Institute for family studies

May 2025

Expand the Child Tax Credit

Pronatal Policy Works, and America Can’t Afford to Forego It

Lyman Stone

Introduction

In a recent *Wall Street Journal* article, economist Leonard Lopoo surveyed the international evidence on pronatalist policies, arguing that baby bonuses and other fiscal supports for parents “have proved costly and ineffective.” He concludes that such policies “may convince a couple to have a child earlier than originally planned.... But that’s it.... The government ends up paying for children who were already going to be born.” [1]

This view—that financial incentives do not greatly alter fertility behavior—is common among many policymakers and experts, but is not only wrong but important to contradict, as it directly impacts current policy debates. As America’s fertility rate plunges to new lows (recent revisions to population estimates suggest rates are below 1.6 per woman), policymakers are justifiably concerned about the demographic future of the country. That’s one reason Congress is presently considering an expansion of the child tax credit, which would essentially increase the monetary benefit, per child, granted by the U.S. government to American parents. Both President Donald Trump and Vice President J.D. Vance have expressed a desire to increase American birth rates, and this expansion would be at least partly based on such hopes. Thus, the question of whether or not “cash for kids” pronatalist policies—such as a boost to the child tax credit—can actually alter birth rates is extremely important.

So, what would happen to American fertility if the child tax credit were appreciably increased? Many are skeptical of the influence of cash transfers on fertility, but that skepticism is misplaced. Cash-for-kids works. It is relatively cost-effective, and its fertility effects help families achieve their own stated

[1] Leonard Lopoo, “How to Make American Babies Again,” *Wall Street Journal*, April 29, 2025.

family goals. The pronatal outcomes of an increased child tax credit are a good reason to support such an investment.

Key Findings

1. Financial incentives—such as child tax credits—can indeed boost fertility by a demographically significant degree, and have done so in many contexts around the world.

2. We suggest raising the nonrefundable child tax credit (CTC) to $2,000 and making it claimable against payroll taxes, raising the refundable additional child tax credit (ACTC) to $2,500, and indexing both values to keep up with inflation.

3. This reform to the child tax credit could plausibly boost fertility by 3–10%, raising U.S. population in 2100 by at least 5 and perhaps as much as 35 million people.

4. This plan would also increase incentives for parents to marry and increase incentives for parents to work, creating not only more births, but stronger families.

Part I: The Evidence Shows That Monetary Incentives Increase Fertility

Can pronatal financial incentives even boost births? The skepticism voiced in Lopoo's *Wall Street Journal* article is hardly unique: the same view can be found in academic publications, virtually any paper of record, and in fact almost any public writing about pronatal policy. Usually, the effects of pronatal policy are described as something like "small compared to how much they cost." Unfortunately, policymakers seem to have taken the wrong lesson from this, and don't realize that what academic researchers consider a small effect is quite different from how policymakers might think about effect sizes. In this first section, we review what the existing evidence actually says about pronatal policy.

Academic Studies Find that Cash Works

Economists have studied cash-for-kids policies for decades. Appendix A provides a list of studies exploring how monetary incentives have been shown to influence fertility. Overall, we reviewed 43 studies assessing 58 effects from policy changes that involved cash incentives. Although some other studies show that improvements in childcare affordability and/or maternity leave duration may also boost fertility, this review exclusively considers direct financial transfers, as they are most comparable to the Child Tax Credit. For each study, we identified the percentage change in births for the relevant group caused by the policy change, as well as the present discounted value of the policy change for families, as a share of GDP per capita for their country in that year.

For example, a $1,000-per-year child allowance available for eighteen years would count as worth approximately $13,000, because that is the present value of the income stream a family could expect to receive from the program if it persists across their child's entire eligible period. On the other hand, a $5,000 baby bonus would be valued at $5,000—since the money is received as one lump sum. This approach effectively measures total change in policy generosity. The figure below shows how policy generosity relates to fertility changes.

