries are differences in the gross replacement rate, in the length of the retirement period measured by remaining life expectancy at the normal retirement age, and in indexation rules.

Replacement rates give an indication of the pension promise relative to individual earnings, but they are not comprehensive measures of cumulated pension payments; they look only at the benefit level relative to individual earnings at the point of retirement, or more generally at a given, later age. For a full picture, life expectancy, normal retirement age and indexation of pension benefits must also be taken into account. Together, these determine for how long the pension benefit is paid, and how its value evolves over time. Pension wealth – a measure of the stock of future discounted flows of pension benefits – takes account of these factors. It can be thought of as the lump-sum needed at the retirement age to buy an annuity giving the same flow of pension payments as that promised by mandatory retirement-income schemes.

In defined benefit systems there is often no or a weak link between the replacement rate and the expected duration of benefit withdrawal. However, in the long run, ensuring financial sustainability imposes a trade-off between the replacement rate and the duration of retirement. When retirement ages and pension benefits are held constant, pension wealth increases with longevity gains. In defined contribution systems there is a more direct link between the size of the benefit and the expected duration of benefit withdrawals. In these systems the pension wealth measure is equal to the accumulated assets and therefore independent of longevity increases as these automatically reduce the benefits.

Gross pension wealth at individual earnings equal to the average wage is highest in Luxembourg at 18.7 times annual individual earnings for men and 20.6 times for women. The lowest pension wealth for men is found in the United Kingdom and for women in Mexico at 4.1 and 4.3, respectively, due to low replacement rates.

This indicator is built based on the average (gender specific) mortality rates within countries. It thus assumes away differences in life expectancy across income levels. Hence, higher individual replacement rates for low earners than for average earners mean that the computed pension wealth relative to individual earnings is also higher for low earners. For men with individual earnings equal to half average-earnings, pension wealth is 10.9 times their annual earnings on average, compared with 8.9 times for average-wage workers, and 12.1 and 9.8 times, respectively, for women. In the countries where pension wealth for low earners is highest (Luxembourg and New Zealand), its value is between 17 and 22 times individual earnings for men and slightly above at 19 to 24 times individual earnings for women.

Impact of life expectancy

In countries where the duration in retirement is shorter, such as Estonia and Hungary, the individual pension wealth is smaller. The effect is the opposite in Switzerland and some of the Nordic countries, where life expectancy is high. Similarly, since women's life expectancy is longer than men's, pension wealth for women is higher in all countries that use unisex mortality tables to compute annuities or that have defined benefit systems. In addition, some countries still have lower retirement ages for women; this extends the payment period even further.

Impact of indexation

Pension wealth is affected by indexation rules at a given initial replacement rate level. Although most OECD countries now index pensions in payment to prices, there are exceptions: Germany, Ireland, Luxembourg and the United Kingdom, for example, link their, basic, defined benefit or point systems to average earnings. Since earnings tend to grow faster than prices pension wealth is higher with wage than price indexation, for a given level of replacement rate. If Luxembourg, for example, indexed to prices rather than wages, the pension wealth for an average male earner would decrease from 18.7 to 15.7 with unchanged initial benefit based on the OECD pension model.

For the non-OECD countries there is great variation with South Africa at only 4.7 and 5.7 times individual earnings for average earners for men and women compared with China at 15.2 and 15.8 times individual earnings for men and women respectively.

Definition and measurement

The calculation of pension wealth uses a uniform real discount rate of 2%. Since the comparisons refer to prospective pension entitlements, the calculations use country-specific mortality rates by age and sex at the year of retirement. Pension wealth is expressed as a multiple of gross annual individual earnings.

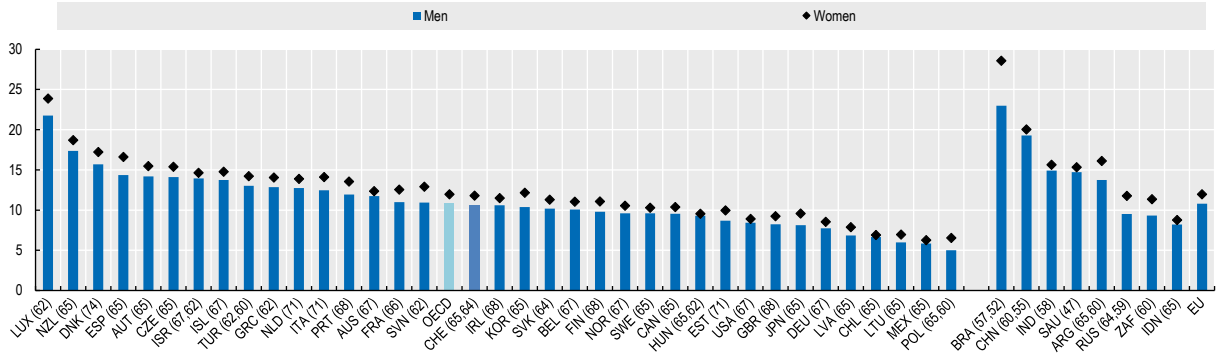
Table 5.7. **Gross pension wealth by earnings, multiple of annual earnings**

