

1 Fertility trends across the OECD: Underlying drivers and the role for policy

Introduction and main findings

Most OECD countries have experienced a marked decline in fertility rates over the years. The total fertility rate (TFR) has more than halved on average across the OECD, from 3.3 children per woman in 1960, to 1.5 in 2022. This decline will change the face of societies, communities and families and potentially have large effects on economic growth and prosperity. Therefore, policy would do well to understand what drives these changes, why adults have fewer children, or none at all, and what can be done to support adults to have the number of children they would like to have, at the time of their choosing.

Personal choices on having a child depend on a wide range of factors, such as, economic and financial security, the costs of raising children, social norms, personal and medical conditions, as well as the overall labour market situation and family policy environment. Over the past decades, many of these factors have changed, affecting women's choices with respect to having a(nother) child. Key societal, policy and economic changes include increased educational attainment among women, improved access to effective contraceptive measures, a growing predominance of dual-earner households, and a strengthening of public policies (such as paid leave and formal early childhood education and care (ECEC) services) that help parents find a balance between work and family responsibilities. In addition, a succession of global crises has increased economic, labour market and housing insecurities especially among younger people, which complicates their transition into parenthood.

Changes in attitudes towards parenthood may be another explanation for changes in fertility rates. For example, more gender equality in households along with more intensive parenting norms – parents spending more time and money on each individual child – have exposed more fathers to the (opportunity) costs of parenthood. As both men and women more often find meaning to life outside of parenthood, they might more often postpone or renounce having children to pursue other life goals, including career advancement and self-actualisation (i.e. the highest form of psychological development, where individual potential is fully realised (Maslow, 1943^[1])).

This chapter brings together evidence from the international literature on the underlying drivers of fertility rates, and presents the results of recent OECD analysis on the effect of labour market outcomes, changes in household budgets and different aspects of the family policy framework on fertility rates as well as the average age of mothers at birth of their children (Fluchtmann, van Veen and Adema, 2023^[2]). The chapter concludes with a short discussion of policy considerations.

Main findings

OECD countries have been experiencing a long-term decline in the TFR since the 1960s. The decline stopped temporarily during the 2000s, but resumed again after the great financial crisis of 2007-08. By 2022, the TFR had reached just 1.5 children per woman – well below the “replacement level” of 2.1 children per woman. Among OECD countries in 2022, the TFR was highest in Israel with 2.9 children per woman followed by Mexico and France with 1.8 children per woman. The TFR was lowest in Italy and Spain with 1.2 children per woman – and particularly in Korea, with an estimated 0.7 children per woman in 2023. Births increasingly occur at later ages, with an average age of 30.9 in 2021, compared to 28.5 in 2000. Growing autonomy and agency in family planning partially explains the fertility decline since the 1960s and the increasing age of mothers at childbirth. However, major social and economic developments that have changed the conditions for family formation and parenthood, have also had an impact.

The main findings of this chapter include:

- There is a broad trend towards increased childlessness across the OECD, but the strength of this trend varies. Comparing the cohort fertility of women born in 1935 and 1975 shows that the incidence of permanent childlessness at least doubled in Estonia, Italy, Japan, Lithuania, Poland, Portugal and Spain, and concerns almost one in four women of the 1975 cohort in Italy and Spain. In Japan it is 28%.
- Across the OECD on average, there is no marked change of numbers in the birth order of children over the 1980-2022 period, but this overall stability masks important country differences. For example, in Estonia and Hungary the proportion of third and higher ranked births increased by more than 5 percentage points to over 20%. By contrast, in Ireland and Spain, this proportion almost halved over the same period to 25% and 14% respectively.
- Most parents do not have children because they will gain economically. But this does not mean that economic considerations do not have any effect on family formation. On the contrary, since Becker's seminal work (1960^[3]), many studies have demonstrated that key economic variables, such as household income, how it is split between parents, and the cost of childcare and housing, all can affect whether people decide to have children, when to have them, and how many children to have. Becker's economic approach towards fertility also postulates that “...an increase in income or a decline in the cost of children would affect both the quantity and quality (expense) of children, usually increasing both...”. An increase in the costs of children will then contribute to a decline in fertility rates. So, why have fertility rates fallen; and what are the broad underlying “cost factors”?
- Part of the answer lies in the changing gender roles in society. In 1960 the TFR stood at 3.3 children per woman on average across the OECD, while female labour force participation rates were often below 50%. Over the past decades, women have increased their educational attainment and strengthened their labour market participation and earnings thus resulting in higher opportunity cost of having (more) children (OECD, 2023^[4]). If women have to choose between work and family, then some will choose (more) children and limit their labour force participation while others will choose paid

work and thus limit fertility rates. In the absence of work-life balance options, increased female labour participation then leads to declining fertility rates.

- However, if women are able to combine work and family life, and participate in economic life on an equal footing, then this leads to better economic outcomes and higher fertility rates. More options to combine work and family commitments, along with greater societal emphasis on gender equality, have contributed to changing gender roles in families, which, on average, are more likely to be dual-earner households than before. This helps to explain why women's employment rates that were negatively linked to fertility in the past, are now positively associated across the OECD on average.
- Policy has become more focused on supporting the reconciliation of parental work and family commitments as this reduces the costs of children to parents and sustains family incomes, which theory predicts will support fertility rates (Becker, 1960^[3]). For example, all but one OECD country offer a nationwide policy of paid maternity/parental leave to care for children, and countries invest in early childhood and care (ECEC) to a varying degree. Countries with comprehensive support systems, such as France, Hungary and Nordic countries, spend about 3% of GDP or more on family benefits. In the countries with the most coherent policies, paid parental leave provisions and ECEC-systems are well-aligned, providing a continuum of support during the pre-school years. However, by 2022/23, even in many of these countries the TFR had fallen to around the OECD average. By contrast, in Hungary, increased spending on family benefits has raised the TFR to the OECD average over the past 10 years. Clearly, work and family policies alone are not enough to explain the cross-national variation in fertility rates.
- Other direct costs of children are also important. Concerns about the cost of housing have come to the fore as a barrier to having (more) children, as the increase in housing costs since the late 1990s has been considerable in most OECD countries (OECD, 2023^[5]). Private education costs can also establish a barrier to having (more) children – as in Korea, but this does not play a role across all countries in the OECD.
- Results from OECD-wide regressions found positive associations between TFRs, employment of men and women, public spending on parental leave and ECEC, and financial support to households to a lesser extent. The regressions also found a clear negative association between TFRs and housing costs, and the unemployment rate as an indicator of labour market conditions. However, much of the variation in fertility trends is not explained by these factors, which could point to a growing role of perceived insecurity, and societal attitudes and norms.
- The recent rapid succession of global crises, e.g. COVID-19, increasing climate issues, the Russian war of aggression against Ukraine, may have spread a feeling of uncertainty and unpredictability, which may lead some potential parents to delay having children, or even decide against it altogether.
- Recent years have also been marked by a change in attitudes towards parenthood. Both young men and women increasingly find meaning in life outside of parenthood, and there is a broad movement towards an increased acceptance of not having children. At the same time, the normative demands on what it means to be a “good” parent have grown in importance, and the changing balance in costs and benefits of having a child – both financial and non-financial – drives choices to have fewer, if any, children today than in the past.

Persistent low fertility has fuelled the debate about a more pro-natalist stance of family policy in some OECD countries. For example, concerns about fertility rates are an important driver of family policy development in Japan, Hungary and Korea. However, the issue does not play a discernible role in, for example British or Dutch policy development, notwithstanding concerns about demographic trends.

The best approach for countries that are concerned about fertility rates remains to promote more gender equality and fairer sharing of work and childrearing. This involves providing family policies that help the reconciliation of work and family life, but policy must also have a greater focus on the costs of children, especially housing costs. However, because of changes in preferences regarding children, it is unlikely that such policies will enable countries to approach replacement fertility rates again.

It would also be prudent to consider how to adapt for a “lower-fertility future”, if only because any increase in fertility rates today will only result in a larger working-age population 20 years down the line. Such a policy – that goes beyond family policy and the scope of this chapter, could involve immigration, bringing more under-represented groups into the labour force and taking measures to enhance their productivity to allay the economic and fiscal implications of a potentially shrinking workforce.

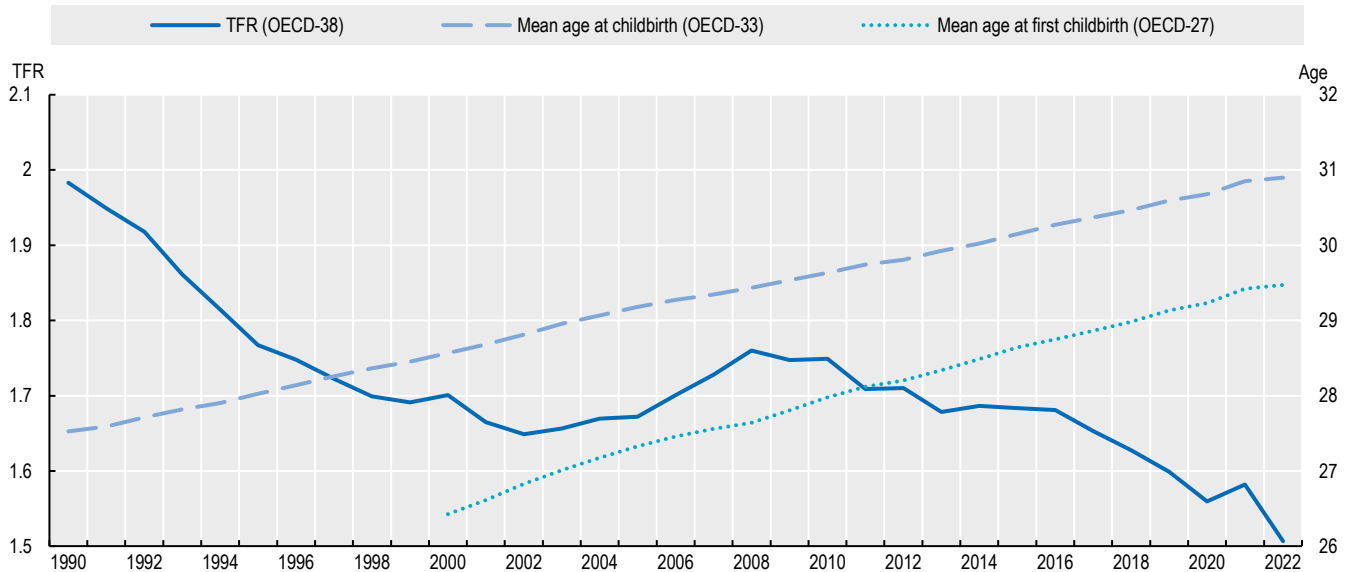
Fewer and later births in most OECD countries

TFRs remain high and well above replacement levels in some parts of the world, and more than half of the projected increase in global population up to 2050 will be concentrated in just eight countries: the Democratic Republic of the Congo, Egypt, Ethiopia, India – which surpassed China as the world's most populous country in 2023 (UN DESA, 2023^[6]), Nigeria, Pakistan, the Philippines and Tanzania. Countries of sub-Saharan Africa are expected to continue growing through 2100 and to contribute more than half of the global population increase anticipated through 2050. Nevertheless, even high-fertility countries have experienced substantial declines in TFRs, particularly since the early 1990s, with a projected convergence towards replacement level over the course of the 21st century (UN DESA Population Division, 2022^[7]). The most recent global fertility rate projections estimate the global TFR to fall from 2.21 in 2022 to 1.83 in 2050 and 1.59 in 2100 (Bhattacharjee et al., 2024^[8]). This long-term trend towards having fewer children reflects economic development, noticeable improvements in reproductive health as well as women's economic and social empowerment (Skirbekk, 2022^[9]).

In many OECD countries, recent decades have been marked by a simultaneous trend toward fewer and later births. At the beginning of the 1990s, the average total fertility rate (TFR – see the notes to Figure 1.1 for the definition) across OECD countries had already been on a long downward trend. In 1990, at just below 2 children per woman, it was relatively close to the replacement level of 2.1, which would keep the size of the population constant in the absence of migration (Figure 1.1). The average TFR across the OECD continued to fall throughout the 1990s to 1.65 children per woman in 2002. This decline was caused in part by a postponement of first births, resulting in a fertility rebound in the 2000s and a peak of the TFR of 1.76 in 2008 (Burkimsher, 2015^[10]; Beaujouan and Berghammer, 2019^[11]). The following years saw a new decline on the TFR, falling to an all-time low average of 1.5 in 2022. At the same time, the mean age at which mothers have children has increased from 28.5 years in 2000, to almost 31 years in 2022 on average across the OECD.

Figure 1.1. Simultaneous trends of fewer and later births

Total fertility rate (left axis) and mother's mean age at (first) childbirth (right axis), 1990 or 2000 to 2022, OECD average



Note: The total fertility rate in a specific year is defined as the total number of children that would be born to each woman if she were to live to the end of her child-bearing years and give birth to children in alignment with the prevailing age-specific fertility rates. It is calculated by totalling the age-specific fertility rates as defined over five-year intervals. OECD averages are unweighted averages. The OECD average for the TFR data includes all 38 OECD countries. The OECD average for the mother's mean age at childbirth excludes France, Germany, Korea, Latvia and Türkiye. The OECD average for the mean age of the mother at first birth does not include Australia, Chile, Colombia, Costa Rica, Germany, Italy, Luxembourg, Mexico, New Zealand, Switzerland and Türkiye.

Source: OECD (2024^[12]), Indicators SF2.1 and SF2.3, OECD Family Database, www.oecd.org/els/family/database.htm.

