

**ECONOMIST
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Fertility policy and practice: a Toolkit for Europe



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About this Report

Fertility policy and practice: a Toolkit for Europe is an Economist Impact report sponsored by Merck. The report provides policymakers in Europe an evidence base that can be used when discussing policies to address falling fertility rates, and help couples to achieve their desired family size.

The research approach consisted of an evidence-based literature review of global papers that analysed the impact of family-friendly policies, as well as an advisory workshop with local experts. The panel of experts represented diverse views from across the region, and helped us to understand the current fertility landscape and the difficulties faced when implementing policies. The experts also facilitated the identification of the policy ideas that should be included, where the barriers to implementation lie, and how best this publication could be useful at a country level.

We would like to thank the following individuals for sharing their insights (in alphabetical order):

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Executive Summary

Europe is undergoing significant demographic challenges similar to elsewhere in the world, characterised by declining fertility rates that have persisted for over five decades. In 2022 the total fertility rate in the EU was 1.46 live births per woman, far below the replacement rate of 2.1. The implications of this demographic shift are large, as it leads to an ageing population and a rising old-age dependency ratio, putting pressure on public services and countries' economies.

The decline in birth rates is influenced by many factors including cultural shifts, economic barriers and changing social norms. Surveys that track ideal fertility preferences over time have shown that there has been a steady decline in the intended or expected number of children from the 1960s, followed by some stability and a more recent decline. This suggests a shift in societal norms and personal preferences towards having fewer or no children in more recent generations. However, despite changing attitudes, many individuals and couples express a desire to have more children than they currently do, indicating a significant "fertility gap" between aspirations and reality. This is particularly pronounced in southern European countries such as Italy, Greece and Spain, where there are more severe economic constraints and a lack of supportive policies. This gap could potentially be helped through the introduction of better, more generous family-first policies.



Policies such as parental leave, baby bonus schemes and assisted reproductive technology subsidies have been implemented as a way to tackle slowing fertility rates and help couples achieve the family size that they desire. But what effect do these policies have on fertility rates in practice, and how do they compare? This Fertility Toolkit serves as a way to present this information in a user-friendly way, where the evidence behind effectiveness is clearly explained, to equip policymakers with evidence-based strategies to address these challenges effectively and help close the fertility gap.



While the Toolkit report is based on insights gained from research and expert opinion, many parameters need to be considered in order for specific policy decisions to be made. These will be based largely on where a country stands within its fertility transition and what its policy goals are. No policy Toolkit can replace the deliberative and consensual process of the policy cycle, and different countries will decide upon different approaches. Nevertheless, we hope that this Toolkit report will prove useful for policymakers in the region. Our goal is that it will help to inspire the development of policy ideas to address falling fertility rates and the growing fertility gap, and support discussions on where funding should best be targeted.

The Toolkit concludes with the following key recommendations:

- **Prioritise long-term thinking.** A long-term perspective is needed when designing and implementing family policies, recognising that changes in fertility rates may take decades to have an effect in broader society.
- **Invest in comprehensive, complementary and sustainable family support services.** Governments should allocate enough resources to improve childcare availability and cost, parental leave, and flexible work arrangements, which tend to be the largest barriers that couples face when considering parenthood.

- **Encourage research and collaboration.**

Continued research into fertility trends, real-life data regarding underlying reasons for observed decreased fertility, country to country differences and the effectiveness of various policies is essential. Policymakers should collaborate with experts, healthcare providers, community organisations and, perhaps most importantly, the general population to develop targeted interventions that address specific barriers to family growth.

- **Promote and prioritise gender equality.**

Policies and activities that support gender equality in the workplace and at home are crucial. This includes initiatives that empower everyone, especially women, to balance career aspirations with family life, therefore creating a better environment for raising children.

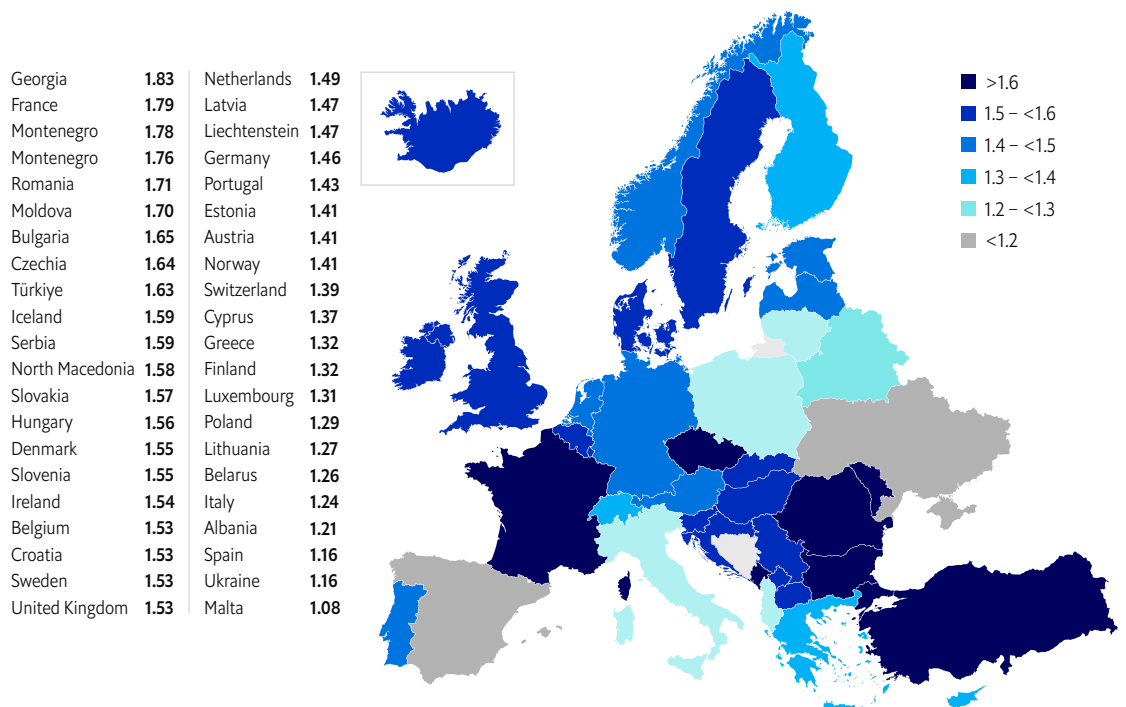
Although the challenges caused by declining fertility rates in Europe are significant, they are not unbeatable if we know the barriers to parenthood that we are trying to close. By adopting a comprehensive, evidence-based approach to family and fertility policy, European countries can create an environment that supports families while addressing the demographic challenges of the future.