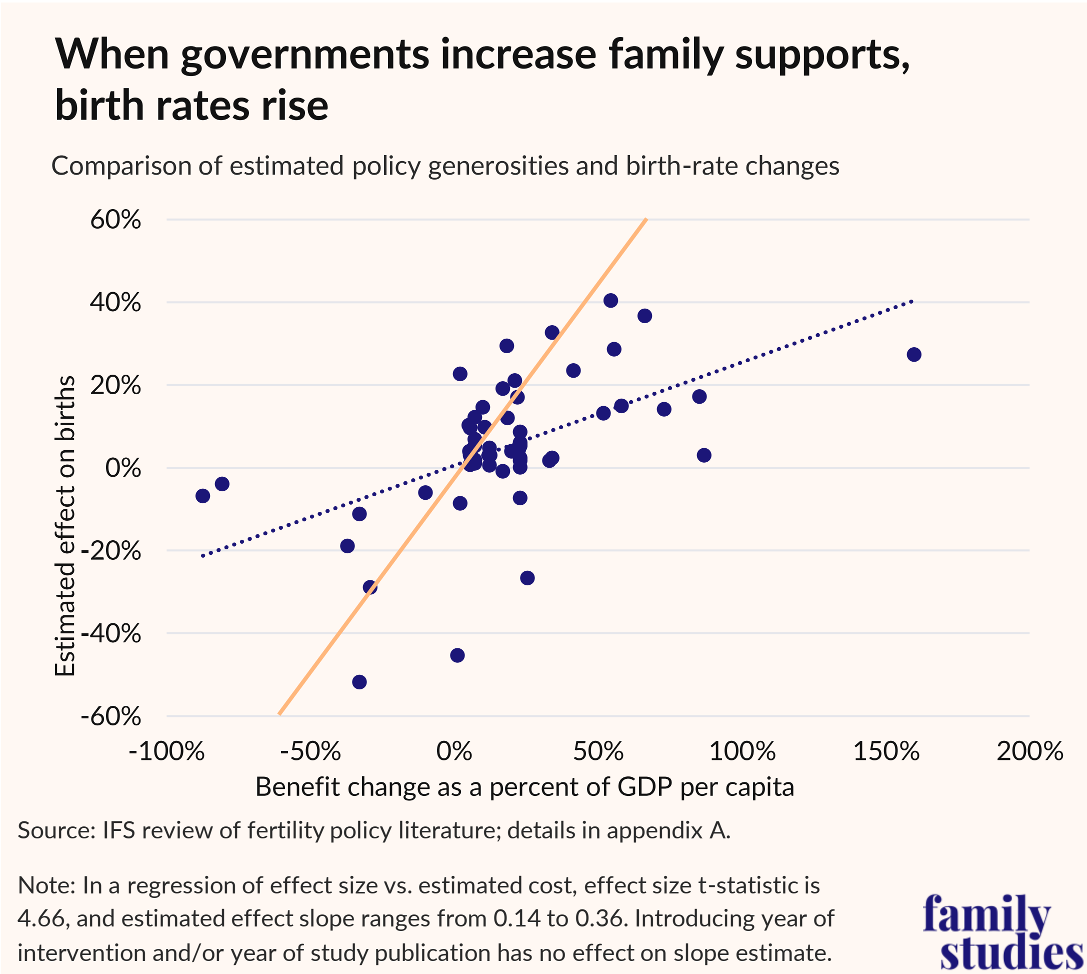

Figure 1: Comparison of effect sizes vs. standardized costs of pronatal policies

Source: IFS review of fertility policy literature; details in appendix A.

The orange line shows where the trendline would fall if a 1%-of-GDP-per-capita generosity increase per child yielded a 1% increase in births. Clearly, this is not the case. Nonetheless, average observed effects, represented by the dotted blue line, are indeed positive. Cuts to program generosity lead to birth declines; increases lead to birth increases. In general, a benefit increase worth 4% of GDP per capita per child is associated with an increase in birth probabilities of 1%. Thus, with the hypothetical $1,000-per-year child allowance increase, its $13,000 discounted value is about 15% of U.S. 2024 GDP per capita, so it might increase births among women receiving the allowance by 2–5%, a relatively modest impact. U.S. fertility would rise, vs. some credible estimate of what it would have been without an intervention, by about 0.05 births per woman.

Recent Policy Interventions Have Been Effective

Policymakers may be justifiably skeptical of amalgamations of studies; many studies of fertility policies are of very niche groups, and effect estimates may not generalize to the entire population. To account for this, we conducted a novel analysis. First, we identified a list of countries that implemented major expansions in their financial benefits for fertility sometime during 2000–2025.[2] We then conducted an analysis known as difference in differences. We included controls for life expectancy, population density, GDP per capita, and country-level net migration rates, as well as year-fixed effects, country-fixed effects, and linear-time trends for each country. (Full model details are available in appendix B.) Our sample of pronatal-policy-implementing countries comprises Estonia (2003), Australia (2004), New Zealand (2005), Czechia (2005), Mongolia (2006), Russia (2007), Latvia (2008), Japan (2010), Bulgaria (2012), South Korea (2012), Armenia (2014), Romania (2014), Hungary (2015), Canada (2015), Poland (2016), Lithuania (2017), and Slovakia (2018).

For these countries, we find that implementing their major policies increased fertility on average by 0.09 to 0.18 births per woman. Virtually all possible model specifications yielded significant positive effects, ranging from 0.04 to 0.3 births per woman. Thus, across a sample of the seventeen most recent national-level, cash-based pronatal policy interventions, there is strong evidence that cash-for-

[2] Sources: the family database of the OECD (Organisation for Economic Co-operation and Development), which tracks public spending on child-related programs; the wider published literature on pronatal policy reforms since 2000.

kids works. On average, the interventions increased fiscal transfers to families by about 0.7% of GDP and increased fertility rates about 9%. Above, we suggested that a $1,000 child tax credit expansion might increase U.S. births 2–5%, based on prior studies. Here, converting that per-child benefit into a total cost comparable to GDP, it would cost about 0.2% of GDP. Assuming that these effects scale linearly, if 0.7% of GDP interventions yielded 9% higher fertility, a 0.2% of GDP intervention should yield about 3% higher fertility, which is highly comparable to the 2–5% estimated from the micro-level academic studies. Thus, macro-level cross-country models of pronatal policy, and detailed micro-level studies of specific interventions, both depict fertility as responsive to financial incentive and yield virtually identical estimates of how responsive it is.