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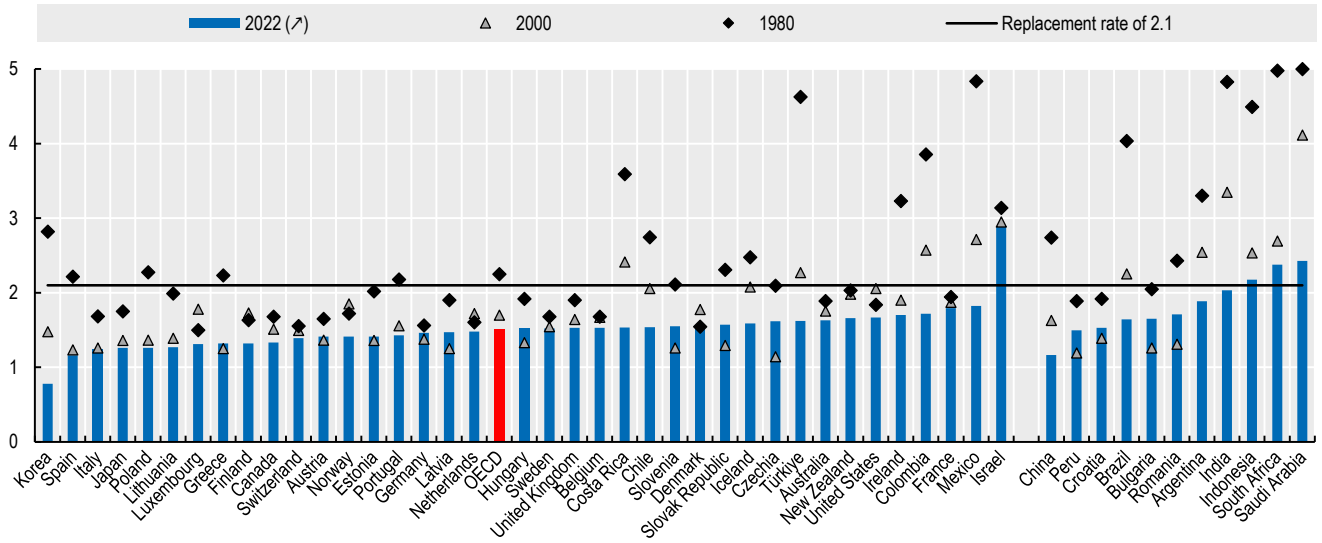
The COVID-19 pandemic led to strong fluctuations in births and fertility rates across countries, although effects vary across countries. In 2019 and in 2020 (the year of the start of the pandemic), TFRs declined in more than two-thirds of OECD countries, while in 2021, TFRs increased in two-thirds of OECD countries, although the 2020 base of comparison was rather low (OECD (2024^[12]), Indicator SF2.1). Lockdowns at the onset of the pandemic significantly reduced fertility in many European countries in early 2021, but this was followed by a quick rebound in fertility by the end of the first quarter of 2021 (Pomar et al., 2022^[13]). For example, Norway and the United States recorded an increase in the TFR in 2021 (Bailey, Currie and Schwandt, 2022^[14]; Lappégård et al., 2022^[15]). In a study based on 37 mostly OECD countries, Sobotka et al. (2023^[16]) confirm this pattern but also show, that, unexpectedly, births declined again in January 2022 with underlying conceptions in spring 2021 when the pandemic measures were mostly eased out and vaccination was gaining momentum. This may be due to a related postponement of births as the vaccination campaign was rolled out, a general return to work and pre-pandemic fertility behaviour (Sobotka et al., 2023^[16]).

Fertility rates have fallen in most countries since 1980

The specific trajectories of TFR-trends differ markedly across countries, with some experiencing most of their decline well before others (Figure 1.2). The TFR increased in six OECD countries over the 1980-2000 period and in five countries over the 2000-22 period, but compared to 1980, by 2022 the TFR had fallen in all OECD countries, except Denmark.

Figure 1.2. Almost all OECD countries saw fertility rates decline since 1980

Total fertility rates in 1980, 2000 and 2022 (or latest year)



Note: See notes to Figure 1.1. 2021 instead of 2022 for Chile, Colombia, Costa Rica, Mexico, the United Kingdom, Brazil, China, India, Indonesia, Peru, South Africa, Argentina and Saudi Arabia.

Source: OECD (2024^[12]), Indicator SF2.1, OECD Family Database, www.oecd.org/els/family/database.htm.

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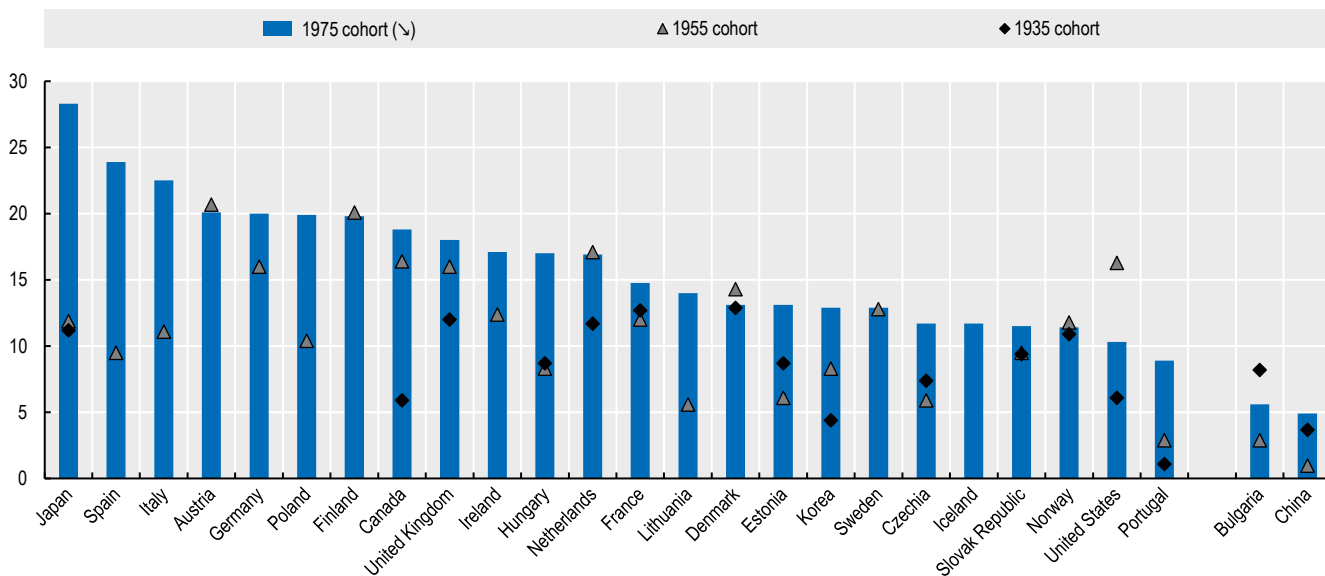
The five OECD countries with the highest TFR in 1980 – Colombia, Costa Rica, Ireland, Mexico and Türkiye – have experienced the strongest declines, falling by more than 1.5 births from a level previously well above 3 births per women. Israel breaks this trend as women among the Haredi (ultraorthodox) population group often have a large number of children (OECD, 2010^[17]; Weinreb, 2023^[18]). In Czechia, Estonia, Hungary, Latvia and the Slovak Republic, TFRs initially fell following the collapse of the Soviet Union, followed by a moderate recovery with higher TFRs in 2022 than in 2000.

Childlessness and the birth order of children

The fall in TFRs is related to women having fewer children and/or none at all. Childlessness has been on the rise across the OECD, but there is cross-national variation in timing and extent (Figure 1.3). For example, in Canada the rise in permanent childlessness seems to have taken place between the cohort of women born 1935 and 1955. However, in most OECD countries the changes occurred more recently between cohorts 1955 and 1975 (women aged 49 in 2024), and childlessness more than doubled in Italy, Spain and Japan to 28% of women born in 1975. In Austria, Germany, Italy and Spain childlessness concerns 20-24% of the women born in 1975, while for most other OECD countries this is between 10- 20% (Figure 1.3). From the data on cohort fertility, it is not possible to discern whether definite childlessness is voluntary or involuntary. But some of those who do want to have children at some point in their life may well remain childless: the literature suggests there is a gap between actual and intended childlessness, especially for highly educated women in Europe and in the United States (Beaujouan and Berghammer, 2019^[11]; Tanturri et al., 2015^[19]).

Figure 1.3. Childlessness increased markedly in many countries among younger cohorts of women

Percentage of women remaining permanently childless for women born in 1935, 1955 and 1975



1. For China, Cohort 1935 refers to women born 1931-35, and 1955 refers to women born in 1951-55, these data were calculated using the 1995 dataset; Cohort 1970 was calculated based on the 2015 dataset. China conducts decennial population census in years ending with 0, and the 1% population sample survey (also called "Micro Census"), during the inter-censal years ending with 5.

2. Regarding the data for the 1975 cohort, data concerns the 1970 cohort for Korea and the Slovak Republic; women born in 1975-77 for Germany (both Eastern and Western Germany); and the 1978 cohort for Italy. For data for the 1975 cohort for France, see Köppen, Mazuy and Toulemon (2017^[20]).

3. Regarding the data for the 1955 cohort: data concerns the 1950 cohort for Italy; women born in 1951-55 for France; women born in 1954-56 for Germany (both Eastern and Western Germany); the 1956 cohort for Poland; 1960 for Spain; 1967 for Finland; 1968 for Slovenia; and 1969 for Austria.

4. Regarding the data for the 1935 cohort: data is for women born in 1931-35 for France; the 1937 cohort for Hungary; 1944 for Estonia; 1952 for Norway; 1953 for Denmark; and 1953 for Japan.

5. Korea: The Census only asked (formerly) married women on their number of children. Births outside marriage are uncommon in Korea.

Source: Human Fertility Database, National Bureau of Statistics (China), Destatis (Germany), Statistics Korea, the "Istituto Nazionale di Statistica", "Institut national de la statistique et des études économiques" and Köppen, Mazuy and Toulemon (2017^[20]), "Demographic Research Monographs, Childlessness in Europe: Contexts, Causes, and Consequences", [www.doi.org/10.1007/978-3-319-44667-7_4](https://doi.org/10.1007/978-3-319-44667-7_4).

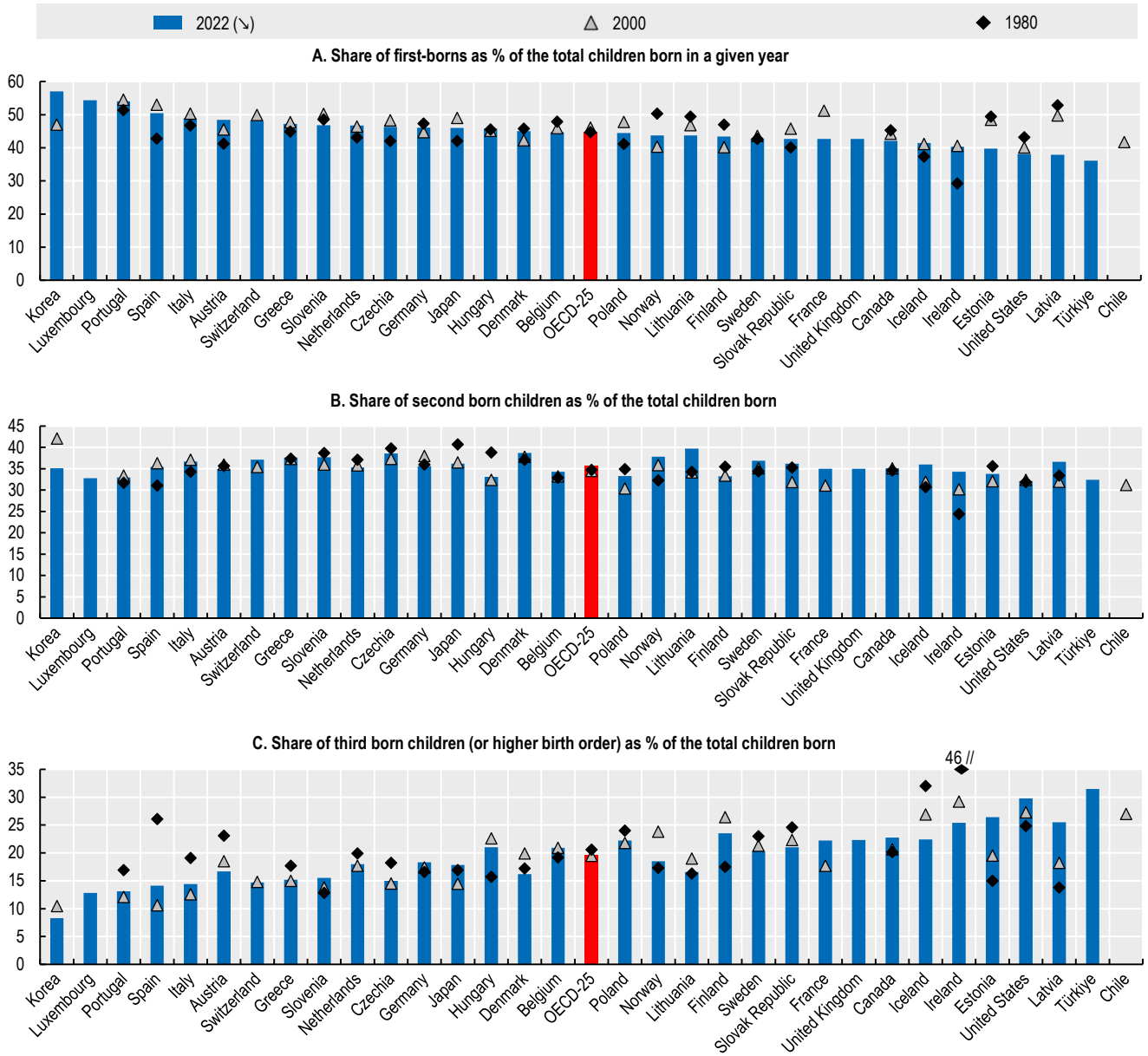
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Across the OECD on average, there is no marked change in the number of children by the birth order (Figure 1.4). The share of first-borns is about 45% of children born in a given year, the share of second children is around 35%, and the share of third or higher order children is about 20%. First-borns as percentage of the children born was the same in 1980 and 2022 on average across the OECD. Over that period, the average share of second children edged up, while that of third (and higher) order children declined somewhat. However, this overall stability masks important country differences in "fertility dynamics". For example, while in Estonia and Hungary the proportion of third and higher births increased by more than 5 percentage points to over 20%, in Ireland and Spain this proportion almost halved to 25% and 14% respectively. There is a growing group of countries (Luxembourg, Portugal, Italy, Spain and Switzerland) where the share of third (and higher) order children is below 15%, while in Korea this share is only 8%.

Indeed, the average trend in the birth order of children born across the OECD on average masks important country differences in "fertility dynamics". For example, Figure 1.3 showed that Japan has the highest level of definite childlessness among women born in 1975 across the OECD, twice as high as that in Korea. Figure 1.4 shows that in Korea the incidence of third and higher order births is the lowest and the share of first-borns is the highest across OECD countries. This suggests that once women in Japan decide to have children, they are much more likely to have two or three (or more) children than women in Korea. This helps to explain why the TFR in Japan (at 1.3 children per woman in 2021) is above that in Korea (0.8 in 2021).