Introduction

Birth rates have been declining globally and in Europe for over 50 years. In 2022 the total fertility rate (TFR) in the EU was 1.46 live births per woman, almost half of what it was in 1960. This ranges from 1.08 in Malta to 1.79 in France, far below the replacement rate of 2.1.¹ In recent years, even the most fertile countries have seen their rates decline. France registered 678,000 births in 2023, a decrease of 6.6% from 2022 and down by 20% since 2010.² Consequently, old-age dependency

is rising, and this demographic reversal has been placing an enormous and growing burden on public services and on a countries' economies, as there are fewer workers to finance care and contribute to the economy, and smaller families to provide this. Europe had the largest proportion of older population in 2022, with almost 19% aged 65 or over, and the region is continuing to age further. Projections indicate that by 2050 one in every four people in Europe could be aged 65 years or over.³

Figure 1: Total fertility rate across Europe, 2022



Source: Eurostat Statistics Explained. Fertility Statistics

Europe is projected to reach its peak population size and to begin experiencing population decline in the 2030s, although trends vary in terms of both scale and magnitude among different countries.³ For instance, the proportion of births happening among women aged 35 and above is higher in southern European countries, whereas delayed childbearing is less common in central and eastern European countries.⁴ Despite these trends, surveys indicate that individuals and couples in many countries facing ultra-low fertility often desire to have more children, suggesting a significant gap between fertility aspirations and actual family size; what we are seeing may be reversible, and effective policy may be one way to bring change.^{5,6}

Why is a Fertility Policy Toolkit needed?

Governments worldwide have increasingly recognised the need to address declining birth rates, with the number of countries looking to raise their fertility levels more than doubling over the past 30 years.⁷

Some key definitions

Total fertility rate (TFR) represents the number of children that would be born to a woman if she were to live to the end of her childbearing years and bear children in accordance with age-specific fertility rates of the specified year.

Replacement rate is the TFR at which women give birth to enough babies to sustain population levels, which is 2.1.

Old-age dependency ratio is the ratio of the population aged 65 years or older to the population aged 15-64.

Many factors play a part in either motivating or discouraging people from having children, such as economic factors, healthcare provision, education policies and labour market regulations, among others, and many policies exist around the world that aim to address these barriers, public childcare and parental leave policies, for example. It is therefore very important, though also methodologically challenging (owing to multiple factors involved in any decision), to evaluate the impacts of policies on fertility, and therefore evaluate the effect that they have in practice on decision-making.





“We still don't fully understand the fertility declines in the last 10 to 15 years,” says Tomáš Sobotka, deputy director of the Vienna Institute of Demography. “There are many theories and arguments around, but we need to better understand changing reproductive preferences and behaviours before we rethink about how to best design policies.” The issue of declining fertility is complex and is influenced by multiple factors, and there is a need for a nuanced, comprehensive approach rather than simple policy solutions. Key also is the importance of supporting individual choices, while also considering societal needs.

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Family policies serve a wide range of objectives, only one of which is increasing fertility. These include fighting poverty, promoting gender equality and enhancing child wellbeing. Importantly, even if fertility rates are successfully raised, the associated positive impacts will take some time to emerge. “If you raise fertility rates today, this will only have an effect on the working age population in about 25 years' time, so we can't expect effects on labour market outcomes in the short term,” says Willem Adema, senior economist at the OECD. “While policies do have an effect on fertility rates, we can't expect a huge rebound just because of investment into family policy. More generally, we shouldn't expect that fertility rates will go back to replacement rate levels anytime soon.”

A long-term, investment mindset is needed when designing any programme—policies need to be sustainable—and robust evidence is key. This Policy Toolkit aims to present the evidence behind the effectiveness and impact of different policy ideas, as well as their other benefits, in a clear, user-friendly way, to provide policymakers and decision-makers in Europe with a menu of options that can be explored, allowing them to choose actions most appropriate for their economies and where they stand along their own fertility transition.

How did we get here and what does this mean?

Cultural shifts are one of the often-cited reasons why fertility rates are declining, as these have an impact on social norms and values. This has been leading to changing attitudes towards family and having children in many countries over the past few decades as we move away from the idea of a “traditional” family with many children. This is partly due to increased education levels, evolving gender roles and more female participation in the workforce, and reasons are often outside of policy influence. Transition to adulthood and parenthood is happening later, and there are increasingly changing attitudes and norms around having children. More and more, people may not wish to have children, for personal reasons, and individual choices must be respected.

“The fertility gap is real, it happens, and we are just seeing the tip of the iceberg for those who would like to have more children.

Eleonora Voltolina, founder of the Why Wait Agenda initiative.

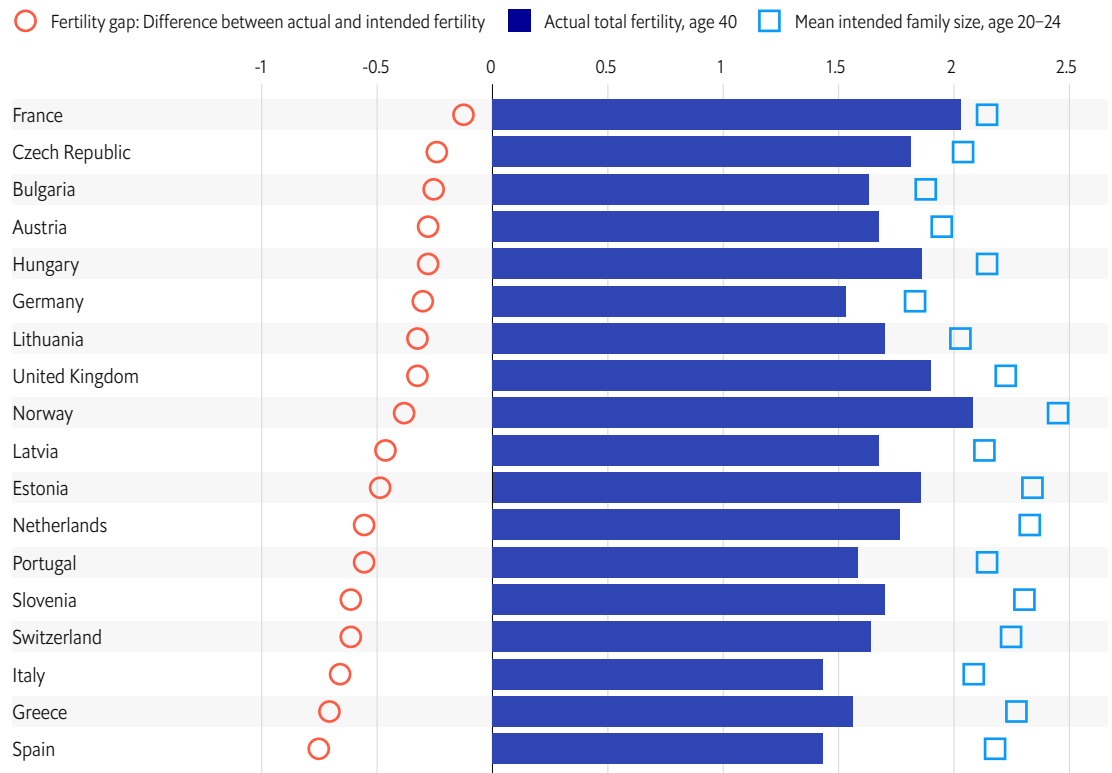
However, another important perspective suggests that while fertility intentions remain stable, couples face obstacles in achieving their desired number of children. These barriers are more practical challenges and include economic factors like childcare and housing costs, difficulties in managing careers alongside raising a family, as well as biological challenges.⁸