Hungarian Pronatalism Is Working

To illustrate these effects, we then attempted to create synthetic control models for each country by matching that country's fertility history to a counterfactual (hypothetical scenario) based on the post-intervention fertility trends of countries that were similar to the intervention country before treatment. For some (though not all) countries, producing a credible synthetic control model was indeed possible. For example, in Hungary, comparison to a synthetic control shows that Hungarian fertility started to rise as marriage rates rose after the 2012 constitutional protection of marriage. It continued rising after the CSOK program (which subsidizes home lending for young families) was implemented, and it bumped up yet again after new cash benefits were administered in 2019. Specifically, the age-adjusted fertility rate rose from 1.25 in 2012 to 1.52 in 2022 (the last year of complete comparable international data).

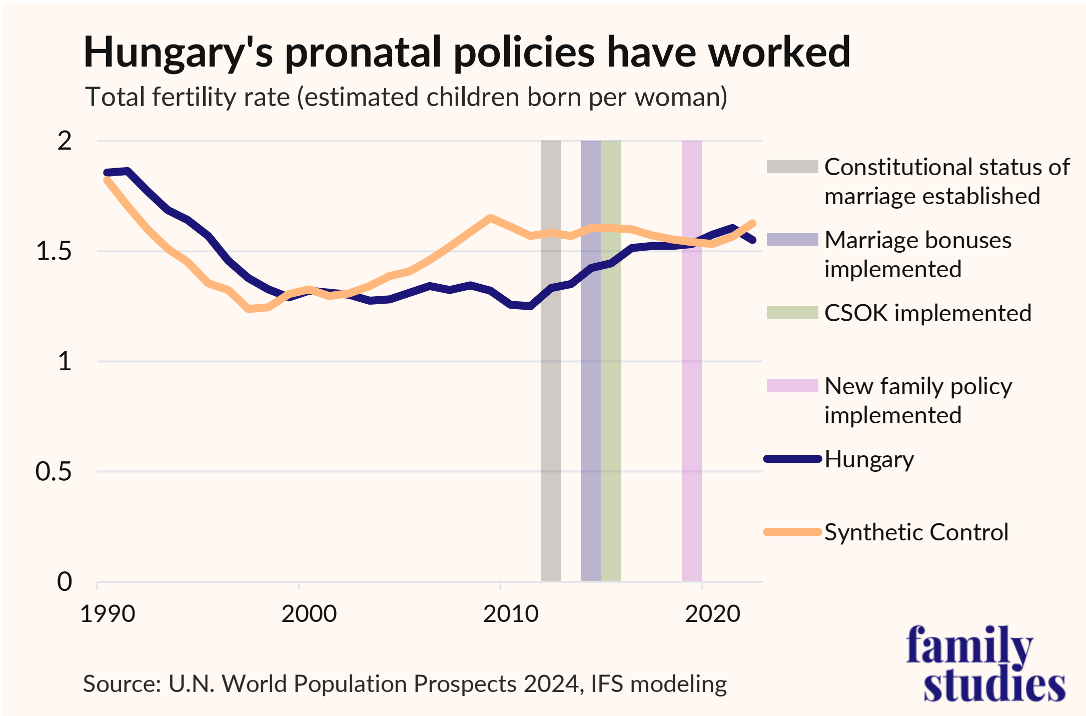

Figure 2: Hungarian fertility vs. synthetic control

Source: U.N. World Population Prospects 2024, IFS modeling

Hungary's case is worth dwelling on a bit longer. The Hungarian government routinely claims to be spending 5% of GDP on family policy.[3] Yet the evidence for this claim is unclear. The OECD's calculations, which establish a comparable definition of family spending across countries, suggest that Hungary is spending only 2.3% of GDP on family policy, and just 1.3% on cash benefits—about the same amount as Canada. On the Hungarian government's own statistics portal, adding up all spending on listed "family benefits" comes to just 1.1% of GDP.[4] Much of the spending Hungary counts is likely from its numerous tax breaks and loan subsidy programs; spending on these programs is much harder to track, and if other countries included their similar programs, it isn't clear how unusual Hungary's 5% spending claim would actually be.

[3] See Rodrigo Ballester, "The Hungarian Way: Supporting Families to Boost Birth Rates," European Conservative, March 1, 2025.
[4] See "Dissemination Database: Statistics by Subject" from the Hungarian Central Statistical Office.

Hungary's flagship pronatal effort, the CSOK, is particularly noteworthy. The program is expensive, yes, but it also serves two important non-demographic purposes. First, it ensures a highly liquid, forint-denominated mortgage market, which is an important issue for a small country like Hungary surrounded by the eurozone. Second, it is part of a longstanding project by the Hungarian government to subsidize the replacement of cramped and decrepit Soviet housing with better, modern options. So the high price Hungary is paying is not meant exclusively to boost births, but also to achieve other macroeconomic goals.

