

## FERTILITY

### Key results

The total fertility rate is below the estimated replacement level of about 2.1 in developed countries – the number of children needed to keep the total population constant – in 33 out of 35 OECD countries in 2015. The exceptions to this are Israel with a total fertility rate of 2.93 and Mexico at 2.14. In over two-thirds of OECD countries fertility rates have slightly increased since the early 2000s. Fertility rates have a profound implication for pension systems because they, along with life expectancy, are the drivers of population ageing. Since 1960, there has been a steady convergence of fertility rates across countries, which is expected to be prolonged in the next decades.

Fertility rates averaged 1.71 across OECD countries in 2015, well below the level that ensures population replacement. The trend to fewer children has been going on since the late 1950s, but stopped around the turn of century on average. The fall in fertility rates reflected changes in individuals' lifestyle preferences, in family formation, and in the constraints of everyday living, such as those driven by labour-market insecurity, difficulties in finding suitable housing and unaffordable childcare.

The positive (and widening) gap between the number of children women declare that they want and the number that they actually have shows at least in part the influence of these constraints.

Another effect might come from changes in women's aspiration regarding partnership and childbearing norms, especially in countries such as Japan and Korea where there is a strong link between marriage and maternity. However, the childbearing patterns of unmarried men and women have also changed. For example, half or more of births now occur outside of marriage in France, Iceland, Norway and Sweden. The average proportion of births outside marriage in OECD countries is now one-third of the total.

Over the last 50 years there has been a steady convergence in fertility rates across OECD countries. In 1960, both Mexico and Turkey had rates around twice the OECD average, with Hungary and Latvia not much over half, and an overall standard deviation of 1.2. This latter figure has decreased considerably over time, falling to 0.3 by 2015 and forecast to be only 0.1 by 2060.

Since 2000, on average there has been a very slight increase in fertility rates across the OECD. However, this increase has been substantially higher in a few countries, reaching 0.4 in both the Czech Republic and Slovenia, and 0.3 in Estonia and Latvia.

This recent increase in fertility rates is forecast to continue, albeit very slowly, and the average rate will be 1.80

across OECD countries by 2060 according to United Nations Population Prospects.

Low fertility rates have wider social and economic consequences. First, the decline in population can become self-reinforcing, with fertility rates going below 2.1, as the number of women of childbearing age falls by each generation. Secondly, the old-age dependency ratio will increase sharply placing additional burdens on the working age population to finance pensions and health care for older people. Finally, the workforce will also age over time and so might be less adaptable to technological change, thereby reducing productivity and economic growth.

Among the other major economies, Argentina, India, Indonesia, Saudi Arabia and South Africa all currently have fertility rates well above the replacement level of 2.1. Nevertheless, the forecast is that fertility rates will go below natural replacement rate by 2030.

### Definition and measurement

The total fertility rate is the number of children that would be born to each woman if she were to live to the end of her child-bearing years and if the likelihood of her giving birth to children at each age was the currently prevailing age-specific fertility rates. It is generally computed by summing up the age-specific fertility rates defined over a five-year interval. A total fertility rate of 2.1 children per woman – the replacement level – ensures broad stability of the population, on the assumptions of no migration flows and unchanged mortality rates.


### Further reading

d'Addio, A.C. and M. Mira d'Ercole (2005), "Trends and Determinants of Fertility Rates: The Role of Policies", *OECD Social, Employment and Migration Working Papers*, No. 27, OECD Publishing, Paris, <http://dx.doi.org/10.1787/880242325663>.