Figure 1.4. Korea has the highest share of first-borns and the lowest share of higher order children

Birth order in selected years, 1980, 2000 and 2022



1. Data for 2022 corresponds to 2018 for the United Kingdom; 2019 for Canada; 2020 for Korea; and 2021 for Germany, Japan, Lithuania, Türkiye and the United States.
 2. Data for 2000 corresponds to 1999 for France; 1997 for Italy; 2005 for Malta; and 2006 for Switzerland.
 3. Data for 1980 corresponds to 1992 for Croatia; and 1990 for Germany, Portugal and Sweden.
 4. OECD-25 is the average for the OECD countries for which data is available for all three years: Austria, Belgium, Canada, Czechia, Denmark, Estonia, Finland, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden and the United States.
 Source: Eurostat and the Human Fertility Database.

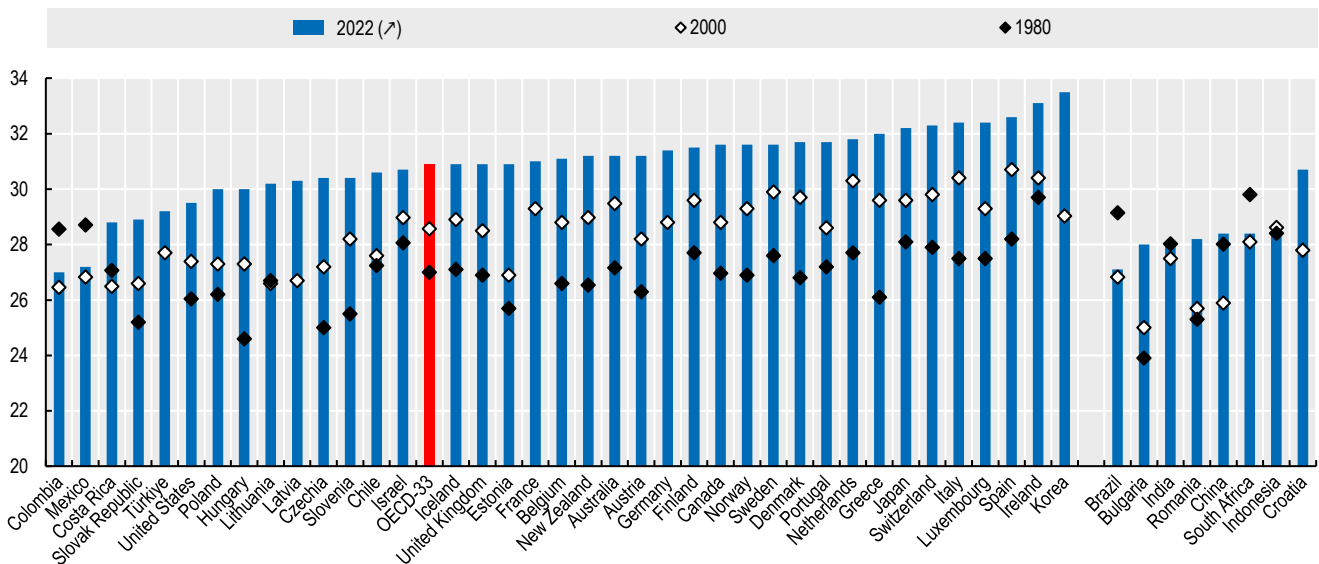
The mean age at which women give birth has risen

While TFRs declined over the past 40 years, the mean age at which women give birth increased, as did TFRs for women aged over 30 (see the Fertility indicator in the General context section of this volume). Across the OECD, the average age of mothers at which they give birth increased from 27 years of age in 1980 to 28.6 in 2000 and 30.9 in 2022 (Figure 1.5). Colombia and Mexico were the only exceptions to this upward trend, due to relatively high teenage birth-rates (see OECD (2024_[12]), SF2.3 Age of mothers at childbirth and age-specific fertility), while in these two countries the highest share of children is born to mothers in the 20-24 age group (DANE, 2023_[21]; INEGI, 2023_[22]).

Over the past 20 years, the age at which women have their first childbirth across the OECD on average has increased from 28.5 years of age to 30.8, while over the same period the mean age of first marriage for women increased from 27.4 to 31.5 years of age (see the Fertility indicator in Chapter 4 of this volume). The mean age at first marriage has risen above the mean age at first childbirth. Also, many people now get married after having children or have children without getting married. Across the OECD on average, just over 40% of the children born in 2020 were born outside marriage, and in 14 of 38 OECD countries it concerned the majority of children born that year (see OECD (2024_[12]), SF2.4 Share of births outside of marriage). With less than 3% of births outside marriage in 2020, fertility rates in Korea, Japan and Türkiye remain strongly associated with marriage. The steep decline in the marriage rate in Korea, from 9.3 marriages per 1 000 persons in 1990 to 3.7 in 2022 (see Chapter 4 in this volume), has contributed to the fall of the TFR in Korea.

Figure 1.5. The mean age at which women give birth rose by four years over the past four decades

Mean age at which women give birth, 1980, 2000 and 2022 or nearest year



1. Data for the United Kingdom refer to England and Wales only.

2. The OECD-33 average is computed only for the countries for which data is available in 1980, 2000, and 2022.

3. Alternate years: 2021 for the United Kingdom instead of 2022; 2017 for Brazil and India instead of 2022; 2016 for China instead of 2021; 2014 for Indonesia and 2011 for South Africa instead of 2022; 2001 for Croatia and 2002 for South Africa instead of 2000; 1990 for Poland; 1982 for Slovenia, and 1981 for South Africa instead of 1980.

Source: OECD (2024_[12]), "SF2.3 Age of mothers at childbirth and age-specific fertility", Indicators SF2.1 and SF2.3, OECD Family Database, www.oecd.org/els/family/database.htm, based on Eurostat demographic statistics, https://ec.europa.eu/eurostat/databrowser/product/view/DEMO_FIND, and National Statistical Offices.

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Over this period, the largest increases of the mean age of women at giving birth, of more than 5 years, were recorded in Czechia, Estonia, Hungary and Greece. Across the OECD, the highest mean age is now observed in Korea at over 33 years of age. The recent increases in the mean age across the OECD could imply that some rebound in TFRs may occur in the not-too-distant future, similar to what happened in the 2000s. However, the trend towards postponement of births across the OECD potentially has negative consequences for overall fertility. As young people wait longer to have children, they may shift family formation to a point where fecundity problems – that is the ability to have children – could interfere with the realisation of desired fertility. Advances in reproductive medicine can, at least in part, allow women to have children at older ages (Box 1.1).

Box 1.1. Medical advances in reproductive medicine mean more births are intentional

The increasing postponement of births could result in some men and women no longer being able to have the number of children they intended. This is likely to hold particularly for higher-order births rather than first births: when people start their families later in life, they are more likely to experience pregnancy-related health issues as they get older (Bhasin et al., 2019^[23]). Infertility rates are rising, and while women have previously predominantly borne its stigma, both men and women are equally likely to contribute to a couple's infertility (Turner et al., 2020^[24]). With decreasing sperm counts and testosterone concentrations as well as increasing prevalence of testicular cancer and puberty disorders (Skakkebaek et al., 2019^[25]), male reproductive health has deteriorated over recent decades (Huang et al., 2023^[26]). However, there is some ambiguity in the literature as Borumandnia et al. (2022^[27]) found that primary male infertility declined in high income countries and increased in lower income countries. This finding may be related to a decline in TFRs in high-income countries that masks infertility – i.e. many cases of infertility remain unknown, while in low-income countries dietary insufficiencies and environmental and work-related toxicants play a role, while access to infertility treatment is limited.

Medical advances – including contraceptive methods, fertility treatments and assistive reproductive technology (ART) – mean that men and women have more control over their childbearing choices today than they had in the past. Such increased autonomy has had a direct impact on fertility trends, particularly through a decline in unplanned childbirths and a lower number of adolescent pregnancies (Tridenti and Vezzani, 2022^[28]; Lindberg, Santelli and Desai, 2018^[29]). In the United States, for example, more than a third of the fertility decline between 2007 and 2016 can be attributed to a reduction in unintended pregnancies, particularly among young women (Buckles, Guldi and Schmidt, 2019^[30]). At the same time, the existence of fertility treatments and ART also give young people the feeling that they can postpone the choice to have children. In Israel, for example, ART is found to have contributed to a delay in marriage among young women and an increase of the age at which women give birth (Gershoni and Low, 2021^[31]).

On the other hand, fertility treatments and ART have given couples exposed to fecundity issues a chance to have (more) children. The share of births that involve some form of ART has steadily increased in many countries (Doepke et al., 2022^[32]), making up 9.2% of all live births in Denmark in 2019, a leading ART country (Sundhedsdatastyrelsen, 2021^[33]).

Population dynamics

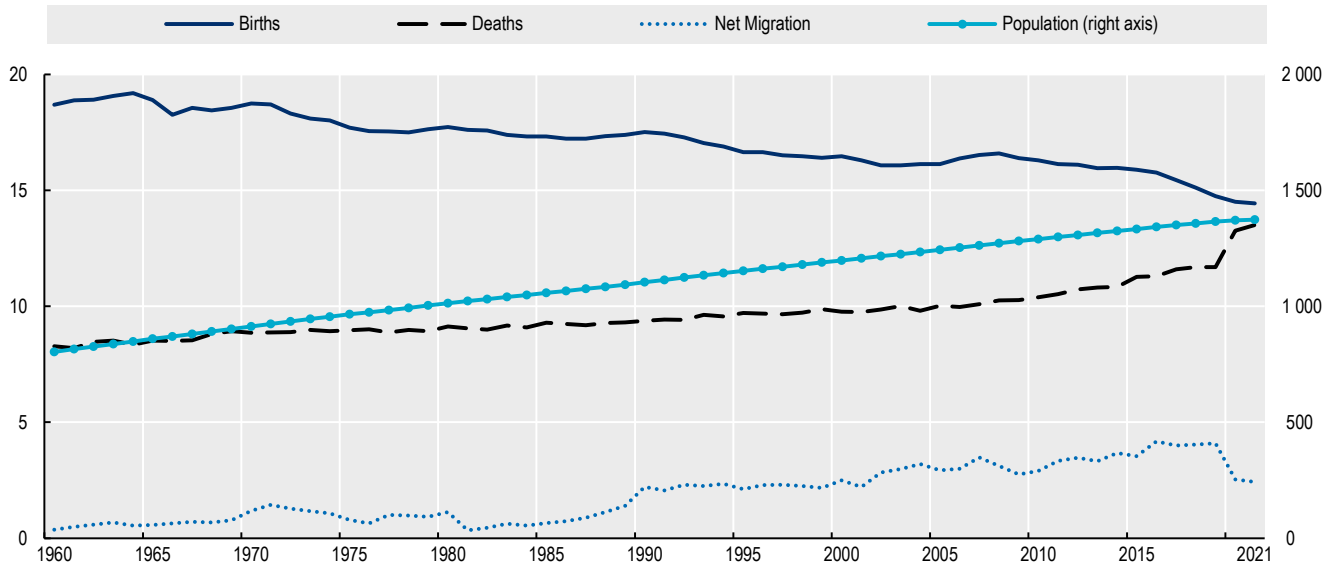
Over the years, the declining fertility rates have led to a fall in the number of births per year across the OECD (Figure 1.6). At the same time, the number of deaths per annum has gone up, though its rise was tempered by increasing life expectancy. With COVID-19 the number of deaths increased to the extent that, by 2021, the number of deaths across the OECD (13.5 million in 2021) came close to the number of births (14.4 million). UN population projections (medium variant) suggest that the number of deaths will outpace the number of births across the OECD around the year 2035 (UN DESA Population Division, 2022^[71]).

With COVID-19 net migration fell, but since 2021, migration has increased to record heights in the OECD – even when not accounting for Ukrainian refugees. But overall, the net contribution of migrants to overall fertility levels is relatively small, notwithstanding the fact that many migrants arrive in OECD countries during their childbearing years and from origin countries which often have relatively high fertility norms. Overall, fertility patterns among migrants and the native-born tend to converge over time and across generations (see OECD (2023^[34]) for a detailed discussion).


Recent global fertility rate projections estimate the global TFR to fall from 2.21 in 2022 to 1.83 in 2050 and 1.59 in 2100 (Bhattacharjee et al., 2024^[8]). Population growth across the OECD is projected to remain limited in future, and ensuing demographic change will have substantial wider policy implications (Box 1.2). Countries that have already recorded important population declines in recent years include Greece, Italy, Japan, Korea, Latvia, Lithuania, and Poland (OECD Population Data).

Figure 1.6. The number of deaths came close to the number of births across the OECD in 2021

Births, deaths, net migration, and population, 1960-2021, OECD total, in millions



Note: Net migration is the number of immigrants minus the number of emigrants. Migration is defined here as a change in usual residence over the past 12 months.
 Source: Calculations from United Nations, World Populations Prospects – 2022 Revisions.

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Box 1.2. Wider policy implications of demographic change

The downward trend in fertility rates and births coincides with increased life expectancy (OECD, 2023^[35]). Living longer is generally good news for the individuals involved, but in conjunction with low-fertility rates it will result in substantially older populations in the future along with a declining share of the working-age population (see OECD (2023^[36]) and UN DESA Population Division (2022^[7]) and the General context section of this volume).

Population ageing will result in stronger fiscal pressures as government expenditures increase (including on pensions, health services and services for the elderly) along with potentially decreasing public revenues with shrinking working-age populations (Guillemette and Turner, 2021^[37]; OECD, 2023^[36]; Rouzet et al., 2019^[38]). At current participation rates of individuals (e.g. assuming no change in employment rates of workers), the decline in the working age population is projected to subtract close to 8% from per capita incomes over the next three decades in the OECD area, i.e. a quarter a percentage point from annual per capita growth (André, Gal and Schieff, forthcoming^[39]).

With the shrinking relative size of the working-age population, there is more room for immigration (OECD, 2023^[34]) and further scope for a better integration of women in the labour force (Fluchtmann, Keese and Adema, 2024^[40]). Gains in educational attainment among young men and women can come with positive spill-over effects on economic productivity. As such, immigration, rising employment rates among women and increased productivity will mitigate some of the negative effects of population ageing and low fertility on economic output (OECD, 2017^[41]). In addition, longer working lives – for example by raising effective retirement ages along with future increases in life expectancy – could reduce imminent pressures on pension systems.

The conditions for family formation and parenthood have changed

In 1960, Gary Becker published the first and arguably one of the most influential articles on the relationship between economics and fertility (Doepke et al., 2022^[32]). In this work he argues: “For most parents, children are a source of psychic income or satisfaction” (Becker, 1960^[3]). Becker’s economic approach of fertility also postulates that “... children would be considered a consumption good ... an increase in income or a decline in the cost of children would affect both the quantity and quality (expense) of children, usually increasing both. An increase in contraceptive knowledge would also affect both but would increase quality while decreasing quantity...” (Becker, 1960^[3]).