Hungary's policies have been in place for long enough now for us to say, conclusively, that they work. Demographers have invented metrics that adjust for such shifts in birth-timing because, as noted in Lopoo's comments above, pronatal policies could simply shift the timing of births without shifting the total number of babies. The most sophisticated such metric is known as the Bongaarts-Sobotka estimator for tempo-and-parity-adjusted fertility; it identifies how much change in fertility is due to individuals "speeding up" or "slowing down" progression to a next birth, in order to capture the true change in implied total family size. This estimator is available for many countries through recent years from the Human Fertility Database, and we have calculated it for Hungary through 2023, as well as several other countries from their own country-specific statistical sources.[5]

The figure below shows changes in tempo-and-parity-adjusted fertility for countries between 2005 and 2014 and 2014 and 2023, with countries arranged so that the leftmost countries had the most positive change in trajectory. Between 2014 and 2023, just two countries have seen documented increases in this measure of fertility: Hungary and Slovakia. Hungary had the most positive

[5] For comparison countries, tempo-and-parity adjusted fertility is available for some year between 2013 and 2022, most typically 2019 or 2020. For comparison to Hungary, we have extrapolated tempo-and-parity-adjusted fertility rates forward to 2023 based on ratios vs. simpler-to-calculated tempo-adjusted fertility rates estimated from U.N. World Population Prospects data, which are calculable through 2023.

break in trend after 2014 for this entire sample of industrialized countries. Before pronatal policy, Hungary's projected average family size was in freefall; after pronatal policy, it has inched higher. The fact that the other country to make this pivot is Slovakia, which dramatically expanded its pronatal policies after 2017, is striking. Fellow pronatal country Poland also saw a positive change in the trajectory of its tempo-and-parity-adjusted fertility.

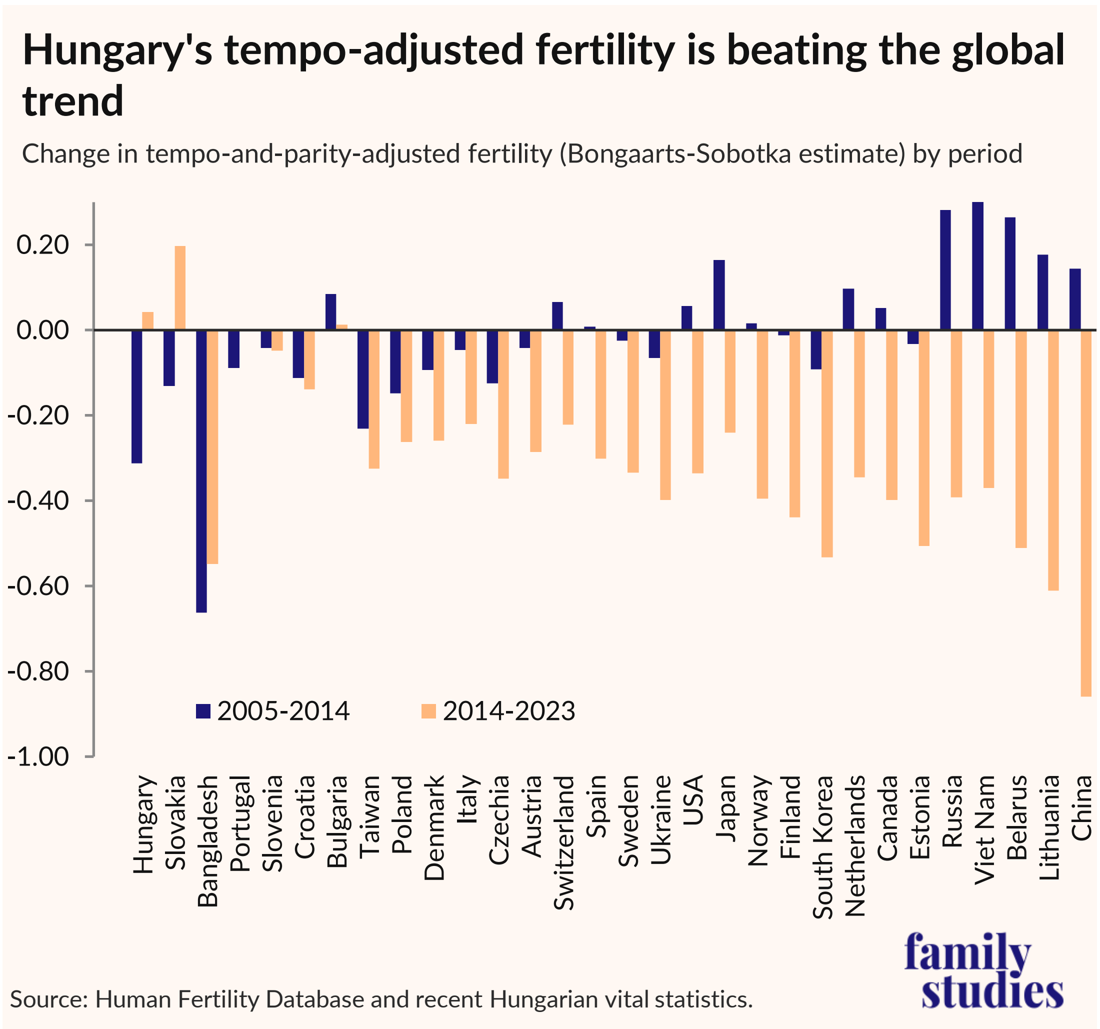

Figure 3: Change in tempo-and-parity-adjusted fertility rates by periods before/after Hungarian pronatal policy, by country