Though it is important to note that many of the reasons why people don't ultimately have the number of children they want are outside the realm of what can be achieved through family policies, some barriers such as financial ones can sometimes be overcome. “The practical aspects are those things which are potentially remediable by government action,” says David Coleman, emeritus professor of demography at the University of Oxford. “These are to do with the obstacles that might be standing in the way of people realising their family ambitions, such as the cost of children, time that children take up, absence of childcare and cost of housing. The challenges which are much more interesting but also much more difficult are whether there is a falling underlying desire [to have] children, and whether children just don't feature as much in the future plans of young people. If this is the case, then that's going to be something very much more difficult to remedy because you can't force people to want or have children.”

Despite lack of desire to have children being a factor, many studies and surveys have shown that a “fertility gap” exists between intended and actual fertility, especially among European populations, with the largest being in southern European countries such as Italy, Greece and Spain.^{5,9} This gap is often linked to economic, educational, social and cultural factors. “The fertility gap is real, it happens, and we are just seeing the tip of the iceberg for those who would like to have more children,” says Eleonora Voltolina, founder of the Why Wait Agenda initiative. “What we are seeing in Italy is that for

families who already have one child, it gets so hard economically, due to the motherhood penalty and due to the lack of services, that they stop at one, which is a reason why Italy has one of the lowest fertility rates in Europe.” Barriers extend beyond the economic ones however, as can be seen in the example of Switzerland, which has a large fertility gap despite being one of the most prosperous European countries, where wealth is more equally distributed. “So it’s not just a matter of money: we’ve got to work on gender equality, so that working women do not fear the fact of having children,” adds Ms Voltolina.

Figure 2: Mean intended family size at age 20–24, completed fertility rate at age 40, and fertility gap



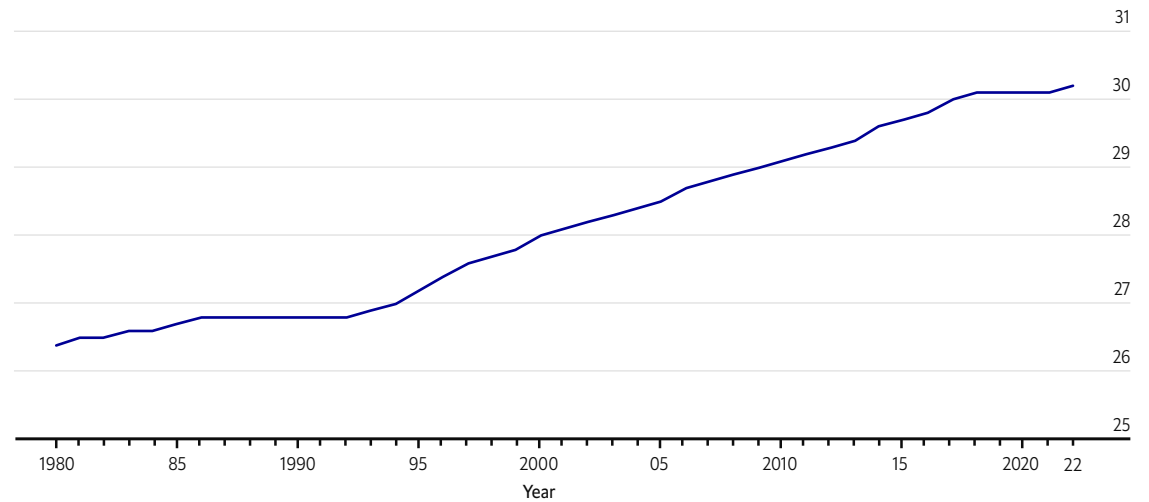
Source: Beaujouan and Berhammer, 2019

This gap is also often linked to postponement of childbearing and a shift in parenthood to older ages.⁹ This can be due to more time spent in education, couples waiting for better financial security before starting a family or, more and more commonly, absence of a suitable partner.¹⁰ ¹¹ The average age of first-time mothers across the EU increased from 27.6 years in 2006 to 30.2 years in 2022, and the mean age of childbearing has been increasing consistently in Europe since the 1980s (see figure 3).⁸ Postponing parenthood may affect realised family size, as a woman’s chances of successfully conceiving decrease as she ages.¹² Women under 30 have an 85% chance of conceiving within one year, compared to 66% by age 35 and 44% by age 40, and fertility decreases dramatically after this.¹³ Assisted reproduction technology (ART) is an option, but it is often financially out of reach, and its effectiveness is often overestimated.^{14,15} “Women are delaying motherhood for a number of reasons. Furthermore, there is a significant male factor contribution to infertility,” says Geeta

Nargund, founder and medical director of abc IVF and CREATE Fertility, and lead NHS consultant for Reproductive Medicine at St George’s NHS Trust, London. “There is going to be an increase in the need for IVF and also for egg freezing in the future. Infertility is a disease, and it needs to be taken seriously. There is an urgent need to increase public funding and also to make IVF more accessible to more women and couples”.

Studies have also shown that there is a lack of knowledge about the impact of age on fertility, even in highly educated populations and among healthcare providers.^{12,16} “At present, young people are told how to prevent pregnancy, but little is said about how to maintain their fertility,” says Satu Rautakallio-Hokkanen, general director of Fertility Europe, a patient organisation. “But infertility is a growing global problem for many reasons, so it is important to tell everyone how to take care of their own reproductive health, and factors that might hamper fertility, such as environmental factors, need to be discussed openly.”