Over the years, the increase in contraceptive use has contributed to a reduction in unplanned births and decline in fertility rates (United Nations Department of Economic and Social Affairs, Population Division, 2020^[42]), but while educational attainment, earnings and incomes increased across the OECD on average, total fertility rates declined.

Following Becker's approach, this suggests that the direct and/or indirect costs of children have increased relatively strongly. Such costs include direct costs like education or housing, but also opportunity costs to spending time away from work to be with one's children, and these opportunity costs increase with earnings.

Fluchtmann, van Veen and Adema (2023^[2]) found that fertility trends are affected by men's and women's employment, public family policies, the cost of housing, and (financial) insecurity. However, much of the variation in fertility trends is not explained, which could point to an important role of perceived insecurity, and societal attitudes and norms.

The link between educational attainment and fertility has changed for women

Over past decades, women's average years of schooling and educational attainment have increased substantially (Barro and Lee, 2013^[43]; OECD, 2023^[44]). In the period after the second world war until the 1990s (timing varies across countries), the higher women's level of education, the lower was the likelihood of them giving birth, largely because higher education increased the opportunity cost to childbirth. These costs were particularly high because combining work and raising children was generally not possible. However, through a decline of unintended births and increasing public and private work-life balance supports that reduced the opportunity costs to having children, that effect has weakened. In fact, in some OECD countries (e.g. Denmark, Norway and Sweden), higher-educated women are now more likely than lower-educated women to have children (Jalovaara et al., 2019^[45]; Ciganda, Lorenti and Dommermuth, 2021^[46]). Also, highly educated women often have faster subsequent transitions to second births and couples with two highly educated partners still have the highest second- and third-birth rates in many European countries (Nitsche et al., 2018^[47]). In the United States, women with advanced degrees have similar fertility rates and are approximately equally likely to remain childless as those without advanced degrees (Bar et al., 2018^[48]; Hazan, Weiss and Zoabi, 2021^[49]).

For men the likelihood to become a father increases with the level of education, and this effect mainly occurs because men with higher educational attainment are more likely to enter a stable partnership than men with low levels of education who are more likely to face difficulties in the "marriage market" (Trimarchi and van Bavel, 2017^[50]). In comparison to women, there is no evidence that the relationship between men's educational attainment and their fertility or childlessness has changed noticeably over time (Jalovaara et al., 2019^[45]; Chudnovskaya, 2019^[51]).

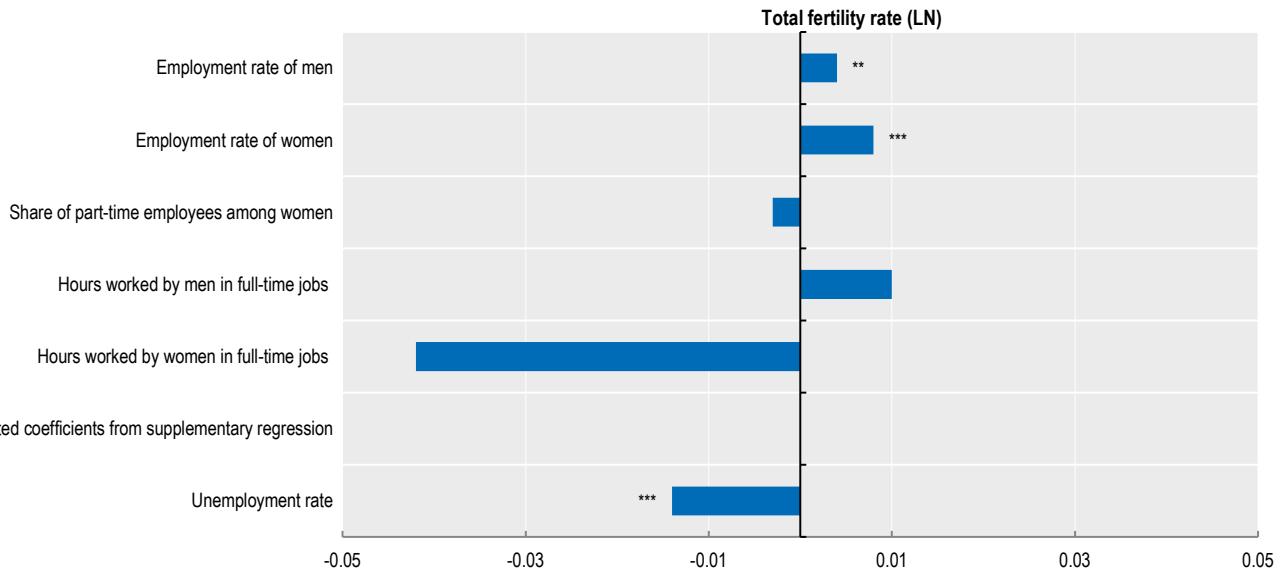
Both men's and women's employment is positively associated with the TFR

Fertility choices can critically hinge on economic factors, determining whether (prospective) parents can afford a(nother) child. Individual labour market situations are an important determinant for fertility behaviour. This is because it helps to determine whether adults have the necessary means to afford the direct costs of parenthood, and it also affects the opportunity costs of having children, as becoming a parent often comes with career interruptions and changes in working time, especially for women (Adema, Fluchtmann and Patrini, 2023^[52]). Cross-national regressions do not reflect the impact of individual (or couple's) labour market situations on fertility choices but show that aggregate labour market outcomes have an important bearing on fertility outcomes. In fact, labour market variables explain more of the variation in fertility outcomes than the public policy factors discussed below (Fluchtmann, van Veen and Adema, 2023^[2]).

Figure 1.7 shows that aggregate employment of men and women is significantly and positively associated with TFRs, a finding that is supported by the literature (Adema, Ali and Thévenon, 2014^[53]; Comolli et al., 2021^[54]; Doepke et al., 2022^[32]; Luci-Greulich and Thévenon, 2013^[55]; Oshio, 2019^[56]) Furthermore, the coefficient estimate on women's employment rates is more than twice as large as the one on men's employment, suggesting that women's employment is a particularly important driver of fertility outcomes. This was not always so. Fluchtmann, van Veen and Adema (2023^[2]) illustrated that while there was a clear negative relationship in the 1970s, since the 1990s women's employment has been positively associated with TFRs. Figure 1.7 also suggests that poor labour market conditions have a negative effect on fertility choices: an increased unemployment rate is negatively associated with TFRs. However, the regressions do not find evidence for a statistically significant link between part time or full-time working hours and fertility.¹

Figure 1.7. The link between labour market outcomes and fertility

Summary results of an OECD-wide two-way fixed-effects regression with clustered standard errors, 2002 to 2019



Notes: Mindful of the statistical limitations and the relatively small sample size, the resulting estimates should be interpreted as a simple association between outcomes/policies in a specific country and its respective fertility rate; they do not provide evidence of a causal relationship with fertility. All specifications are a two-way fixed-effects model with linear country time trends and controls for average years of schooling and log GDP. It is estimated over the period 2002 to 2019 using country-level data from Austria, Canada, Czechia, Denmark, Finland, Germany, Hungary, Italy, Korea, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, the United Kingdom and the United States. The standard errors are heteroskedasticity- and panel-corrected (for fixed effects models). ***, ** and * represent significance at 1%, 5% and 10% level, respectively. “...” indicates insignificant estimates (less than at the 10% level). “+” stands for a positive sign of a significant point estimate, and “-” stands for a negative sign.

Source: See Tables 4 and 5 for the main baseline regressions and Annex Tables 5.B.9 and 5.B.10 for the supplementary regression results, in Fluchtmann, J., V. van Veen and W. Adema (2023_[2]), “Fertility, employment and family policy: A cross-country panel analysis”, [www.doi.org/10.1787/326844f0-en](https://doi.org/10.1787/326844f0-en).

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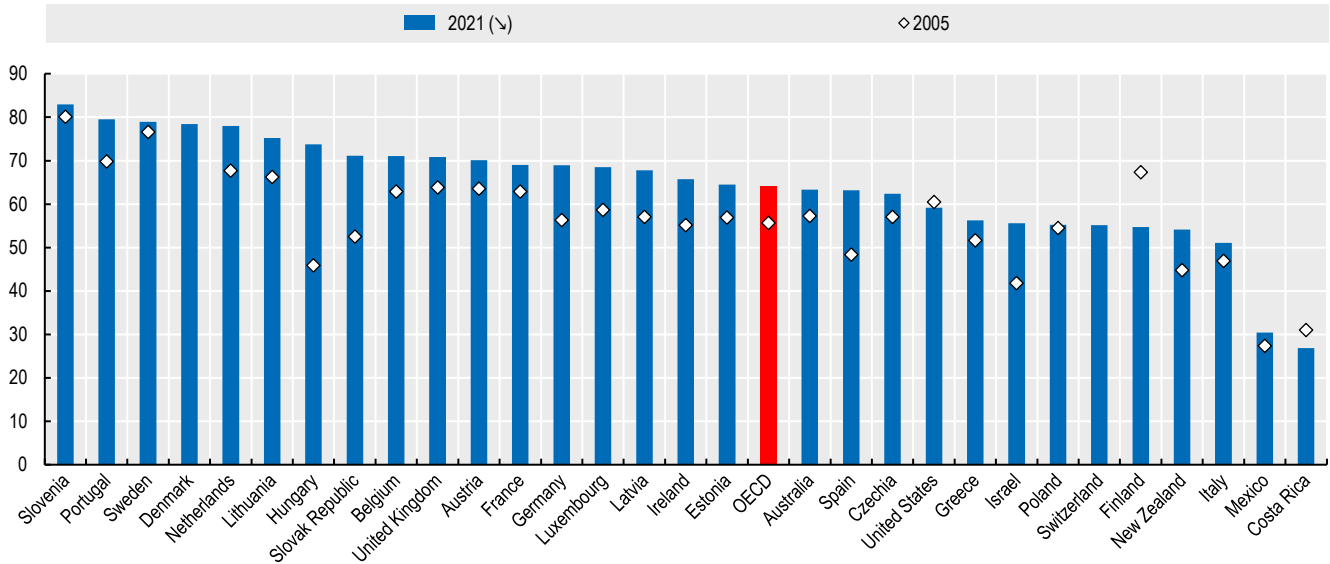
The effect of women’s incomes on fertility depends on national contexts

Higher wages and incomes lead to more household resources and “more consumption of children”, i.e. more children and/or spending more time and money per child (Becker, 1960_[3]). However, higher wages also increase the opportunity cost of childbirth, particularly among women, assuming they shoulder the majority of childcare over the early years after birth – which is indeed very often the case. The opportunity costs are especially high among women at the upper end of the income distribution, as evident through strong motherhood penalties on earnings (Kleven et al., 2019_[57]; OECD, 2022_[58]). Such opportunity costs of childbirth have also been increasing since 1990, as women are now working more often in higher-paying and less in lower-paying jobs (OECD, 2023_[59]).

For women, the international literature identifies a positive link between women’s earnings and fertility in Denmark (Berninger, 2013_[60]) and Norway (Hart, 2015_[61]), where dual-earner households have long been the norm (Figure 1.8).² However, this is the opposite in Italy – particularly in its southern regions – where male breadwinner norms are still strong and female earners may be seen as incompatible with parenthood, although patterns are changing slowly (Alderotti, 2022_[62]). While the United States previously exhibited a negative income-fertility gradient in the 1980s, this pattern has since flattened, particularly through higher fertility at the upper end of the income distribution facilitated by access to relatively affordable childcare and domestic services (Bar et al., 2018_[48]).

Figure 1.8. The share of dual-earner households is slowly increasing

Share of dual-earner (full- /full-time and full- /part-time) among couples with at least one child aged 0-14



Note: Data for 2005 refer to 2006 for Germany, Ireland, and Poland, to 2007 for the United States, to 2008 for Finland and to 2009 for Australia and Sweden. Data for 2021 refer to 2020 for New Zealand and Sweden and to 2019 for Australia, and the United Kingdom.

Source: OECD (2024^[12]), Indicator LMF2.2, OECD Family Database, www.oecd.org/els/family/database.htm.

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It is not just about having a job, but the stability of that job is important too

While employment is positively associated with fertility rates, labour market dualism and the associated poor labour market conditions for the “outsiders” reduce the likelihood of having (more) children (Ayllón, 2019^[63]; Seltzer, 2019^[64]; Vignoli, Tocchioni and Mattei, 2020^[65]; Yoo., 2022^[66]). Alderotti et al. (2021^[67]), for example, showed that temporary employment reduces women’s likelihood to have children, while for men it is particularly unemployment that reduces the likelihood to have children. Such labour market insecurities increased after the 2008 financial crisis, and particularly affect younger workers through higher unemployment risks and increased reliance on temporary and platform work (Chung, Bekker and Houwing, 2012^[68]; Causa, Luu and Abendschein, 2021^[69]). Using Dutch register data following young people who left education between 2006 and 2018, van Wijk, de Valk and Liefbroer (2022^[70]), found that it was especially the accumulation of precariousness over time, and along multiple dimensions (employment, income) that inhibited first childbearing for young men and women.

Reductions in job insecurity have been associated with higher fertility. For example, when several local governments in Spain started subsidising the conversion of temporary to permanent jobs in 1997, Spain’s TFR increased by 1.43% at a cost of about EUR 19 000 per birth. The effects for the transition into parenthood were concentrated among male employees, while the likelihood of having a second child increased for male and female employees (Nieto, 2022^[71]). A possible explanation for the gender differences is that permanent employment not only increases job security which has a positive effect on fertility rates, but also improves career prospects. Greater career prospects involve an income effect that raises fertility and an opportunity cost (or substitution effect), which may decrease fertility. The substitution effect may be especially relevant for women as childbirth has a more negative impact on labour outcomes for mothers relative to fathers.³

Families postpone having children due to both real and perceived economic uncertainties

To a certain degree, fertility follows the ups and downs of the business cycle. Most analyses generally find that birth rates react negatively to economic downturns, for example, Comolli (2017^[72]) for evidence on Europe and the United States, and Comolli and Vignoli (2021^[73]) on how the sovereign debt crisis of 2011 resulted in a 1.5-5% drop in Italian birth rates. Such findings, as well as the timing of recent fertility declines in many other OECD countries suggest a link with the financial crisis that materialised in 2008-09. However, the ensuing low birth rates have been more persistent than the economic consequences across countries. Fertility rates fell sharply and stayed low through the 2010s even in Nordic countries where the economic downturn was relatively shallow and the recovery was quick. For example, the Norwegian economy rebounded swiftly after 2008-09 and remained one of the strongest across the OECD throughout the 2010s, all the while fertility fell to record low levels (OECD, 2023^[74]).