Source: Human Fertility Database, prior IFS calculations in "Is There Hope for Low Fertility" (2024), recent Hungarian vital statistics, and large-scale fertility surveys or censuses in China, Bangladesh, and Viet Nam, extrapolations to 2023 based on extrapolating TFRp ratio to aTFR in available years forward to 2023, aTFR calculated from U.N. data.*

Thus, the evidence supports the notion that Hungarian pronatalism is working. Due to ongoing policy measures encouraging marriage and fertility (more cash benefits were added in 2024), Hungarians are choosing to have bigger families, even as family size plummets in the wider world. The fact that Hungary's non-tempo-adjusted fertility rates have declined from 2022 to 2024 and early 2025 is not evidence of policy failure—rising rates of tempo-adjusted fertility and dramatically rising rates of marriage both suggest that long-run fertility in Hungary will remain above its prior trend, even if annual rates are volatile.

Other Cases Also Show that Pronatalism Works

On the other side of the world, Mongolia expanded its financial incentives for births during the 2000s but then has allowed them to shrink in value in recent years. The results are clear, as shown in the figure below.

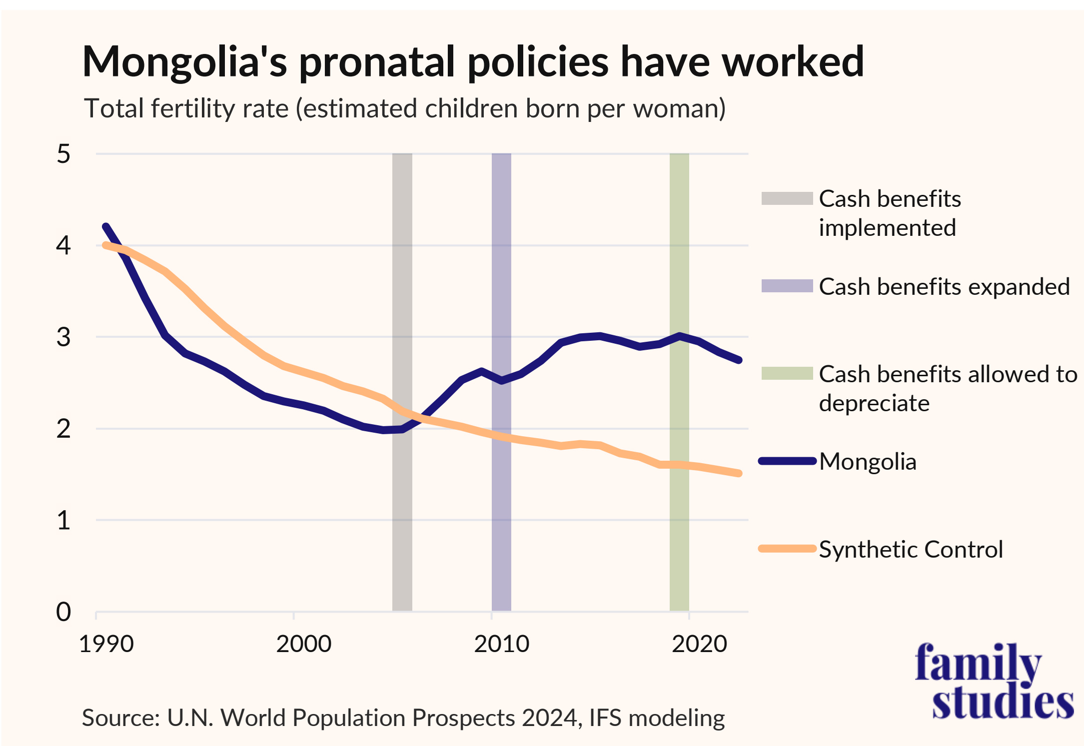

Figure 4: Mongolian fertility vs. synthetic control

Source: U.N. World Population Prospects 2024, IFS modeling

Finally, in Japan, while rising government financial supports have not prevented fertility decline, the synthetic control approach shows that they have certainly mitigated that decline.