Figure 3: Mean age of childbearing in Europe, 1980-2022



Source: Statistica

Lower levels of fertility in Europe mean that the age structure of the population is changing. As the proportion of younger people shrinks, the relative number of retired people is going up, with the share of older people in the total population expected to increase significantly in the coming decades. This may, in turn, lead to an increased burden on those of working age to provide for the social expenditure required by the ageing population. Over only ten years, between 2013 and 2023, the share of the total population aged over 65 increased by 3% in Europe, and by over 4.5% in Poland, Slovakia, Croatia and Portugal.¹⁷

A decline in the working population can result in labour shortages as well as fewer consumers, which may reduce per capita income and diminish a country's economic competitiveness.¹⁸ In Europe, where the share and sometimes absolute number of people in the working age group is in decline, this raises concerns that economic gains in recent decades will be lost.¹⁹ "While we cannot tell people to have babies or to stay in the workforce, from the point of view of society, we need production and we need reproduction," says Anna Rotkrich, director of the Population Research Institute at Väestöliitto, the Family Federation of Finland.

A note on immigration

The benchmark of a 2.1 replacement rate per woman assumes no net migration. However the flow of immigrants into countries with lower fertility rates can be a way of avoiding depopulation and can also help with a country's age structure, and several studies have found that immigrants have a positive fiscal contribution over their lifetimes.²⁰ Immigrants also tend to have higher TFRs, although these often decline over time.²¹ However immigration cannot solve population ageing except through very high and increasing inflows; in the medium term, higher birth rates are seen as a more demographically efficient response.²¹ Immigration brings its own challenges and, while an important consideration, immigration policy is not included in our Toolkit owing to its wider contextual implications.

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How to use this Toolkit

Evidence suggests that family-friendly policies help contribute to higher fertility, and differences in fertility rates across countries have emerged at least partly as a result of the presence and effectiveness of these family policies. However their effects in different countries in Europe differ, and differences in national priorities could affect which countries are best positioned to implement specific policies effectively. Policies usually aim to balance several goals, and it is important that countries know which goals they want to achieve. It is also increasingly difficult to know how effective policies are in achieving their aims in practice, owing to multiple factors being involved in any decision, and the decision to become a parent is one of the biggest a person can take, with many considerations. We have identified four categories of policies that are the most commonly adopted:

Childcare policies

Although childcare is usually not designed to directly encourage or support fertility, it can have a positive effect on childbearing through increasing work-family compatibility. The provision of childcare reduces the high opportunity costs that might come from parenting, especially for women, including lost wages and loss of skill development if they choose to stay home to take care of children. In addition, it enables parents to more easily re-enter the workforce.

There is a positive correlation between fertility rate and availability of formal childcare, especially for younger infants, although improving the provision of childcare often involves larger costs and long-term thinking—though this can sometimes be a positive.²² “Improving childcare would mean that you are introducing major infrastructure, which also provides a certain element of commitment—it is not a quick fix, but may have a more powerful impact in the long-run” says Arnstein Aassve, professor of demography in the Department of Social and Political Sciences at Bocconi University. As of 2019, 88% of governments in low-fertility countries (countries with a TFR of below 2.1) offered publicly subsidised childcare.⁷ Within the childcare domain of this Toolkit, we compare several options such as increasing childcare availability, subsidising childcare costs, introducing a home-care subsidy payment, implementing longer hours for childcare and improving the quality of childcare, to demonstrate their potential impact on fertility rates, the economy and society as a whole.



Workplace policies

Policies around employment can more easily allow career continuity, compensate for lost income owing to time out of the workforce and protect from discrimination. Especially for women, this can better support people to enter, remain, return to and progress at work. The gender imbalance of domestic and formal labour in a country has been shown to be a key driver of low fertility, and fair policies including equal parental leave policies could potentially help to equalise this balance, ultimately promoting fertility.²³ As of 2019, 99% of governments in low-fertility countries offered maternity leave for children with job security (paid or unpaid), and 73% offered some sort of paternity leave.⁷ Within the workplace domain of this Toolkit we compare the options of having longer maternity leave, higher-paid maternity leave, mandated paternity leave, flexible working arrangements, and ensuring job protection with no discrimination.

Financial policies

Financial help is often provided by governments to help reduce the direct costs to parents of bearing and raising children. Although the primary aim of financial transfers is usually to help reduce child poverty and improve the standard of living for families with children, they have also been shown to have an influence on fertility rates, as they can reduce some of the financial burden that comes with having children.²⁴ Policies such as baby bonuses (a lump-sum payment at birth) are popular, in part owing to their ease of implementation, though evidence from studies suggests that though financial transfers have an overall positive effect on fertility, the effect is usually small because these only represent a fraction of the large costs of children. “Often, when a major crisis in population is declared, saying we need urgent measures, you hear about a new baby bonus, since more money being put into the system is easy, as long as the money is there,” says Dr Sobotka. “But you need to think really long term about the issues of fertility.”

As of 2019, 78% of governments in low-fertility countries offered child or family allowances, and 49% offered a baby bonus.⁷ Within the financial domain of this Toolkit we compare the provision of a one-time baby bonus for new parents, providing tax credits for children, providing universal child allowances and providing housing benefits for families.

Assisted reproduction policies

As the average age of having children is increasing, so is the proportion of women experiencing difficulty in achieving a pregnancy, and approximately 17.5% of the global adult population (one in six adults) is affected by infertility.²⁵ ART treatments are becoming increasingly used to counteract this decline, and some countries subsidise treatment for their populations, or even completely cover treatment through public funding. A recent report found that insurance coverage plays a large role in driving the demand for IVF, with the rate of IVF falling by half when treatment is not covered.²⁶

ART can broaden the range of possible responses to low fertility rates, although its contribution to TFR so far has been modest. “Infertility is a growing global problem for many reasons and to overcome these challenges, access to and reimbursement of treatments is important,” says Ms Rautakallio-Hokkanen. “Society should understand that investing today will bring the desired result in the long term but there is no quick fix and fertility and its determinants need to be discussed openly.” In the latest (2021) global survey of ART practices and policies undertaken by the International Federation of Fertility Societies, 47 (53%) of the 88 countries who submitted data on the extent of insurance coverage reported that they provided some type of financial support for ART treatment.²⁷ Within the assisted reproduction domain of this Toolkit we compare the options of introducing public funding of ART, increasing availability of ART, providing subsidies for egg freezing, allowing more inclusive ART (for instance, for same-sex couples and for single women), and introducing programmes to improve fertility education and awareness.

The Policy Toolkit has the following components:

- 1. Fertility rate impact:** each policy area comes with a star rating to indicate the quality of the evidence base of the respective policies and their impact on fertility rates, based on experimental and observational studies.
- 2. Economic impact:** this rating offers a guide to the likely size and timeframe of the return on investment for each policy area, based on economic studies and labour studies.
- 3. Societal or individual impact:** this rating measures the broader impact of policies beyond only fertility, their impact on wellbeing for society in general and for individuals, mostly based on qualitative studies and reviews.