## 5.1. Total fertility rates, 1960-2060

	1960	1970	1980	1990	2000	2010	2015	2030	2060
<b>OECD members</b>									
Australia	3.27	2.54	1.91	1.86	1.77	1.89	1.83	1.77	1.77
Austria	2.78	2.04	1.60	1.48	1.38	1.45	1.51	1.63	1.75
Belgium	2.65	2.01	1.60	1.61	1.68	1.78	1.80	1.83	1.86
Canada	3.68	1.98	1.63	1.69	1.52	1.61	1.56	1.60	1.72
Chile	4.95	3.58	2.70	2.43	2.03	1.82	1.76	1.72	1.76
Czech Republic	2.21	2.21	1.97	1.65	1.19	1.48	1.57	1.72	1.82
Denmark	2.58	1.96	1.43	1.75	1.76	1.73	1.76	1.81	1.85
Estonia	1.94	2.15	2.09	1.63	1.39	1.59	1.66	1.77	1.83
Finland	2.66	1.62	1.69	1.82	1.75	1.77	1.78	1.80	1.83
France	2.83	2.30	1.87	1.71	1.88	1.98	1.97	1.96	1.95
Germany	2.47	1.71	1.46	1.30	1.35	1.43	1.47	1.57	1.68
Greece	2.29	2.53	2.06	1.42	1.33	1.34	1.30	1.43	1.66
Hungary	1.81	2.04	1.81	1.74	1.30	1.33	1.40	1.53	1.67
Iceland	3.94	2.87	2.23	2.19	1.99	1.98	1.92	1.82	1.78
Ireland	4.07	3.82	2.76	1.91	1.97	2.00	1.98	1.95	1.93
Israel	3.85	3.81	3.13	2.93	2.91	3.04	2.92	2.61	2.17
Italy	2.50	2.32	1.52	1.27	1.30	1.43	1.49	1.62	1.74
Japan	2.03	2.13	1.76	1.48	1.30	1.41	1.48	1.62	1.74
Korea	5.60	4.00	2.23	1.68	1.21	1.23	1.32	1.52	1.70
Latvia	1.88	2.00	2.03	1.63	1.29	1.50	1.57	1.70	1.80
Luxembourg	2.40	1.72	1.47	1.66	1.65	1.55	1.59	1.68	1.76
Mexico	6.75	6.71	4.37	3.23	2.61	2.29	2.14	1.81	1.72
Netherlands	3.17	2.10	1.51	1.59	1.74	1.73	1.75	1.79	1.82
New Zealand	3.85	2.84	1.97	2.07	1.95	2.04	1.97	1.85	1.79
Norway	2.90	2.35	1.69	1.89	1.81	1.82	1.83	1.84	1.86
Poland	2.72	2.23	2.31	1.95	1.26	1.33	1.29	1.41	1.65
Portugal	3.19	2.83	2.01	1.48	1.45	1.28	1.24	1.38	1.64
Slovak Republic	2.91	2.51	2.27	1.87	1.22	1.39	1.46	1.61	1.74
Slovenia	2.34	2.20	1.93	1.33	1.21	1.58	1.64	1.75	1.83
Spain	2.81	2.85	1.88	1.28	1.29	1.33	1.39	1.52	1.66
Sweden	2.31	1.91	1.64	2.01	1.67	1.90	1.91	1.92	1.93
Switzerland	2.60	1.87	1.54	1.54	1.41	1.53	1.55	1.60	1.67
Turkey	6.20	5.39	4.11	2.90	2.37	2.12	2.02	1.83	1.74
United Kingdom	2.81	2.01	1.78	1.78	1.66	1.88	1.87	1.86	1.86
United States	3.23	2.03	1.80	2.03	2.04	1.88	1.89	1.90	1.92
<b>OECD</b>	<b>3.15</b>	<b>2.60</b>	<b>2.05</b>	<b>1.82</b>	<b>1.65</b>	<b>1.70</b>	<b>1.70</b>	<b>1.74</b>	<b>1.79</b>
Argentina	3.09	3.15	3.15	2.90	2.52	2.35	2.27	2.07	1.86
Brazil	6.00	4.68	3.82	2.72	2.13	1.78	1.70	1.61	1.68
China	6.20	4.77	2.55	1.90	1.55	1.60	1.63	1.71	1.77
India	5.89	5.41	4.68	3.83	3.14	2.44	2.30	2.02	1.79
Indonesia	5.62	5.30	4.11	2.90	2.53	2.45	2.32	2.04	1.84
Russian Federation	2.55	2.03	2.04	1.55	1.30	1.70	1.75	1.84	1.89
Saudi Arabia	7.26	7.30	7.02	5.55	3.65	2.73	2.48	2.02	1.71
South Africa	6.00	5.50	4.60	3.34	2.75	2.55	2.41	2.11	1.84
EU28	2.60	2.24	1.90	1.66	1.47	1.56	1.59	1.68	1.78

Source: United Nations, World Population Prospects – 2017 Revision.

StatLink  <http://dx.doi.org/10.1787/888933634230>



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