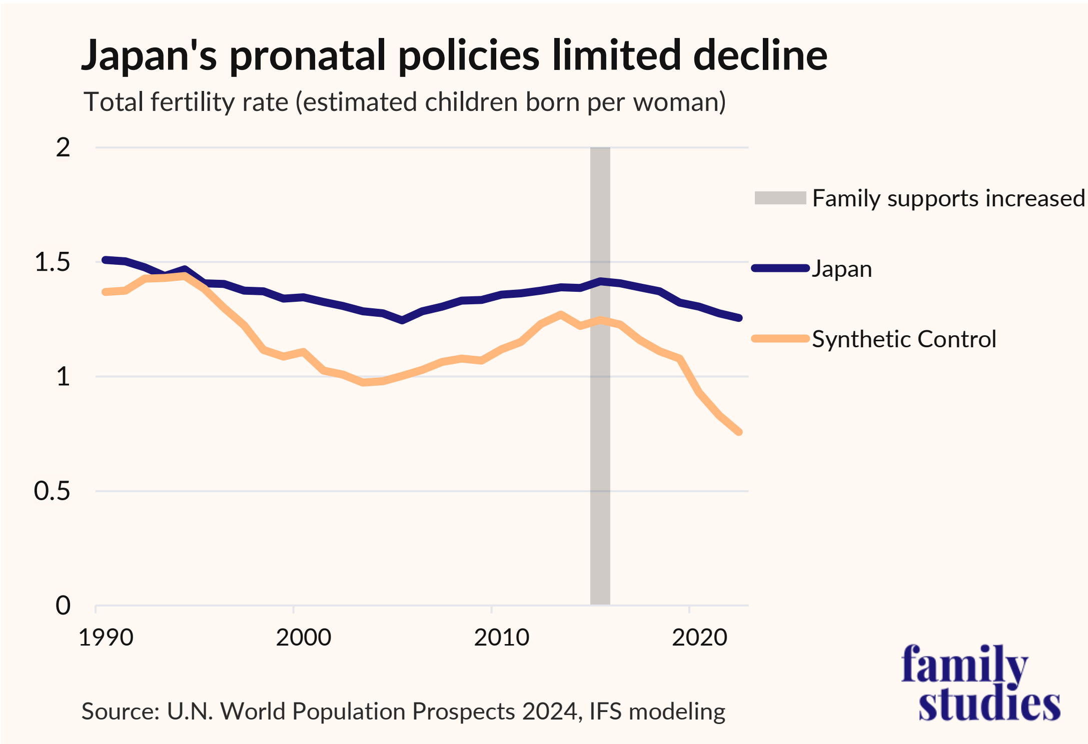

Figure 5: Japanese fertility vs. synthetic control

Source: U.N. World Population Prospects 2024, IFS modeling

Of course, these effects, and fertility trends more generally, are complicated by other factors. The literature review described above includes estimates on both short- and long-run fertility, but both the difference-in-differences and synthetic-control models assess only short- and medium-run measures of fertility. Some of the effect of financial incentives works via encouraging families to accelerate fertility they would have otherwise put off till later. As such, effects on completed family size tend to be modest—about one-third as influential as short-run fertility effects. Nonetheless, family policy does affect completed fertility, as the next example shows.

Following the breakup of Czechoslovakia in 1993, the two new countries experienced divergent family policies. Both reduced family spending through the mid-1990s, but then Slovakia kept cutting while Czechia held steady until the early 2000s. Then Czechia expanded their benefit generosity during 2005–2008, and again in 2018; but Slovakia's family spending kept falling until 2008 and saw no major increase until 2018. What happened to the completed fertility of women exposed to these two different dynamics?

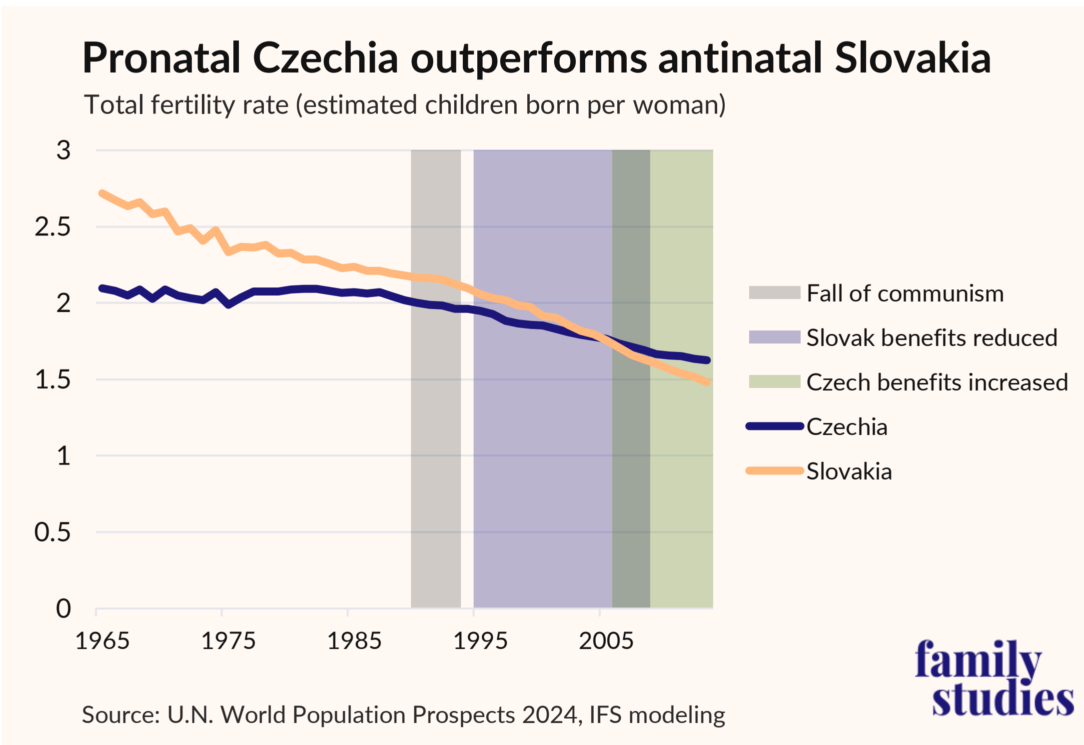

Figure 6: Czech vs. Slovak completed fertility as of age 40 vs. periods of major policy change, cohorts turning 30 in given year 1965-2013