Fertility rate impact, methods note	
★	No studies or evidence identified on impact on TFR
★★	Little evidence (1-2 studies) identified on increase in TFR, or evidence of no or negative impact
★★★	Some evidence (3-4 studies) identified of a small, long-term increase (or larger but short-term increase) in TFR
★★★★	More evidence (5 studies) identified of a long-term increase in TFR
★★★★★	Strong evidence (more than 5 studies) identified of a significant, consistent, long-term increase in TFR

Economic impact, methods note	
★	Very high cost to implementation, no studies or evidence showing positive returns on investment
★★	High cost to implementation, little evidence (1-2 studies) identified of positive returns on investment
★★★	Medium cost to implementation, some evidence (3-4 studies) identified of immediate positive returns on investment, mostly longer-term returns
★★★★	Lower cost to implementation, more evidence (5 studies) identified of immediate positive returns on investment
★★★★★	Very low cost to implementation, significant evidence (more than 5 studies) identified of immediate positive returns on investment

Societal or individual impact, methods note	
★	No evidence showing any positive societal or individual impact on wellbeing
★★	Little evidence from studies showing any positive societal or individual impact on wellbeing
★★★	Medium evidence from studies showing positive societal or individual impact on wellbeing
★★★★	Strong evidence from studies showing positive societal or individual impact on wellbeing
★★★★★	Very strong evidence from studies showing positive societal or individual impact on wellbeing

The Toolkit

Policy area	Policy	Fertility rate impact*	Economic impact (return on investment)*	Societal or individual impact (wellbeing)
Childcare policies	Increasing childcare availability	★★★★	★★★★	★★★★
	Subsidising childcare costs	★★★		
	Introducing a home care subsidy	★★		
	Implementing longer hours for childcare	★★		
	Improving the quality of childcare	★★		
Workplace policies	Introducing longer maternity leave	★★★★	★★★★	★★★★
	Introducing higher-paid maternity leave	★★★★		
	Mandating paternity leave	★★		
	Allowing flexible working arrangements	★★		
	Ensuring job protection and no discrimination	★★		
Financial policies	Providing a one-time baby bonus	★★★	★★	★★★★
	Providing tax credits for families	★★★		
	Providing universal child allowance	★★★		
	Providing housing benefits for families	★★		
Assisted reproduction policies	Introducing public funding of ART	★★★	★★★★	★★★★
	Increasing availability of ART	★★★		
	Providing egg-freezing subsidies	★★		
	Allowing more inclusive ART for same-sex couples and single women	★★		
	Introducing programmes to improve fertility education and awareness	★★		

* Note. Limitations to these ratings include that these are not based on a full systematic review, and studies were done at a national or sub-national level, meaning they may not have evaluated the impact on specific groups of people which may be more likely to be influenced. Impact may therefore be much larger.

Country case studies

This section lists case studies and short summaries from the literature review scan to provide background information on the selected policies and give a rationale to the scores listed in the Toolkit.

Childcare policies

Fertility rate impact

Europe: Using the European Union Survey on Income and Living Conditions for 16 European countries combined with country-level data, Baizan et al (2016) analysed completed fertility through modelling. They found that increasing the childcare coverage rate from 10% to 50% would increase the number of children of low-educated women from 1.8 to 2.0 and increase the number of children of highly educated women from 1.5 to 1.9.²⁸

Germany: In the mid-2000s public childcare was greatly expanded in Germany for children under the age of three. Bauernschuster et al (2015) explored the role affordable and widely available public childcare plays for fertility, using a difference-in-differences framework. Estimates suggested that a 10% increase in childcare increased birth rates by 2.7%, driven to a large extent by higher-order births to married women aged 30-34.²⁹

Italy: A national daycare subsidy (“bonus nido”) was introduced in Italy in 2017. Dimai (2023) measured the effects of daycare benefits on fertility in a region in northeastern Italy, and investigated whether a family receiving the daycare subsidy for a child had a higher probability of giving birth to another child.

Some 1,745 families receiving the subsidy were matched with similar families not receiving it, and the families were tracked over the 2017-20 period. The study found that the likelihood of having another child was 15.4% higher among the group receiving the childcare subsidy.³⁰

Economic impact

United Kingdom: By conducting a cost-benefit analysis, Ben-Galim (2011) found that universal childcare paid a return to the government of £20,050 (US\$26,630) over four years in terms of tax revenue minus the cost of childcare for every woman who returned to full-time employment after one year of maternity leave.

Spain: After a large-scale increase in the availability of publicly subsidised childcare was introduced in Spain in the early 1990s, Nollenberger and Rodriguez-Planas (2011) found that this resulted in an 8% increase in employment and a 9% increase in hours worked of mothers with age-eligible (three-year-old) children, and that these effects persisted over time.³¹

Germany: Childcare reforms between 2007 and 2017 meant that childcare places for children aged 0-2 more than doubled in Germany and the share of full-time childcare places for children aged 3-5 increased by 57%. Neuberger et al (2022) found that female labour-force participation went up from 53.6% to 65.1% during this period, an increase of 11.5%.³²



Societal and individual impact

The benefits of childcare policies have been shown to extend beyond fertility and economic gains to include significant long-term advantages for children, families and society as a whole.³³ For children, high-quality childcare has been shown to be beneficial for children's cognitive development, especially for children from disadvantaged family backgrounds.³⁴ It can also play an important role in reducing inequality, as it can help to bridge social gaps by providing disadvantaged children with opportunities that they might otherwise not have.³⁵ For families, and especially for women, access to affordable childcare enables parents to pursue employment and educational opportunities instead of staying home, leading to increased family income and financial stability, and can help contribute to gender equality in employment.³⁶

Workplace policies

Fertility rate impact

Europe: A study by Ariza et al (2003) analysed the relationship between availability of part-time work and fertility for 11 European countries, finding that for working women, the part-time schedule affected fertility positively in Belgium, France, Ireland, The Netherlands, Spain and the UK, as women who made use of this possibility were more likely to have a child. Results were non-significant in Denmark, Germany, Italy and Portugal, and negative in Greece.³⁷

Austria: In 1990 a national reform increased the duration of parental leave from one to two years. Zweimüller (2009) found that mothers who gave birth to their first child immediately after the reform were more likely to have a second child compared to pre-reform mothers, and extending parental leave led to a 3.5% increase in fertility overall and increased long-term fertility.³⁸

Sweden: A four-week period of paternity leave was introduced in Sweden in 1995. Duvander et al (2020) found that although parental leave use among eligible fathers increased from almost 3% to 25% at the time of the introduction of the quota, there were no significant effects on fertility rates other than a small positive effect on third births if fathers had low income.³⁹