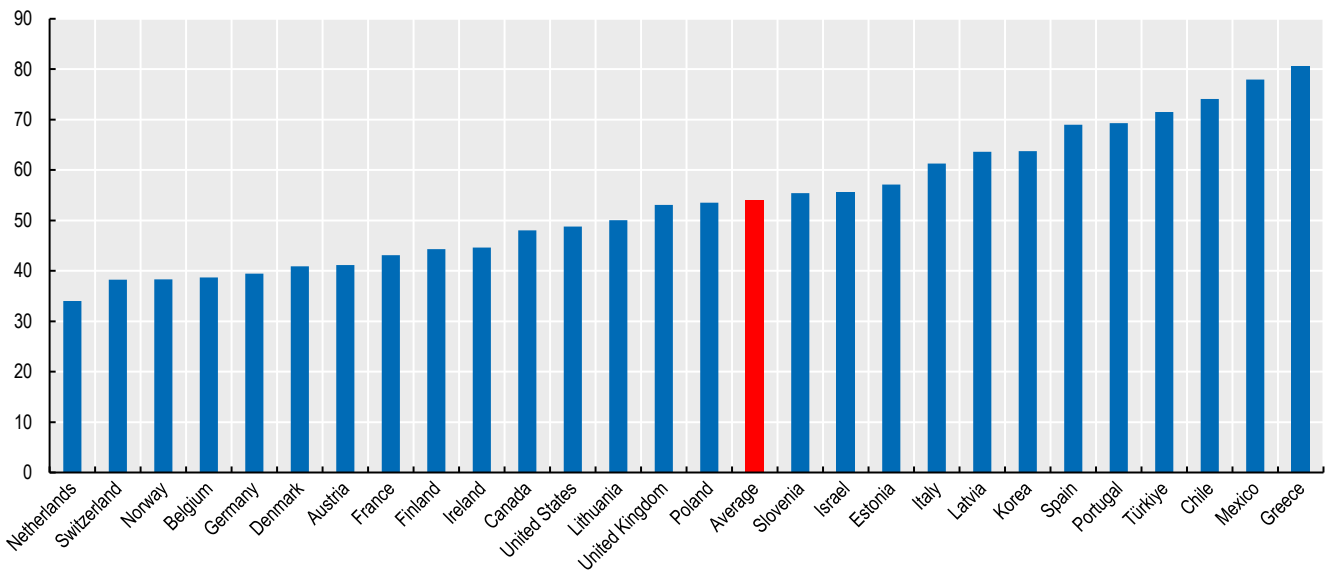
Indeed, actual economic outcomes are not all that matter. Fertility choices are made based – at least partly – on perceived economic uncertainty and expectations of the economic outlook (Buckles, Hungerman and Lugauer, 2020^[75]; Comolli and Vignoli, 2021^[73]; Gatta et al., 2021^[76]). In 2022, in many OECD countries, employment rates and unemployment rates were back at their

pre-COVID-19 levels. However, rising inflation and Russia's war of aggression against Ukraine fed uncertainty in the outlook, and many people felt insecure about the state of their economies and their household finances. For instance, in Canada, unemployment fell to a low-point of 5.3% in 2022, but 48% of 25-54 year-old respondents to the *OECD Risks that Matter Survey* still reported that the risk of losing their job or income was among their top-three worries that year (Figure 1.9).

Concerns about the real or perceived lack of public support associated with anticipated income losses when having children also play a role. Although many governments expanded their parental leave allowances during the 2000s (OECD (2024^[12]), Indicator PF2.5 "Trends in leave entitlements around childbirth"), many people doubt that their families will be adequately supported if they have children. Figure 1.10 shows that among the countries that participated in the *OECD Risks that Matter Survey*, on average 44% of 25-54 year-olds report thinking the government will not or does not sufficiently support income losses associated with having children.

Figure 1.9. In 2022, many workers were worried about losing their jobs

Share of respondents identifying "Losing a job or self-employment income" as one of the top-three greatest risks to themselves or their immediate family over the next year or two, age 25-54, 2022



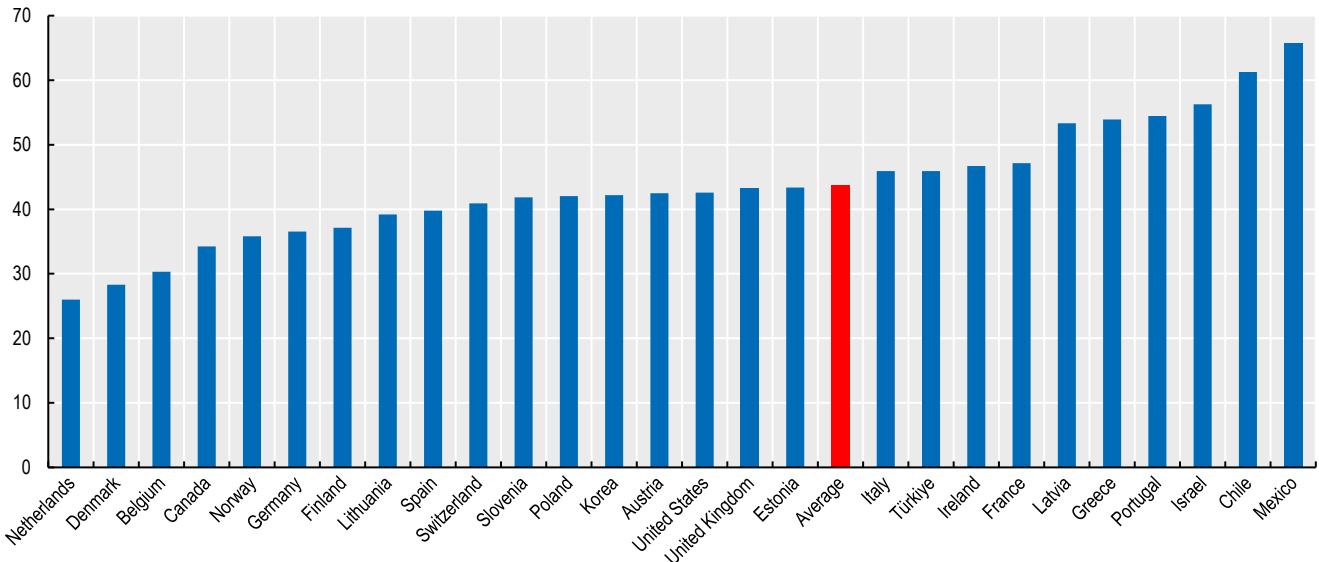
Note: Respondents were asked how concerned they are about the different social and economic risks facing themselves and their immediate family in the near future, defined as the next year or two. Respondents were presented with 10 different social and economic risks, including (a) becoming ill or disabled, (b) Losing a job or self-employment income, (c) Not being able to find/maintain adequate housing, (d) Not being able to pay all expenses and make ends meet, (e) Not being able to access good-quality childcare or education for your children (or young members of your family), (f) Not being able to access good-quality long-term care for elderly family members, (g) Not being able to access good-quality long-term care for young, (h) Being the victim of crime or violence (i) Having to give up my job to care for children, elderly relatives, or relatives with illness or disability, and (j) Accessing good-quality healthcare. Response options were "not at all concerned," "not so concerned," "somewhat concerned," "very concerned" and "can't choose / not applicable".

Source: Estimates based on the OECD (2023^[77]), *Main Findings from the 2022 OECD Risks that Matter Survey*, www.doi.org/10.1787/70aea928-en.

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Figure 1.10. Many think that child income support is inadequate

Share of respondents disagreeing with the statement “I think that the government would (or does) provide my family and me with adequate income support in the case of income loss due to becoming a parent”, age 25-54, 2022



Notes: Respondents were asked about the degree to which they agree or disagree with the statement “I think that the government does/would provide my household and me with adequate income support in the case of income loss due to...” for different reasons for income loss. Response options were “strongly disagree”, “disagree”, “neither agree nor disagree”, “agree”, “strongly agree” and “can’t choose”.

Source: Estimates based on the OECD (2023^[77]), *Main Findings from the 2022 OECD Risks that Matter Survey*, [www.doi.org/10.1787/70aea928-en](https://doi.org/10.1787/70aea928-en).

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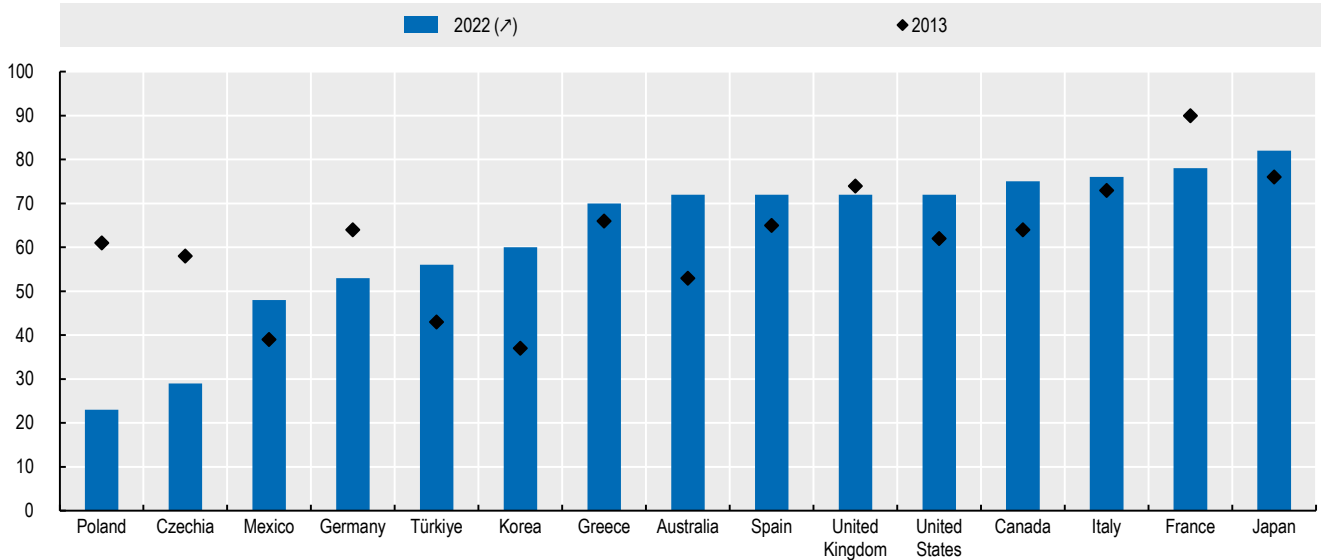
Perceived and anticipated uncertainties matter

Perceived and anticipated uncertainties that influence fertility choices are heavily impacted by prevailing narratives in society, including the tone in media, the experiences among friends and dinner table conversations among families. By construction, news reporting filters and simplifies complex information, and this is becoming a key factor in an increasingly globalised world. The perception of economic strength or weakness is strongly rooted in the public narratives conveyed through the media (Vignoli et al., 2020^[78]; 2021^[79]). In fact, evidence from Sweden shows that different dimensions of perceived global uncertainties can matter as much as – or even more than – actual economic uncertainties for fertility intentions (Guetto, Bazzani and Vignoli, 2020^[80]).

There are justified concerns about, for example, climate change, of energy, food and/or housing costs (OECD, 2023^[77]), and many people anticipate geo-political instability and socio-economic instability and the outlook is markedly more negative over a 10-year timeframe (WEF, 2024^[81]). There are also many people who believe that today’s children will grow up to be worse off than their parents: over 50% in most OECD countries, and in the majority of these countries this negative sentiment strengthened over the past decade (Figure 1.11). Only in Czechia and Poland did fewer than 30% of respondents report that they think that children will be worse off than their parents. Insofar as *perceptions* that the world is in a bad state can influence fertility choices – and Ivanova and Balbo (2024^[82]) found that preoccupations with the future that the next generation could face are actually associated with realised fertility behaviours – an increased spread of negative global narratives might dampen intentions to have a(nother) child.

Figure 1.11. A majority in many countries think that today's children will miss out on progress

Share of respondents who report thinking that when children today grow up, they will be worse off financially than their parents



Note: Data for 2022 refers to 2021 for Czechia, Mexico, Poland and Türkiye. Survey question: "When children today in (survey country) grow up, do you think they will be better off or worse off financially than their parents?"

Source: Pew Research Center, Global Attitudes Survey, www.pewresearch.org/global/question-search/.

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Worries about the future go beyond the economic fallout from the 2008 recession while including xenophobic responses to the refugee crisis in 2015. Euroscepticism, the rise of populism and Russia's war of aggression against Ukraine, all contribute to spreading a feeling of uncertainty and unpredictability that prospective parents are faced with when deciding whether to have a(nother) child (Comolli et al., 2021^[54]; Joris, Puustinen and d'Haenens, 2018^[83]; Vignoli et al., 2020^[78]).

Furthermore, Dillarstone et al. (2023^[84]) found that climate change concerns were typically associated with less positive attitudes towards reproduction and a desire and/or intent for fewer children or none at all – their systematic review was based on studies conducted between 2012 and 2022 in European countries, Canada, New Zealand and the United States. Indeed, population growth can have negative effects on climate issues, as it along with increased consumption strains resources, and exposes more people to climate-related risks (Guzmán, 2009^[85]). Global fertility rates are expected to fall from 2.21 in 2022, to 1.83 in 2050 and 1.59 in 2100 (Bhattacharjee et al., 2024^[81]). This will contribute to a slowing down of population growth, but not directly to reduced CO₂ emissions, as these only decline per person later in life – for those over age 50 in Europe (Natale, Ueffing and Deuster, 2023^[86]).