	Individual earnings, multiple of mean							Individual earnings, multiple of mean					
	0.5	1.0	1.5	0.5	1.0	1.5		0.5	1.0	1.5	0.5	1.0	1.5
	Men			Women				Men			Women		
Australia	11.7	5.6	5.6	12.4	5.6	5.6	New Zealand	17.4	8.7	5.8	18.7	9.4	6.2
Austria	14.2	14.2	14.2	15.5	15.5	15.5	Norway	9.6	8.6	6.9	10.5	9.5	7.5
Belgium	10.1	8.2	5.9	11.0	9.0	6.5	Poland	5.0	5.0	5.0	6.5	4.9	4.9
Canada	9.6	7.3	5.6	10.4	8.0	6.1	Portugal	11.9	11.7	11.5	13.6	13.3	13.1
Chile	6.7	5.7	5.8	6.9	5.7	5.8	Slovak Republic	10.2	8.5	8.0	11.3	9.4	8.9
Czech Republic	14.1	8.6	6.8	15.4	9.4	7.4	Slovenia	10.9	8.9	8.2	12.9	10.5	9.8
Denmark	15.7	10.1	8.6	17.2	11.1	9.4	Spain	14.4	14.4	14.4	15.6	15.6	15.6
Estonia	8.7	6.7	6.0	10.0	7.6	6.9	Sweden	9.6	9.6	11.7	10.3	10.3	12.6
Finland	9.8	9.8	9.8	11.1	11.1	11.1	Switzerland	10.7	8.5	5.9	11.8	9.3	6.4
France	11.0	11.0	9.9	12.5	12.5	11.3	Turkey	13.0	13.0	13.0	14.2	14.2	14.2
Germany	7.7	7.7	7.7	8.5	8.5	8.5	United Kingdom	8.2	4.1	2.7	9.2	4.6	3.1
Greece	12.8	10.2	9.3	14.0	11.1	10.1	United States	8.4	6.7	5.5	8.9	7.1	5.8
Hungary	9.3	9.3	9.3	9.5	9.5	9.5	**OECD**	**10.9**	**8.9**	**8.1**	**12.1**	**9.8**	**8.9**
Iceland	13.7	11.9	11.6	14.8	12.7	12.5							
Ireland	10.6	5.3	3.5	11.5	5.7	3.8							
Israel	13.9	9.0	6.0	14.6	9.2	6.1	Argentina	13.8	11.7	11.0	16.1	13.5	12.6
Italy	12.5	12.5	12.5	14.1	14.1	14.1	Brazil	23.0	14.7	14.7	28.6	14.3	14.3
Japan	8.1	6.1	5.4	9.6	7.2	6.4	China	19.3	15.2	13.9	20.0	15.8	14.3
Korea	10.4	7.0	5.0	12.1	8.1	5.9	India	14.9	14.9	14.9	15.6	15.6	15.6
Latvia	6.8	6.8	6.8	7.9	7.9	7.9	Indonesia	8.2	8.2	8.2	8.8	8.8	8.8
Lithuania	6.0	3.8	3.1	7.0	4.5	3.6	Russian Federation	9.5	7.6	6.8	11.8	9.2	8.2
Luxembourg	21.7	18.7	17.7	23.9	20.6	19.4	Saudi Arabia	14.7	14.7	14.7	15.3	15.3	15.3
Mexico	5.8	4.3	4.1	6.3	4.3	4.1	South Africa	9.3	4.7	3.1	11.4	5.7	3.8
Netherlands	12.7	12.3	12.2	13.9	13.4	13.2	EU28	10.8	9.2	8.6	12.0	10.2	9.5

Source: OECD pension models.

StatLink https://doi.org/10.1787/888934041630

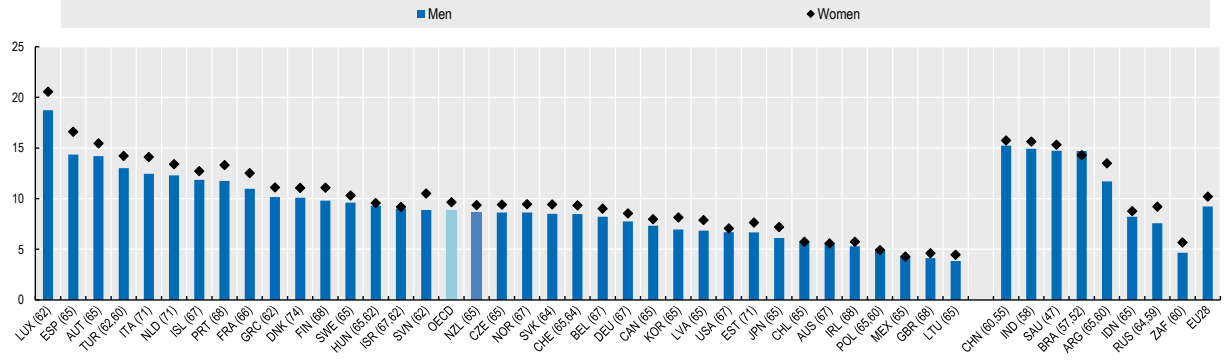
Figure 5.6. **Gross pension wealth for lower earners by gender, multiple of annual earnings**



Source: OECD pension models.

StatLink https://doi.org/10.1787/888934041649

Figure 5.7. **Gross pension wealth for average earners by gender, multiple of annual earnings**



Source: OECD pension models.

StatLink https://doi.org/10.1787/888934041668