Economic impact

Norway: Between 1987 and 1992 a series of policy reforms in Norway expanded paid maternity leave from 18 to 35 weeks. Dahl et al (2016) found that expenditures were US\$2,100 per mother. In 1992 45,682 eligible women participated in the programme for a yearly cost of almost US\$100m. The annual cost of providing 35 weeks of paid leave was over US\$1bn (in 2010 dollars), representing almost 0.5% of GDP. However, the expansions had little effect on parental earnings and participation in the labour market in the short or long term, and little impact on parents' future tax payments.⁴⁰



Canada: In 2006 wage replacement increased from 55% to 70% for 30 out of 55 weeks of the parental leave period. Ang (2015) found that the net government cost of each additional birth due to the policy was C\$15,828 (compared to C\$223,625 for cash-transfer fertility incentives), earnings of women increased by C\$17.26, and there was a 1.5% increase in labour-force participation among women aged 25-45.⁴¹

Societal and individual impact

At a societal level, more generous workplace policies such as maternity leave, flexible working, job protection and policies against discrimination can play a large role in reducing inequality and promoting gender equality. These working arrangements can help to bridge social and economic gaps by providing all families, regardless of income, with the time and resources needed to care for their children and for themselves, and can help to reduce the career penalties often faced by women due to caregiving.^{42,43} At an individual level, these policies have been shown to improve physical and mental maternal health, including reducing the risk of postpartum depression, and paid maternity leave in particular has been shown to substantially improve the health outcome of children.^{44,45} Paternity leave policies can also help to enable shared responsibility, where both parents participate in childcare, fostering a more equitable distribution of household responsibilities and improving family dynamics.⁴⁶

Financial incentive policies

Fertility rate impact

Spain: A lump-sum maternity allowance was introduced in 2007 for all new mothers, but was cancelled in 2010. González et al (2023) tracked birth rates during the time of the introduction and cancellation of this policy and concluded that births increased by 3.5% in 2007 and increased a further 2.8% in 2008. After the cancellation of the benefit, there was a 5.7% decrease in births.⁴⁷

Switzerland: Chuard and Chuard Keller (2021) measured fertility in 11 out of 26 cantons in Switzerland, which introduced a baby bonus at different points in time between 1969 and 2017. They found that although fertility rates increased by around 5.5% in the first year of the bonus payment, this faded out quickly.⁴⁸

Germany: In 1996 Germany introduced significant increases in child benefits regardless of income. A study by Riphahn and Wiyneck (2017) found no effect for first or second births among low-income couples, although there was a positive fertility effect for higher-income couples deciding on a second child of between 10% and 23%.⁴⁹

Economic impact

Norway: A cash-benefit reform in 1998 provided monthly benefits to families with 1-3-year-old children, who did not use state-subsidised daycare centres. Naz (2004) found that on average, the reform reduced women's labour-force participation. Effect depended on women's schooling, with the labour-force participation of highly educated mothers falling by more than that of mothers with less education.⁵⁰



Spain: A family policy introduced in Spain in 2003 provided working mothers with a monthly cash benefit per child aged under 3 years. Oliver and Apadaro (2017) found that since the implementation of the policy, the labour market participation rate for mothers of children aged under 3 had risen by 3% compared with the rate for non-eligible females.⁵¹

Societal and individual impact

Often, the primary aim of financial policies is to support families with the direct cost of raising children, thereby reducing child poverty and improving the standard of living for families with children. Financial incentives can help to lift families out of poverty, particularly those with low incomes, and can help to reduce income inequality by providing more support to lower- and middle-income families.⁵² At a public health level, financial support can lead to better health outcomes for children and families, reducing the burden on healthcare systems.⁵³ Housing policies can contribute to better community infrastructure and living conditions, and can help families to access more-affordable or higher-quality housing.

Assisted reproduction policies

Fertility rate impact

Canada: For five years (2010 to 2015) the Quebec government initiated public coverage of ART. A study by Bissonnette et al (2019) on the impact showed that over 9,000 babies were born as a result of the coverage. Importantly, the rate of multiple pregnancies (being pregnant twins, triplets and so on, which raises health risks for mothers) was greatly reduced to 4.9%, compared with 25.6% before the policy.⁵⁴

United Kingdom: A study by Grant et al (2006) investigating whether ART should be made part of population policies found that if the UK increased its access to ART from 625 cycles per million women to 2,106 cycles, it would increase TFR by 0.04, from 1.62 to 1.66.⁵⁵

France: A simulation conducted by Leridon and Salma (2008) found that there would be an increase in completed fertility of 0.2 if half of couples with infertility issues resorted to ART, and 0.4 if all couples with infertility issues resorted to ART.⁵⁶

Economic impact

Sweden: A model by Svensson et al (2008) on the long-term fiscal implications of subsidising IVF in Sweden found that doing so would not negatively impact the long-term fiscal budget, and rather over an average lifetime an IVF offspring would return a positive net value to the country.⁵⁷

Spain: A model by Matorras et al (2016) to assess the lifetime economic benefits of funding ART found that the return on investment for each euro invested was €15.98 (US\$17.50) for IVF and €18.53 (US\$20.29) for artificial insemination, and concluded that investment in ART may lead to fiscal revenue gains over time.⁵⁸



Australia: A model to assess value for money of publicly funded IVF treatment by Keller et al (2023) found that providing at least five publicly funded IVF cycles was cost-beneficial in women aged less than 42 years, but no cycles provided good value in women aged over 42.⁵⁹

Societal and individual impact

Policies that help to make ART more affordable and accessible can have a huge individual impact on wellbeing. Public funding and inclusive policies make it possible for more individuals and couples to be able to become parents, regardless of their financial situation or family structure. There are also non-monetary impacts of being unable to have a child, with one study finding that women who do not give birth within five years of the first unsuccessful conception are 48% more likely to fill a prescription for a mental health drug than women whose first conception succeeds, suggesting that policies that affect access to treatment have a substantial private and social value.²⁶ Policies supporting egg freezing and fertility awareness can also help with reproductive autonomy, giving individuals more control over their reproductive choices and timeline.⁶⁰ Increased awareness and accessibility of ART can help to reduce the social stigma surrounding infertility and alternative family structures, and can reduce the psychological distress associated with infertility.⁶¹

One important, often underestimated positive societal benefit of providing funding for ART is its impact on multiple birth rates. Health risks exist for both mothers and babies of multiple pregnancies following ART, and this is still common in many countries.⁶² Nationally published data from China for treatments performed in 2016 reported twin delivery rates with IVF of 27.9%.⁶³ One mechanism that some countries such as Belgium and Turkey have implemented to reduce the burden of too many multiple pregnancies is to link funding coverage to restrictions on the number of embryos that can be transferred.^{64,65} In Turkey this new law, which was introduced in 2010, reduced the multiple pregnancy rates from 23.1% to 5.3%.⁶⁵

Overall, findings of the Toolkit emphasise that effective childcare, workplace, financial and reproductive policies not only enhance fertility and economic participation but also contribute to social equity and improved family wellbeing. Childcare and workplace policies, especially increasing availability of childcare and improving maternity leave, show the greatest impact on increasing fertility rates, while also providing the highest return on investment owing to their role in helping women to remain in or return to the workforce more easily. All of the policies explored also serve a broader role beyond increasing fertility, both at a societal and individual level, as any policy that serves to reduce gender inequality and reduce the opportunity costs of childbearing should be encouraged.