Source: U.N. World Population Prospects 2024, IFS modeling

For birth cohorts who turned 30 between 1980 and 1993, Slovakian women had a relatively stable fertility advantage over Czech women. But as the Slovak Republic began cutting its family benefits moreso than Czechia, relative fertility rates began to converge. And as Czechia implemented pronatal policies after

2005, this process continued. For women who turned 30 in 2013 (thus 40 in 2023, the last cohort we have such data for), Czech women averaged 0.14 children more than Slovak women—a striking reversal from the 1980–1993 period, when Slovak women averaged 0.17 children more. The case of Czechia and the Slovak Republic is a relatively clean natural experiment where initially identical family policies diverged due to an exogenous political event—and thus fertility behaviors diverged as well.[6]

Shifting the Timing of Births Is Still a Policy Win

Moreover, even when tempo effects do make up a large share of the increased births from pronatal policies, that isn't a reason not to pursue pronatal incentives. Most fertility decline in rich countries over the last 20 years is due to fertility delay, and so helping families accelerate their fertility addresses a real problem for American families. Additionally, births to younger mothers (say, at 28 instead of 35) tend to be healthier. Mothers recover faster, and these births cost less for the healthcare system.[7] Younger women experience a lower burden of infertility in particular, and infertility services are a rapidly growing cost center for healthcare systems.

Policymakers may be concerned that younger births could have adverse consequences for women's career trajectories. But the evidence suggests that motherhood penalties, i.e., negative effects on women's earnings resulting from having children, arise entirely from cultural norms and values, which don't change much as women age. Contingent on those values, the exact age of planned births likely has little effect.[8] Furthermore, several studies in our analysis assess the

[6] Other evidence further supports the idea that pronatal policy made the difference: Czechs are considerably less religious than Slovaks, Czechs have higher incomes than Slovaks, Czech and Slovak women have similar educational attainments, and Czech women on average marry later than Slovak women. These variables should all result in Slovak women having higher fertility, yet in fact Slovak fertility has fallen below Czech fertility.

[7] Our analysis of CDC data on births 2016–2023 suggests that between the age groups of 25–29 and 35–39, rates of eclampsia rise 15%, rates of IVF usage rise 60%, rates of breech presentation rise 42%, and rates at which infants require ventilation or NICU admission, or experience seizures rises 15%. Older births are indeed dramatically riskier for mother and child and far costlier for healthcare systems.

[8] The work of Henrik Kleven is most instructive in this regard, especially his analysis of U.S. state variation ("The Geography of Child Penalties and Gender Norms: A Pseudo-Event Study Approach," Princeton University and NBER,

effects of profamily policy on women's work lives, and while some do indeed find negative effects, many find positive effects: helping women accelerate births may help their career prospects.

But perhaps most significantly, the tempo effect of acceleration is a real policy win for the sake of American preferences. The average mother's age at a birth in the U.S. today is 30, but Americans want to start their families earlier. They understand that an earlier start means more years for their children to enjoy their grandparents, more healthy years to spend time with their children, and a greater likelihood of meeting their own grandchildren. Our 2024 survey of about 3,700 reproductive-age women found that 22% wanted to have a child in the next two years, yet birth data suggest that only 10% will. This trend is not mostly driven by older women experiencing infertility: among those aged 25–29, 37% wanted a child in the next two years, while actual fertility for these women is likely to be about 17–20%, barely half as much.[9] So short-term fertility effects driven by acceleration of fertility are not policy failures; they are policy victories, because helping Americans get started closer to their desired time is a good thing.

Finally, tempo effects are real demographic victories. Having children two years earlier means those children enter the workforce two years earlier. As a general rule, it is true that for societies with a given fertility rate, their population growth rate will be similar or higher if their average spacing between generations is shorter. Especially in a world where pronatal policies are unlikely to be offset by falling late-in-life fertility—as reproductive medicine continues to improve—tempo effects are, simply, increases in population growth. Each generation arrives a bit earlier and overlaps more with subsequent generations, yielding more people at any given time.

April 2025), his analysis of role model effects (with Giulia Olivero and Eleonora Patacchini, "Child Penalties and Parental Role Models: Classroom Exposure Effects," September 2024), and his analysis of policy interventions, which finds essentially no effect of family policy on gender inequality in the labor market (with Camille Landais, Johanna Posch, Andreas Steinhauer, and Josef Zweimüller, "Do Family Policies Reduce Gender Inequality? Evidence from 60 Years of Policy Experimentation," American Economic Journal: Economic Policy 16, no. 2 [2024]: 110–149).