Public expenditure on family benefits

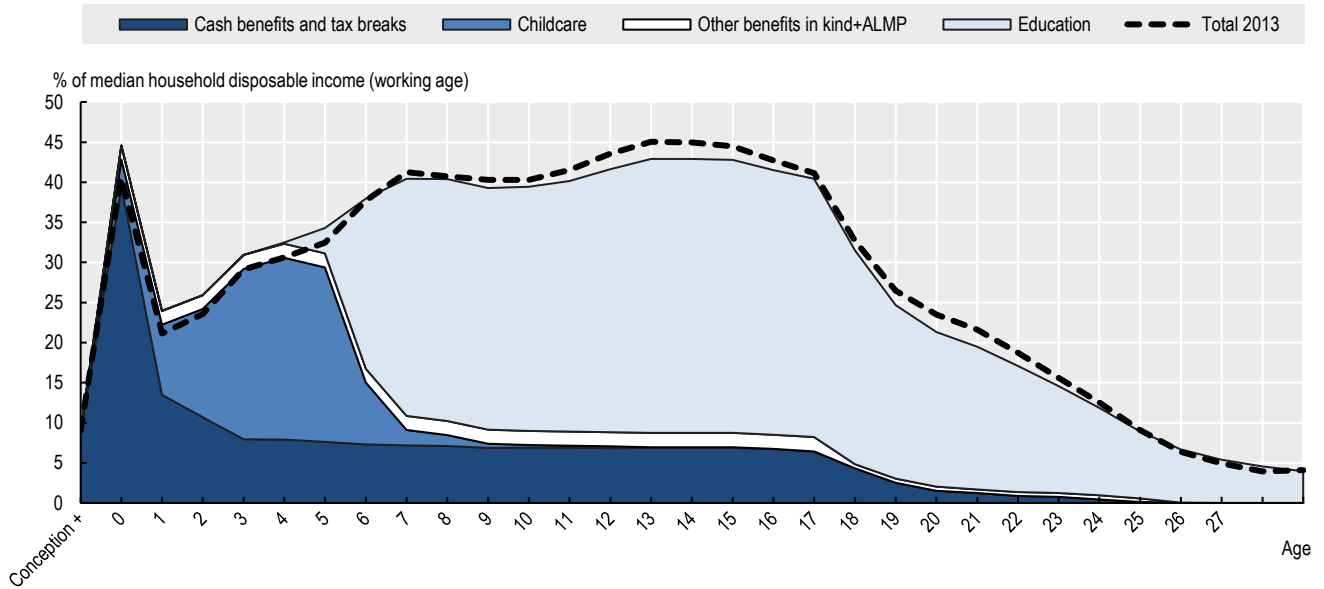
Family policies provide varying degrees of support for families over the early life-course of their child(ren), which might influence people's choices on whether to start a family or not. Policy measures can include, among others, family leave around childbirth, ECEC services, and child benefits. Considering the often large (opportunity) costs of childbearing – for example through reductions in disposable household income, foregone career progressions, high childcare costs – family policies can make parenthood more attractive to (prospective) parents.

However, it is not just a matter of making individual supports such as parental leave available. It is important that measures are designed and put in place in a coherent manner, so that parents can access a continuum of supports over the child's early life course. Thus, when entitlement to parental leave runs out, ECEC should be accessible, combined with Out-of-School Hours (OSH) services, child benefits and flexible workplace supports as fitting (Adema, 2006^[87]). In this sense, reducing the costs of children may influence preferences on family size, but for this to occur, policy support has to be sufficiently comprehensive and consistent over time (Thévenon and Gauthier, 2011^[88]). The notion of providing coherent support throughout to aid parents overlaps with the notion of productive investment in childhood that purports to start early with investing in children, do so where it is needed most, and sustain it throughout childhood (Heckman and Masterov, 2007^[89]).

Figure 1.12 shows spending on family benefits across the early life-course. Spending on children across the OECD on average tails off after childbirth to pick up again in earnest around age 2 to 3 when ECEC becomes available in many countries on a more comprehensive basis. Some countries, notably, Hungary, Iceland and Norway do better and have a more flat, sustained spending level on children during the early years across childhood that they sustain (OECD (2024_[12]), Indicator PF1.6, “Public spending by age of children”). However, most countries face “spending dips” during the early years that may reflect a lack of services and/or a gap between the time that paid parental leave runs out and publicly supported ECEC becomes available. The shortcoming in services exacerbates challenges for parents with young children who wish to reconcile their work and family commitments.

Figure 1.12. A continuum of family support throughout childhood

Average social expenditure by intervention, in percentage of median household disposable income (working age) per child and age in 2019 (PPP USD)



Note: Average across OECD countries for 2019 – dashed line reflects average spending for 2013.

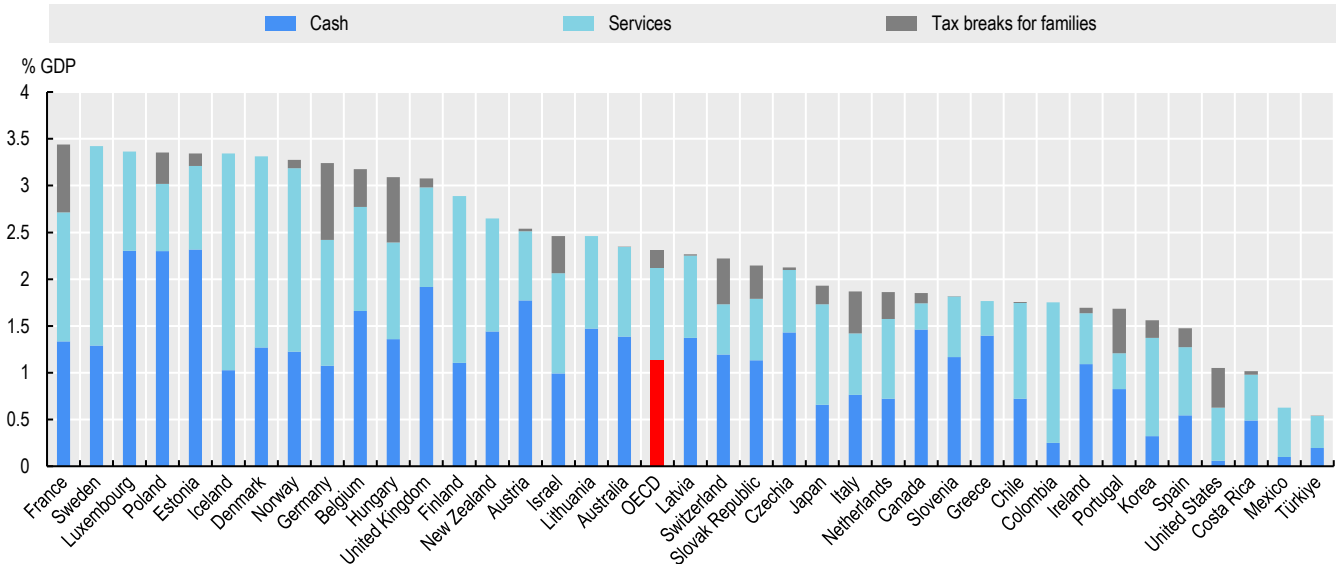
Source: OECD (2024_[12]), Indicator PF1.6, “Public spending by age of children”, OECD Family Database, www.oecd.org/els/family/database.htm.

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Public expenditure on family policies differs widely across the OECD (Figure 1.13). The Nordic countries, where until recently, TFRs were relatively close to two children per woman, spend about 3% of GDP or more on family benefits, and mostly through spending on family services, including ECEC supports. On the other hand, France, Luxembourg, Poland, Estonia, Hungary, Germany and the United Kingdom devote about two-thirds of their spending on family benefits through cash or fiscal financial benefits. The drawback of these benefits is that they often weaken financial incentives to work for second earners in families with very young children (OECD, 2007_[90]; 2011_[91]; 2024_[92]), but their effect on fertility rates also depends on national contexts.


Figure 1.13. Public spending family supports varies widely across OECD countries

Public expenditure on family benefits by type of expenditure, percentage of GDP, 2019 or latest available



Note: Public spending accounted for here concerns public support that is exclusively for families (e.g. child payments and allowances, parental leave benefits and childcare support), only. Spending in other social policy areas such as health and housing support also assists families, but not exclusively, and is not included here. Coverage of spending on family and community services in the OECD Social Expenditure data may be limited as such services are often provided and/or co-financed by local governments. The latter may receive general block grants to finance their activities, and reporting requirements may not be sufficiently detailed for central statistical agencies to have a detailed view of the nature of local spending. In Nordic countries (where local government is heavily involved in service delivery) this does not lead to large gaps in the measurement of spending, but it does for some countries with a federal structure, for example, Canada and Switzerland. Data for Tax Breaks towards families for Ireland, Poland and the United Kingdom are estimates by the OECD. Data for the United Kingdom refer to 2018. National authorities provided estimates on the value of tax breaks for Switzerland.

Source: OECD (2024_[12]), Indicator PF1.1., "Public spending on family benefits", OECD Family Database, www.oecd.org/els/family/database.htm.

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Parental leave can support fertility, but effects depend on context

Employment-protected paid family leave entitlements are a major feature of family policy in OECD countries. Administered through maternity-, paternity-, parental- and home-care leave, these entitlements are designed to protect infants and mothers around childbirth and to give both parents the necessary time to provide childcare in the early years of life of a new-born, while ensuring that fathers and mothers can return to work afterwards and are financially supported during their time on leave.

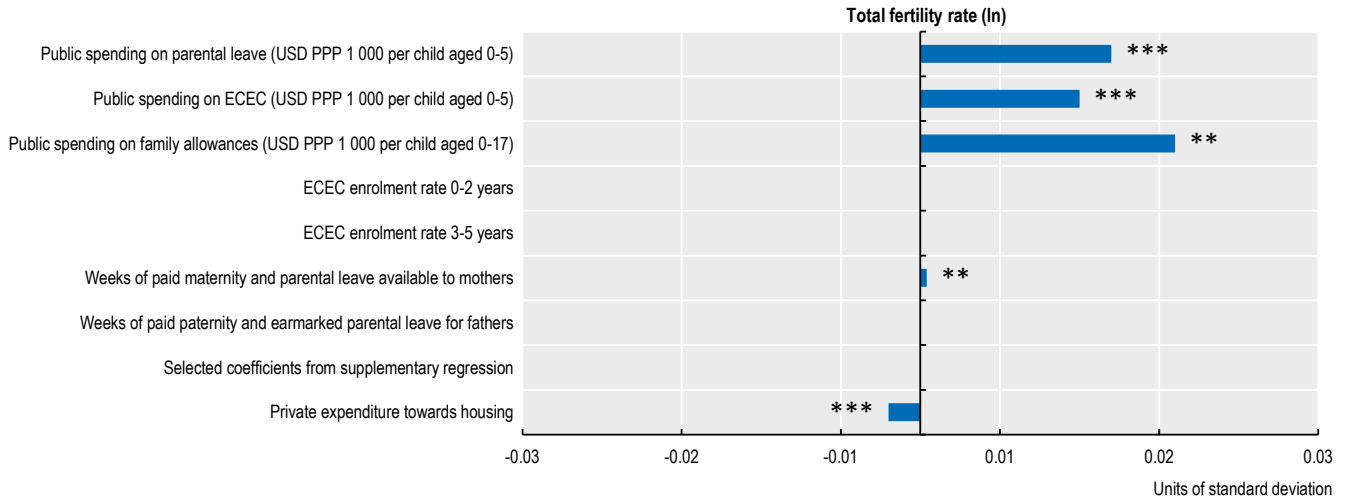
In 2021, all OECD countries except for one offered national/federal paid family leave around childbirth and for the early months and years of a child's life (OECD (2024_[12]), Indicator PF2.1). The United States is the only country without a national/federal paid leave entitlement, though 13 states and the District of Columbia had enacted mandatory paid family leave by 1 January 2024 (Bipartisan Policy Centre, 2024_[93]).

Across the OECD, an average of 25.7 weeks are earmarked for exclusive use by the mother and 12.7 weeks earmarked for exclusive use by the father. Across the OECD on average, both parents can share an additional 26.4 weeks of parental and home care leave between them as they see fit, but most of these leave entitlements are still used by mothers, despite increasing overall involvement by fathers (see OECD (2024_[12]), Indicator PF2.2, "Use of childbirth-related leave benefits"). Leave entitlements that are targeted for use by fathers have increased over the three decades: Sweden first introduced a "daddy quota" in 1995, and by 2023, there were 23 OECD countries where parental leave systems encourage fathers to take leave (e.g. "daddy quota", "bonus months") for at least 8 to 10 weeks.

OECD-wide regressions of the overall length of paid parental leave and the exclusive entitlements for fathers on fertility and mean age of childbirth with fertility, show that the duration of paid leave for mothers is significantly associated with TFRs (Figure 1.14). Relying mostly on national evaluations of policy reforms of varying scope, the link between family leave entitlements and fertility is complicated to capture and highly dependent on country contexts (Bergsvik, Fauske and Hart, 2021_[94]; Thomas et al., 2022_[95]). For example, Thomas et al. (2022_[95]) concluded that there are indeed positive links between parental leave and fertility if benefits are generous enough. Ang (2015_[96]) found that the 2006 reform of the Québec Parental Insurance Program that increased income replacement rates and maximum benefit payments during parental leave, substantially increased the birth rate and induced increases in labour supply among women of childbearing age, while cash-transfer fertility incentives only slightly increased birth rates and decreased female labour supply. By contrast, several reforms that increased parental leave entitlements between 1987 and 1992 in Norway had, at best, a marginal effect on fertility over the 14 years after the reforms (Dahl et al., 2016_[97]).

Figure 1.14. The link between family policy and fertility outcomes

Summary results of an OECD-wide two-way fixed-effects regression with clustered standard errors, 2002 to 2019



Note: All specifications are a two-way fixed-effects model with linear country time trends and controls for average years of schooling and log GDP. It is estimated over the period 2002 to 2019 using country-level data from Austria, Canada, Czechia, Denmark, Finland, Germany, Hungary, Italy, Korea, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, the United Kingdom and the United States. The standard errors are heteroskedasticity- and panel-corrected (for fixed effects models). ***, ** and * represent significance at 1%, 5% and 10% level, respectively. “...” indicates insignificant estimates (less than at the 10% level). “+” stands for a positive sign of a significant point estimate, and “-” stands for a negative sign.

Source: See Fluchtmann, van Veen and Adema (2023_[2]), Tables 4 and 5 for the main baseline regressions and Annex Tables 5.B.9 and 5.B.10 for the supplementary regression results in “Fertility, employment and family policy: A cross-country panel analysis”, [www.doi.org/10.1787/326844f0-en](https://doi.org/10.1787/326844f0-en).