Applying policy at a country level

European countries vary in many ways, including in their demography, culture, political system and economic structure, which contributes to significant diversity across the continent. Because of this, there can be difficulties in comparing policy effectiveness across different countries and time periods. There are also significant variations in cultural attitudes

towards fertility and family formation across Europe, and therefore challenges exist in creating policies that are effective across diverse European contexts.

Based on a number of impact indicators, which can be found in the Appendix of this report, we suggest a series of categories for countries in the region.

Figure 4: Country categories

	1	2	3	4
Social spending (on social protection, family benefits and housing)	Higher	Higher	Medium to low	Lower
Gender equality (female labour-force participation, gender wage gap)	Higher	Higher	Medium to high	Lower
Tertiary education, especially among women	Higher	Higher	Medium to high	Lower
Unemployment rates	Lower	Lower	Varied	Higher

Denmark	Netherlands	Estonia	Italy
Norway	Germany	Portugal	Greece
Sweden	Belgium	Spain	Croatia
Finland	Austria	Switzerland	Hungary
France	United Kingdom	Czechia	Poland

Key	Lower TFR (<1.4)	Medium TFR (1.4-1.5)	Higher TFR (>1.5)
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There is a slight correlation between a country's category and its TFR, with countries that spend more of their GDP on social protection, family benefits and housing, have higher gender equality (measured through female labour force participation and the gender wage gap), higher tertiary education for women, and lower unemployment rates generally having a slightly higher TFR (with the exception of Finland). Countries in category 2 also tend to have above-average social spending, good gender-equality indicators, and high tertiary education rates. However, countries that fall into categories 3 and 4 score slightly lower in these indicators, showing that investing more into these areas may help to bring their TFR closer to those seen in countries in categories 1 and 2 (Czechia is an outlier here).

It is important to note that this categorisation is a simplification based on a few datapoints and does not capture all the variations of each country's unique situation. Some countries may excel in certain areas while facing challenges in others, and the importance of each indicator may vary depending on specific policy goals or cultural contexts. "In many countries today in Europe, we don't necessarily need strong population increase, partly because of immigration," says Dr Sobotka. "Context matters, and it really matters which countries and which parts of Europe we are talking about." Nevertheless, placing countries into categories allows policymakers to start the process of thinking about specific policies that may suit the needs of their populations.



Moving on from traditional policies

Beyond traditional family-friendly policies, several innovative approaches have emerged to address declining birth rates. Many of the more traditional policies such as those included in this Toolkit (maternity leave and subsidised childcare, for example) have been tried before with limited long-term success, partly owing to short political cycles. “In Europe it can be really challenging to explain to MEPs, who see only four years ahead, what we need when we want to look 20 years ahead,” says Ms Rautakallio-Hokkanen. “That is the constant struggle when we have to start over and over again, every four years.”

Additionally, recent fertility trends do not always align with traditional policy settings. Some newer policies (such as flexible working, housing benefits and egg freezing) are listed in our Toolkit but score lower, as they are not backed by the same comprehensive evidence as more conventional, longstanding policies, which have had the opportunity to be tried and measured. But this does not mean that they should be discounted. “In many countries, including Finland, we have the traditional family policies and they are great for wellbeing, they're great for children, they're great for gender equality,” says Dr Rotkrich. “They're good policies, we need them, but will they impact fertility rates? If the driver of the change is related to globalisation, to changing

life goals, to the value put on employment, to lack of knowledge and to the huge influence of social media, these may not work.”

The newer model of gender-equal parental leave policies, offering well-compensated, flexible parental leave that can be shared between parents has shown positive impacts in terms of promoting gender equality and lessening the “motherhood penalty”, which in turn may have a positive effect on a woman deciding to have a child. This approach allows for better work-life balance and career continuity for both parents. Implementing incentives for employers who support pregnant women and new mothers, along with penalties for discrimination, can also help to create a more family-friendly work environment. Generally fostering a child-friendly culture and creating a society that values and welcomes children, from community attitudes to public spaces, could additionally help to encourage family formation. Even more out of the box, targeting modern lifestyle factors and addressing the impact of social media use on family formation aspirations could be a new frontier in fertility policies. “What we need is innovation, putting equal parenting and freedom of choice at centre stage,” says Ms Voltolina. “Let's find new ways to support would-be parents and those who already are parents, let's invent other ways.”

When it comes to ART, expanding access to families beyond the traditional idea of man and woman can also help more people to become parents. “Clearly, fertility treatment or fertility care is also about helping single women and same sex couples to start families, it’s about gender equality and creating diverse and modern families, which has got to be part of our policies,” says Dr Nargund. Elective egg freezing has also emerged as a newer strategy to address declining birth rates by offering women the option to preserve their fertility for later in life. However, there are several factors and challenges associated with this approach that need to be considered, such as age and success rates, and how to manage the storage of frozen eggs.⁶⁶ In 2021 France became the first country to offer elective egg freezing for nonmedical reasons under public health coverage for women aged 29-37.⁶⁷ While the long-term benefits of this policy are yet to be determined, its adoption should be closely monitored to help provide important information to other countries with universal health care systems who may consider implementing something similar.⁶⁸

“Clearly, fertility treatment or fertility care is also about helping single women and same sex couples to start families, it’s about gender equality and creating diverse and modern families, which has got to be part of our policies.

Geeta Nargund, Founder and Medical Director, abc IVF and CREATE Fertility and Lead NHS Consultant for Reproductive Medicine, St George’s NHS Trust

Comprehensive social support is key. Instead of isolated measures, implementing a holistic approach that addresses various aspects of family life can be more effective. “Individual measures, such as parental leave or childcare supports, will have very limited impact on fertility as it is the package, the way that these measures interact, which determines how effective they are in supporting parents,” says Dr Adema. “If you have parental leave for five months but childcare places only become available at age two, this doesn’t help much.”

Affordable housing can help to alleviate the financial burden on young families, allowing them to allocate resources towards raising children. Access to quality childcare and education ensures that children have the opportunities to thrive, which can encourage parents to have more children. Comprehensive healthcare, including maternal and child health services, provides families with the necessary support to maintain their wellbeing. When these elements are combined, they create an environment that not only supports the immediate needs of families but also ensures long-term stability and growth.⁶⁹

However, it is difficult to track the success of comprehensive policies. “There are many aspects of policies which are not easily measurable, and different family policies form complex packages,” says Dr Sobotka. “How do they fit together? Do they give couples more flexibility to design their lifestyle, to combine work and family life? We need to think more about how these packages are organised, and whether they are sustainable—they need to have broad support across different parts of the political spectrum so that they are not killed in two years.”

This holistic approach, if implemented correctly, would recognise that the decision to have children is influenced by many factors, and addressing them collectively could lead to more sustainable increases in birth rates across the continent.

Conclusion

Declining fertility across Europe is a complex but urgent issue, and there is a need for effective policy interventions to support individuals in achieving their desired family sizes. As the resulting demographic shifts are set to bring significant challenges including an ageing population and increased economic burdens on public services, a robust, sustainable response from policymakers is needed.

The Toolkit provides evidence-based strategies that can be tailored to the unique contexts of different European countries, though most important is to first understand the various factors that influence fertility decisions, including economic conditions and cultural attitudes towards family and parenthood. An approach is needed that respects individual choices while addressing societal needs. To lead to change, policymakers and other stakeholders must prioritise family-friendly policies that not only aim to increase fertility rates, but also enhance overall societal wellbeing.

Key recommendations for the region include:

- **Prioritise long-term thinking.** A long-term perspective is needed when designing and implementing family policies, recognising that changes in fertility rates may take decades to have an effect in broader society.
- **Invest in comprehensive, complementary and sustainable family support services.** Governments should allocate enough resources to improve childcare availability and cost, parental leave, and flexible work arrangements, which tend to be the largest barriers that couples face when considering parenthood.

- **Encourage research and collaboration.** Continued research into fertility trends, real-life data regarding underlying reasons for observed decreased fertility, country to country differences, and the effectiveness of various policies is essential. Policymakers should collaborate with experts, healthcare providers, community organisations and, perhaps most importantly, the general population to develop targeted interventions that address specific barriers to family growth.
- **Promote and prioritise gender equality.** Policies and activities that support gender equality in the workplace and at home are crucial. This includes initiatives that empower everyone, especially women, to balance career aspirations with family life, therefore creating a better environment for raising children.

This Toolkit not only provides a roadmap for addressing declining fertility rates but also serves as a call to action for all stakeholders involved. While challenges remain, proactive and informed policy measures can lead to environments where families can thrive. It is important that we act now to implement these strategies to provide a supportive environment for families and ensure a sustainable demographic future for Europe. By prioritising family policies and addressing the barriers to parenthood, we can help to bridge the gap between fertility aspirations and actual family sizes, ultimately contributing to a healthier, more balanced society.

Appendix

Table 1: Impact indicators informing country categories

Country	Public social protection expenditure excluding healthcare (% of GDP) ⁷⁰	Investment in housing (% of GDP) ⁷¹	Family benefits public spending (% of GDP) ⁷²	Ratio of female to male labour force participation rate (%) ⁷³	Gender wage gap (% of median earnings of men) ⁷⁴	Unemployment rates (%) ⁷⁵	Tertiary educational attainment, female (%) ⁷⁶
Austria	20.1	5.4	2.5	85	12.1	-	48.0
Belgium	19.7	6.2	2.8	85	1.1	5.8	57.3
Croatia	14.7	3.6	-	83	7.3	-	49.2
Czechia	12	4.7	2.1	76	13.6	2.7	41.1
Denmark	22.2	5.9	3.3	88	5.8	5.8	57.9
Estonia	13	4.9	3.2	86	20.5	7.8	56.0
Finland	24.4	6.9	2.9	91	17.5	8.0	46.1
France	23.9	7.0	2.7	88	11.6	7.3	55.8
Germany	19.4	7.0	2.4	84	14.4	3.2	41.0
Greece	19	1.3	1.8	77	8.1	10.8	53.3
Hungary	13.5	3.9	2.4	79	13.3	4.4	36.0
Italy	20.9	5.8	1.4	70	3.3	7.1	37.1
Netherlands	15.5	5.5	1.6	88	14.8	3.7	58.8
Norway	19.1	5.1	3.2	90	4.5	4.0	67.1
Poland	16.2	2.3	3.0	77	10.2	3.0	56.0
Portugal	17.1	3.9	1.2	87	6.1	6.3	47.4
Spain	16.8	5.9	1.3	84	6.722	11.7	58.0
Sweden	19.5	5.3	3.4	90	7.3	8.4	61.9
Switzerland	12.8	4.5	1.7	86	13.8	-	51.2
UK	15.1	-	2.4	87	13.3	-	54.4

Key

High	>17.0	>6.0	>2.5	>85	<6.0	<5.0	>55.0
Medium	14.0-17.0	4.0 - 6.0	1.5-2.5	80 - 85	6.0-10.0	5 - 7.0	45.0 - 55.0
Low	<14.0	<4.0	<1.5	<80	>10.0	>7.0	<45.0

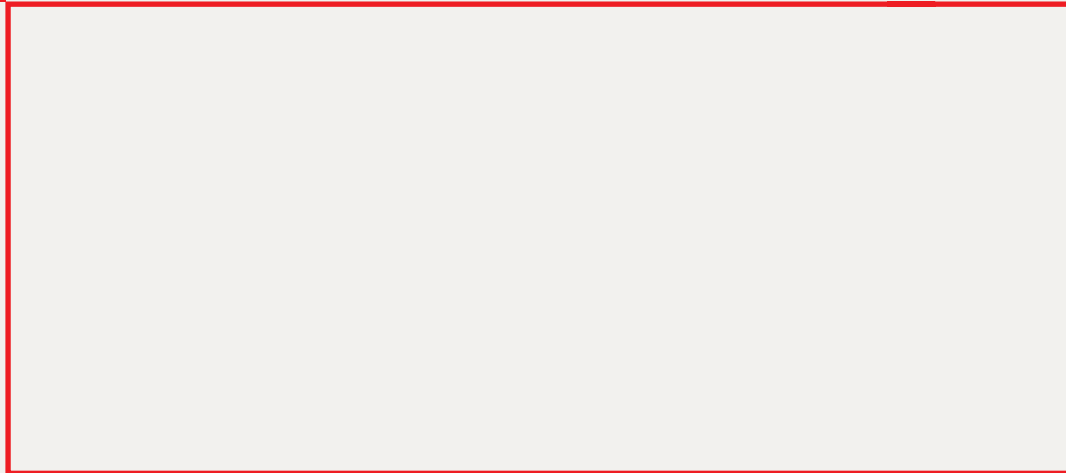
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