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Entitlements to paternity and earmarked parental leave that are available to fathers are also potentially relevant, as they contribute to more sharing of unpaid work in the household, which can be important for fertility plans. A German reform in 2007, which introduced two “bonus months” if fathers took leave – along with replacing a low means-tested maternity flat-rate benefit with an income-dependent benefit – led to a higher likelihood of first and second births among higher educated women (Raute, 2019_[98]), but the reform also shortened the duration of leave and was estimated to involve a loss for lower-income mothers which contributed to a reduced likelihood of subsequent births among them (Cygan-Rehm, 2015_[99]). The same reform – which improved their intra-household bargaining positions – also showed that, a year after birth, fathers eligible for leave increased their weekly childcare engagement by 0.6 hours, and by 2.45 hours for those who actually took the leave, potentially mediating part of the effects on fertility. Such positive effects of father’s engagement in parental leave taking are further supported by evidence on Icelandic, Norwegian and Swedish families, who were more likely to have a second child if fathers took parental leave (Duvander et al., 2019_[100]; Duvander, Lappégård and Andersson, 2010_[101])

However, in Spain, Korea and Norway there is evidence to the contrary. In Spain, the introduction of two weeks of paid paternity leave was followed by a delay in first births (Farré and González, 2019_[102]). Similarly, in Korea, fathers who took family leave were less likely to want another child relative to those who are just about to start their leave (Lee, 2022_[103]), and in Norway, an extended father’s quota had no effect on subsequent fertility (Hart, Andersen and Drange, 2022_[104]). Particularly in Korea and Spain, the reconciliation of family and work life in the early years after birth can be complicated, for example through often very long working hours for parents and long study hours for children in Korea and a mismatch between affordable ECEC demand and supply in Spain (OECD, 2022_[105]; 2019_[106]). As Korean and Spanish fathers have become more aware of the non-pecuniary costs of raising children, they may have also become less enthusiastic about having another child.

Childcare availability can increase fertility rates, with varying effects across birth parities

Access to high-quality and affordable ECEC supports both parents in their efforts to combine family commitments with full- or part-time labour market attachment. The availability of ECEC for children under the age of 3 once paid parental leave entitlements expire, can influence fertility choices. When families can realistically expect a continuum of leave and childcare supports during early childhood (as, for example in Denmark, Norway and Sweden) career and family commitments become more compatible, which mitigates the opportunity costs of having children (Gray et al., 2022_[107]).

The provision of ECEC has been increasing across OECD countries over the last 15 years, particularly for children aged 0-2 (OECD (2024_[12]), Indicator PF3.2, “Enrolment in childcare and pre-school”). On average, 35% of children below the age of 3 were enrolled in ECEC in OECD countries in 2019, up from just 22% in 2005 and with wide variation across countries. In many cases, the differences in use of ECEC across countries relate to differences in parental leave entitlements, public childcare support, and societal attitudes towards the provision of care to very young children. For example, ECEC enrolment of children aged 0-2 is highest in the Netherlands, where mothers often work part-time, and children participate in formal ECEC often for one or two days per week only. In Scandinavian countries, participation in ECEC is high and often on a full-time basis to facilitate full-time employment participation of both parents. By contrast, enrolment is particularly low in the Slovak Republic, where parental leave lasts until the child’s third birthday, as well as in Mexico and Türkiye, where public investment in family supports is limited and social norms favour maternal care over public childcare. However, such social norms are malleable through family policy and have been changing in line with evolving provision structures in the past (Chung and Meuleman, 2017_[108]). Some countries have seen a substantial expansion of ECEC provision for the youngest over recent years/decades, particularly in Belgium, Germany, Greece, Spain, Korea, Luxembourg and Norway, raising child enrolment rates by more than 20 percentage points.

Figure 1.14 shows that public spending on ECEC – which covers accessibility, availability, and intensity of use as well as affordability and quality of ECEC – has a significant positive association with fertility rates. ECEC enrolment rates (which are a proxy for the availability of ECEC) are not significant in any of the regressions. The international literature frequently, but not always, finds positive effects of ECEC availability on fertility, and effects may differ across birth parity. For example, expansions of ECEC availability in Japan have been positively linked with slightly increased fertility in regions where women are most likely to engage in the labour market (Fukai, 2017_[109]). Better access to ECEC has been associated with increased fertility in Germany and Norway, particularly regarding second and third births (Rindfuss et al., 2007_[110]; Rindfuss et al., 2010_[111]), but ECEC expansion in Austria or Korea had no clear effect (Kleven et al., 2022_[112]).

However, despite a massive expansion of ECEC and family supports in general, Korea has not been able to reverse its downward trend in the TFR (Jeong et al., 2022_[113]), which dropped below 1 in 2018 and stood at 0.72 in 2023. Part of this may be explained by the difficulties to reconcile work and family life, for example through very long working hours. Other potential factors include changing societal norms and notions on gender roles, labour market dualism and the large number of parents who are reluctant to use or are ineligible for paid leave around childbirth. Furthermore, Korean and to a lesser extent Japanese parents as well, face substantial (after school) education cost in cash and time across childhood, and these high costs of childbearing have been a key reason for women not to have another child (Jones, 2019_[114]; OECD, 2019_[106]; OECD, 2024_[115]; Tan, Morgan and Zagheni, 2016_[116]).

Cash benefits have transitory effects on fertility at best

Cash transfers for families with children, such as family or child allowances, lower the direct costs of having children and may therefore increase fertility rates. However, substitution effects might also occur, such as investing more in children who have already been born instead of having more children (Bergsvik, Fauske and Hart, 2021_[94]). Most international research shows that monetary transfers for families with children have no or only modestly positive effects on fertility; however, a lack of natural experiments makes the analysis challenging (Skirbekk, 2022_[9]). Figure 1.14 shows that across the OECD, public expenditure on family cash benefits has a significant relationship with the TFR, but it is of weaker statistical significance than for spending on paid leave or investment in ECEC.

Depending on the country studied, the effects of cash transfers differ greatly across the OECD, as does their role in the overall package of family supports. Hungary, for example, has spent large sums on incentivising higher numbers of births through various family cash and tax benefits (Figure 1.13), including maternity and parental leave benefits with high payment rates for two years, a housing programme of lump-sum payments and subsidised loans, and increased investment in ECEC as from age 2 to 3 (OECD, 2022_[117]). The support package is geared towards those in formal employment, resulting in those in the bottom income deciles with less formal employment relationships missing out, including Roma families with three or more children (Szántó, 2021_[118]). The Hungarian TFRs in 1995 and 2020 were similar at around 1.5 children per women, but in 2010/11 the TFR bottomed out at 1.25 children per woman (OECD, 2024_[12]). The package of Hungarian support policies is likely to have contributed to increasing the TFR to around 1.5 children per woman, and efforts to expand the ECEC network and its coverage, including to all low-income families, would increase gender equality (OECD, 2022_[117]) and fertility rates (Szabó-Morvai et al., 2019_[119]).

The Polish 500+ child benefit programme, has substantially reduced (extreme) child poverty, but failed to raise fertility rates (Magda et al., 2019_[120]; Ekert, 2022_[121]). From February 2024 onwards, the programme became the 800+ programme”, which pays PLN 800 (just over USD 200) per child per month (Ministry of Family, Labour and Social Policy, Republic of Poland, 2024_[122]). The Demographic Strategy 2040, launched by the Polish Government in 2022, also focuses on reducing barriers to work and family reconciliation, but it remains to be seen how large investment in this area will be (Polish Government, 2022_[123]). The Australian Baby Bonus had a small but statistically significant impact on the fertility rate, with the biggest effects among immigrant women of low educational attainment (Bonner and Sarkar, 2020_[124]; Parr and Guest, 2011_[125]). The concentration of effects among lower educated and immigrant women highlights that these groups, like young people, are likely particularly sensitive to the financial costs of childbearing. However, a German child benefit reform, which increased payments for first births among lower earners, had a negative effect on first births for this group – which could potentially be explained by restrictive sampling with respect to age and domestic migration histories coupled with East-West fertility differentials (Riphahn and Wiyneck, 2017_[126]).

When family cash benefits do have a positive effect, it is generally only transitory in nature. For example, birth allowances that were introduced in a number of Swiss cantons temporarily increased the TFR by 5.5% – slightly more for first than second births

and mainly among immigrants with lower socio-economic status – yet this effect faded quickly (Chuard and Chuard-Keller, 2021^[127]). In Spain, the implementation of a universal child transfer led to an increase in 3% in the TFR, but a cancellation of the programme in 2010 led to a decrease in the TFR of 6%, which outweighed the increase that existed while the programme was active (González and Trommlerová, 2021^[128]). Similarly in France, a restriction of the eligibility criteria for early childhood allowances led to declining fertility through postponement of births to later ages, likely reflecting the higher sensitivity to childbearing costs at younger ages as well (El-Mallakh, 2021^[129]).

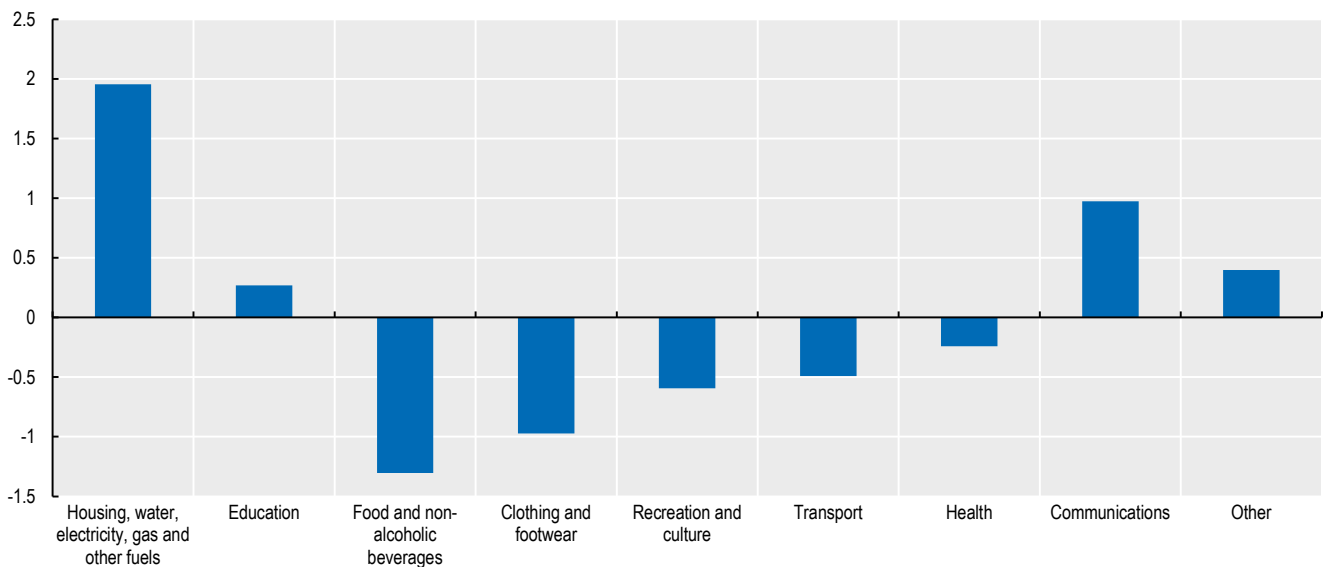
Increasing housing costs affect fertility

Formal childcare, education, food, and housing are significant parts of a family budget, and more children mean more costs. Changes in the price of such goods and services are therefore likely to change fertility outcomes. Figure 1.15 shows that household expenditure on housing and utilities has increased substantially, in line with strong increases in (real) house prices over past decades, but particularly since the mid-2010s (OECD, 2023^[15]).

Having (more) children, often means an increase in housing expenditure through moving to bigger housing space to accommodate a larger family size. Increasing housing costs make it more expensive to have (more) children. Fluchtmann, van Veen and Adema (2023^[2]) found that increases in household expenditure on housing had a significant and negative effect on TFRs. At the same time, housing property is a major source of household wealth across the OECD and for some, it may provide the necessary housing security for childbirth (Kim and Sparks, 2019^[130]). However, as the average age of first-time homeowners is generally increasing, housing wealth may mostly influence fertility among people who had sufficient time (and accumulated resources) to climb the housing property ladder, thus affecting mainly second or higher-order births among higher-earners.

Figure 1.15. Household expenditures have changed since 2000

Percentage point change in expenditure shares by item of household budgets, 2000 vs. 2019, OECD-33 average



Note: Data refers to changes in the share of different household expenditure items among final consumption expenditure of resident households in the respective territory and abroad, based on the *Classification of Individual Consumption according to Purpose* (COICOP) and National Accounts data. The OECD 33 average excludes Chile, Colombia, Costa Rica, Switzerland, and Türkiye.

Source: OECD (2022^[131]), "Final consumption expenditure of households", https://stats.oecd.org/Index.aspx?DataSetCode=SNA_TABLE5.

StatLink  <https://stat.link/2nrsh>

Governments have a range of policy options to promote housing affordability for renters. Policies could aim to increase the supply of housing through measures such as facilitatory land use and building permit regulations, as for example, a review of boundaries on urban development or relaxation of building height regulations (OECD, 2021^[132]); support social housing policies; and, housing allowances that tend to target lower-income and other vulnerable households (OECD, 2021^[133]; 2020^[134]), while access to more affordable rental housing makes it easier for younger people to have children (Brauner-Otto, 2021^[135]). In addition, easier access to mortgage and homeownership for younger people through subsidies and guarantees could positively affect fertility (Gurov and Kulikova, 2022^[136]). In Hungary, for example, increased home-ownership support has been shown to positively affect fertility (Szabó-Morvai et al., 2019^[119]).

Since house and rental prices have risen dramatically in many OECD countries, partnership and family formation may in part have been inhibited by more young adults having to live with their parents for financial reasons for a longer time into their 20s and 30s (Esteve et al., 2020^[137]; Cournède and Plouin, 2022^[138]). Indeed, living with parents can for some young people be the only way to deal with a situation of high rental prices and insecure jobs. On average across the OECD, there has been an increase in the proportion of youth living in their parents' households, but there is substantial variation across countries (Figure 1.16). Countries like Greece, Italy, Portugal and Spain have high and increasing shares of young adults living in their parents' households – which coincides with high ages at birth and a low TFR overall – while the Nordic countries have low and relatively stable shares. Between 2006 and 2022, a few countries recorded increasing shares of young people living outside of their parents' home, and these include Austria, Finland, Estonia, Lithuania, Mexico, Slovenia and the United States (Figure 1.16).

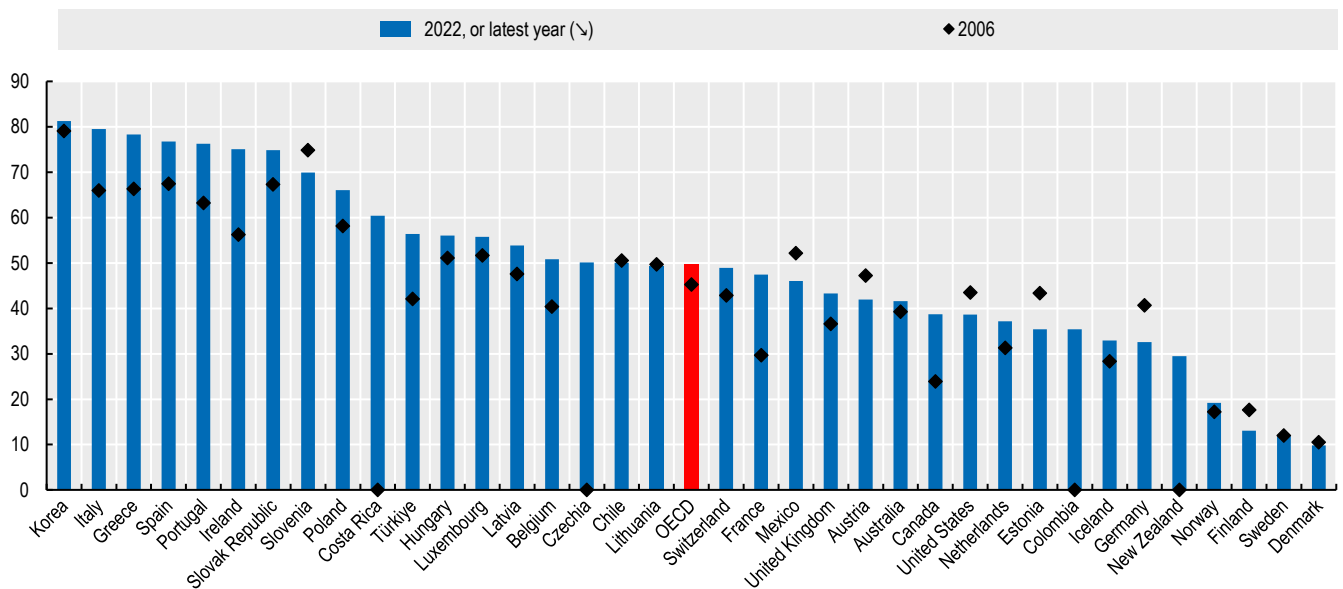
Changes in attitudes and norms can be important for fertility

When young people are facing competing life goals the psychosocial costs and benefits of having children become more important. One factor is the way attitudes and norms affect the way people *think* about their conditions. Understanding how norms and attitudes have changed over time, and how more recent norms and attitudes drive behaviour among young adults will help to understand the decline in fertility and the choices couples make.

The *Second Demographic Transition* theory has emerged as a central theory to explain changes in family formation over the course of the 2000s and 2010s (Sobotka, 2008^[139]). It postulates that as societies reach a certain level of economic advancement, non-materialist values such as self-fulfilment become more important to people. It predicts that the family ideal weakens because of a greater focus on individual autonomy, choice, and self-actualisation. In this sense, having children and investing time and resources in raising them according to the high standards required by society (see below) can be seen as competing with alternative life goals. The focus on self-actualisation also means that there is a greater emphasis placed on the quality of relationships, which in turn can lead to a postponement of partnership and a greater likelihood of leaving a partnership that is no longer satisfactory (Hellstrand, Nisén and Myrskylä, 2022^[140]).

Figure 1.16. The share of young adults living with their parents has increased in many countries

Share of young adults aged 20-29 living with their parents



1. The OECD average is unweighted and does not include Colombia, Costa Rica, Czechia and New Zealand.

2. The latest data refer to 2021 for Australia, Colombia, Costa Rica, Hungary, Switzerland and the United States; 2020 for Korea, Mexico, Norway, Switzerland, Türkiye and the United Kingdom; 2018 for Iceland; and 2017 for Canada and Chile.

3. Data for 2006 refer to 2007 for Canada and the United States and to 2008 for Mexico and Switzerland.

Source: OECD calculations based on EU-SILC, HILDA (Australia), CIS (Canada), CASEN (Chile), KLIPS (Korea), ENIGH (Mexico), estimates provided by Statistics New Zealand (2021); and CPS (United States).

StatLink  <https://stat.link/8izn31>

Family versus self-actualisation

Most births are intentional (albeit unintentional births still happen) and more people intend to have – and do have – fewer children. Along with these trends, there is a broad movement towards an increased acceptance of not having children. Rotkirch (2020^[141]) observed the rise of a new “childfree ideal” in Finland, while Guzzo (2022^[142]) found that increasing numbers of young adults in the United States do not want to have any children. Reasons for delaying or choosing not to have children include not wanting to give up the current lifestyle (Alakärppä et al., 2022^[143]; Rotkirch, 2020^[141]). Life goals other than family and children have gained importance in recent years (OECD, 2023^[74]). An increasing number of people tend to postpone or even renounce having children to pursue other life goals that they value, including career advancement and self-actualisation activities (Savelieva, Jokela and Rotkirch, 2022^[144]; Rotkirch, 2020^[141]). Rotkirch (2020^[141]) documented that having children – rather than not having children – is described as a “sacrifice” by many young people.

Pressures of parenting

The normative demands on what it means to be a “good” parent have grown, or at least grown in importance. The act of balancing the costs and benefits of having children – both financial and non-financial – has been widely studied to better understand the reasoning behind the choice to have fewer, if any, children today than in the past (Mynarska and Rytel, 2022^[145]; Cools and Strøm, 2020^[146]; Lebano and Jamieson, 2020^[147]). Parents tend to put in increasing amounts of time into raising children, rather than letting children grow up without much intervention, and this holds true especially for parents with higher levels of education (Ellingsæter, Kitterød and Hansen, 2022^[148]), as postulated by (Becker, 1960^[3]). In Norway, for example, between 2000 and 2010, the time men and women spend on family care per day increased from 39 minutes to 54 minutes for men and 1 hour and 12 minutes to 1 hour and 19 minutes for women (SSB, 2022^[149]). Parents in Korea are subject to a strong culture of “helicopter parenting” or “over-parenting”, that requires parents – and particularly mothers – to micromanage their children’s days to maximise their chances in an increasingly competitive education environment. This “helicopter parenting” culture was found to inhibit parents’ emotional and financial abilities to have children, as well as children’s ability to develop autonomy, independence, and happiness (OECD, 2019^[106]).

A fear of not being able to live up to the ideal of intensive parenting is an important reason for postponing or avoiding family formation. Qualitative evidence from Europe finds that one important reason why some women in their early thirties choose to postpone having children is that they do not believe that they can live up to the ideal of motherhood (Lebano and Jamieson, 2020^[147]; Rotkirch, 2020^[141]). Similar effects are also seen in the United States where the economic investment required can be larger than in many European countries due to extensive public supports available in welfare countries (Guzzo, 2022^[142]).

With the de-stigmatisation of childlessness and a wider discussion about whether it is right to have children, it is not surprising that young adults increasingly consider the state of the world in which their potential future children will grow up when making fertility choices. For instance, qualitative evidence from Sweden shows that young adults and teenagers think both about children’s impact on the climate, and the impact of climate change on the lives of their future children. Indeed, participants consider the prospect of having children as a selfish option, in large part because they worry about future children having a poor quality of life when climate change makes the world less inhabitable (Bodin and Björklund, 2022^[150]). A 2020 survey found that 26% of childless adults in the United States reported that climate change was either a “major reason” or a “minor reason” for not having children (Jenkins, 2020^[151]). Another poll shows similar results in Australia: 33% of female respondents under 30 reported “reconsidering having children or more children because I am increasingly worried that if I have children, they will face an unsafe future from climate change” (Australian Conservation Foundation, 2019^[152]). In Canada, teenagers signed the “No Future, No Children Pledge” to show the government that they want decisive climate action before they feel confident to have children (Climate Strike Canada, 2019^[153]). Evidence from China shows that while not the most frequently cited concern around fertility choices, climate worries do play some role (Fu, Schneider-Mayerson and Montefrio, 2022^[154]).

Growing gender equality changes the way households organise their lives

With increasing labour force participation of women, families have had to rebalance their strategies for managing careers and the responsibility of raising children. The success of families to find a balance between careers and care that is perceived as fair is crucial for fertility intentions. For people that consider becoming parents or having another child, prospects of future conflicts in family responsibilities and labour market careers may therefore be a deciding factor, especially for women, who continue to shoulder most care and housework. However, even though social norms of female caregiving have remained rigid for many decades, male involvement in childcare and housework is slowly increasing, as is the support for gender equality in the household (Pew Research Center, 2019^[155]). These changes in attitudes and practice may ease the work-family balance for couples and support higher fertility rates (Goldscheider, Bernhardt and Lappegård, 2015^[156]). In a systematic literature review covering the evolution of gender equal norms, Raybould and Sear (2021^[157]) found that the number of births indeed increase either when men and women specialise into a home-maker model or combine into an egalitarian co-provider – co-carer model, rather than when mothers face the dual burden of labour market engagement and the majority of care work.

Transitions between normative states are not straightforward, however, and household disagreements on the organisation of family and work dampen fertility intentions. Research generally suggests that actual and perceived fairness in the division of care and housework are important parts of the puzzle when trying to understand fertility choices within couple households (Kolk, 2019^[158]; Lappegård, 2020^[159]). Doepke and Kindermann (2019^[160]), found a link between an unequal division of care work and

disagreement over fertility intentions. This disagreement among partners often involves women wanting fewer children when they do most of the unpaid work and is most prevalent in low-fertility countries.

In Norway, where male involvement in care and housework is one of the highest in the OECD, male partners tend to be the ones who argue against having a(nother) child (Cools and Strøm, 2020^[146]). This male hesitation to have a(nother) child may reflect a changing reality for fathers in more gender equal societies, as the commitment to think about timing and involvement – along with other opportunity costs – is a newer phenomenon for prospective fathers than it is for prospective mothers. In fact, it has been suggested that increased demands on time and emotional commitment from fathers has been one of the key factors in delaying or avoiding having children (Jensen, 2013^[161]; Goldscheider, Bernhardt and Lappegård, 2015^[156]). Qualitative work from Norway also found childless male respondents emphasise that they want to be sure of the relationship, have a secure financial position, and be able to “be there” for their families. These new norms about what may be expected from parents (and fathers in particular), makes participants hesitant toward having children (Cools and Strøm, 2020^[146]).

Policy considerations

Families remain a cornerstone of any society in OECD countries (OECD, 2011^[91]), and modern family policy aims to support families through pursuit of a range of interdependent policy objectives (Adema, 2012^[162]). These include, in no particular order:

- Combat child and family poverty
- Promote child development and generally enhancing child well-being throughout the early life-course
- Enhance gender equality
- Mobilise female labour supply to foster economic growth and underpin the financial sustainability of social protection systems
- Support parents with the reconciliation of work and family responsibilities
- Promote conditions which help adults to have the number of children they desire at the time of their choosing.

The prevailing balance of these family policy objectives varies across countries, and while pro-natalist notions fuelled by low-fertility rates may be an important driver of policy development in, for example, Japan, Hungary and Korea, they play no discernible role in, for example, British or Dutch policy development, notwithstanding concerns about demographic trends (Staatscommissie Demografische Ontwikkelingen 2025, 2024^[163]).

Increasingly families need two adults in paid work to sustain household income. Countries like Denmark, France, Norway and Sweden have comprehensive policies supporting the reconciliation of work and family life through the provision of a continuum of support including paid parental leave provisions and investment in ECEC, and these countries spend more than 3% of GDP on family supports. Until recently these countries were relatively successful in sustaining fertility rates at a level just below replacement level. However, by 2022/23, in many of these countries the TFR had *fallen* to around the OECD average. By contrast, Hungary increased spending on family benefits to over 3% of GDP and *raised* the TFR to the OECD average over the past 10 years. Clearly, work and family policies on their own are not enough to explain the cross-national variation in fertility rates.

Increasingly, concerns about the cost of housing have come to the fore as a barrier to having (more) children, as the increase in housing cost since the late 1990s has been considerable in most OECD countries. For a variety of reasons that go well beyond family formation countries have been looking at policies to make housing (more) affordable (OECD, 2021^[133]). The housing policy response varies substantially across countries. Austria, Denmark, France and the Netherlands, for example, have a substantial social housing sector serving a range of clients, while Hungary relies more on providing housing ownership subsidies for families with children.

Personal choices towards having children depend on a range of factors. Consequently, a multifaceted policy approach is required to enable people to have the number of children they desire at the time of their choice, as solving one issue (e.g. support with care for children) may not address other barriers to parenthood (e.g. the cost of housing or long working-hours). Indeed, public policy cannot do it alone, it needs coherence with labour market institutions and workplace practices that are co-determined by employers and unions. Furthermore, for any policy to have a long-lasting effect, people have to trust it will be in place in future; policies that are believed to be temporary will have a short-term effect at best.

Fiscal space for additional investment in families may be limited, but the best approach for countries that are concerned about fertility rates remains to promote more gender equality and fairer sharing of work and childrearing. This involves providing family policies that help the reconciliation of work and family life, but policy must also have a greater focus on the costs of children, especially housing costs. However, because of changes in preferences for children, it is unlikely that such policies will enable countries to approach replacement fertility rates again.

More generally, policy should consider how to adapt for demographic change, if only because any increase in fertility rates only translates into a larger working-age population 20 years or so down the line. Such a policy – that goes beyond family policy and the scope of this chapter – see Box 1.2, could involve net immigration, bringing more under-represented groups into the labour force and taking measures to enhance their productivity to allay the economic and fiscal implications of a potentially shrinking workforce. Ensuring better population health and prolonging working lives will further support these efforts and reduce future fiscal pressure.

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Notes

¹ Excessively long working hours may affect reproductive health of women itself (Ahn et al., 2021^[164]; Gaskins et al., 2015^[165]). Using panel-data for France, Lambert et al. (2023^[167]) found that working non-standard hours decreases the propensity of a woman to have a first child, and the negative effect on fertility rates is stronger for night schedules rather than morning, evening or weekend schedules.

² The relationship between earnings and fertility can change across birth parities. For example, Kornstad and Rønsen (2017^[166]) identify a U-shaped relationship between wages and fertility. When considering having a first birth, women are likely earning comparatively low wages. They may want to wait and capitalise on steeper earnings profiles later on, thus postponing fertility. Kornstad and Rønsen (2017^[166]) regard this as the downward sloping part of the wage-fertility relationship over which increasing wages initially decrease or postpone fertility. For their second or higher births, many women are likely to have higher wages and be on the upward slope of the curve, with a positive link between wages and fertility.

³ Nieto (2022^[71]) is based on a study on the population employees. As the partner of male employees may be inactive, unemployed or self-employed, it is feasible to find that subsidies increase fertility for male employees but have a different effect on fertility among female employees.



From:
Society at a Glance 2024
OECD Social Indicators

Access the complete publication at:
<https://doi.org/10.1787/918d8db3-en>

Please cite this chapter as:

OECD (2024), "Fertility trends across the OECD: Underlying drivers and the role for policy", in *Society at a Glance 2024: OECD Social Indicators*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/fa367bad-en>

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