[9] "IFS Housing, Neighborhoods, and Family Formation Survey," conducted August 2024.

Part II: Blueprint for a Practical, Pronatal Child Tax Credit

For all the reasons outlined above, policymakers should consider increasing cash benefits for fertility. While an increase of 0.05 or 0.1 or 0.15 children per woman may seem small, were such an increase sustained, then by the year 2100, there would be 10–30 million more Americans—essentially the equivalent of adding the population of the entire state of Florida to the union. Cash benefits for fertility have large effects over time, because fertility rates are like compound interest: the extra children who are born then have extra children in the future.

But policymakers face real budget constraints. Using the kinds of relationships described in our findings, boosting U.S. fertility up to the replacement level of 2.1 children per woman purely with cash would require the implementation of a fully refundable tax credit worth $7,000 to $9,000 per child, paid for without cutting other programs for kids and without disproportionately raising taxes on families. This scale of spending is not feasible, as it would cost perhaps as much as $550-800 billion more per year over current spending.

But just because a policy cannot get fertility to 2.1 doesn't mean it's not worth doing. The difference between U.S. fertility rates in 2030 being 1.5 vs. 1.65 would be tens of millions of extra Americans by 2100, and this kind of change is within the realm of things pronatal policy can accomplish.

Many other political constraints also tie the hands of legislators. Any new family policy must be carefully considered in light of its effects on incentives for parents to work. Discouraging parents from working is bad for the public budget and ultimately, bad for kids and parents. Encouraging work helps families escape poverty, which reduces spending on other welfare programs. Pronatal policy, then, should avoid discouraging work and creating welfare dependency. Beyond work effects, it is all too easy to create accidental marriage penalties that discourage people from creating stable households, which are best for children. Such effects on marriage incentives, then, must also be carefully avoided.

Below, we lay out a rubric for a child tax credit reform that we believe is politically practical. It could be feasibly paid for (though not the focus of this report, we discuss some options for budget-balancing in the conclusion) and would maximize the pro-family benefits of the CTC while creating strong work incentives. The table below compares our proposed reform to current law, and to the CTC and ACTC amounts as they will revert to in 2026 if the Tax Cuts and Jobs Act (TCJA) expires.[10]

Put simply, our proposal dramatically increases the nonrefundable CTC, while also expanding the base of taxes it can be claimed against. This effectively increases the size of marriage and work incentives facing families, even as the more modest increase in the refundable ACTC provides work incentives stretching further up the income brackets. And by incorporating inflation adjustment, the purchasing power of these benefits for families is protected for the future.

Because the CTC phases in on a total-credit rather than a per-child basis, this plan also addresses concerns about welfare dependency: only relatively high-earning families would be eligible for the credit for a third, fourth, or fifth child, since low-earning families wouldn't have enough earnings for credit values of that scale to be phased in. For families with three children, the full value of the refundable credit would not phase in until the family had over $75,000 in income. This dynamic is already current law, and we do not propose to change it;

[10] The TCJA of the first Trump administration increased the child tax credit, but many of its provisions are set to expire after 2025, barring intervention from Congress.

it is impossible for families with low incomes to acquire large incomes simply by having children.

family studies	Current Law (TCJA)	After TCJA Expiration (2026)	Proposed
Nonrefundable CTC Value	$300	0	$2,000
Refundable ACTC Value	$1,700	$1,000	$2,500
Total Maximum Credit Value	$2,000	$1,000	$4,500
Inflation Adjustment	None	None	PCE Deflator[11]
CTC Claimable Against…	Income Taxes	Income Taxes	Income + Payroll Taxes
Phase-In Rate of ACTC	15%	15%	15%

In fact, strangely enough, by increasing the per-child credit size, our proposal reduces the marginal incentives for low-income families to have a third, fourth, or fifth child—the credit from their first or second child is so large that families who are working but still lower income are unlikely to capture the full benefit. Families would need over $20,000 in income to have fully claimed even their first child's complete credit, and over $40,000 for their second. The figure below shows how much credit a married couple would receive at various incomes, based on their number of children.

We have not proposed a cap on the number of child tax credits a family can claim, but if policymakers are concerned about excessive generosity for large, high-earning families, setting a cap at six or seven children is not unreasonable. Alternatively, policymakers could reduce the threshold at which benefits begin to

[11] The Personal Consumption Expenditures (PCE) Price Index, also called the PCE Deflator, tracks prices of U.S. goods and services and is used to gauge inflation.

phase out to $200,000 for married couples and $100,000 for singles, instead of the current $400,000 and $200,000. Given the large credit size increase, most families earning between $200,000 and $400,000 would actually still be better off with a $4,500 credit and $200,000 phase-out threshold than they would be with a $2,000 credit and a $400,000 phase-out threshold. If policymakers wish to manage costs by limiting generosity for large, rich families, our view is that it would be better to reduce the phase-out threshold to $200,000 for married couples and $100,000 for singles than to cap the credit at some fixed number.

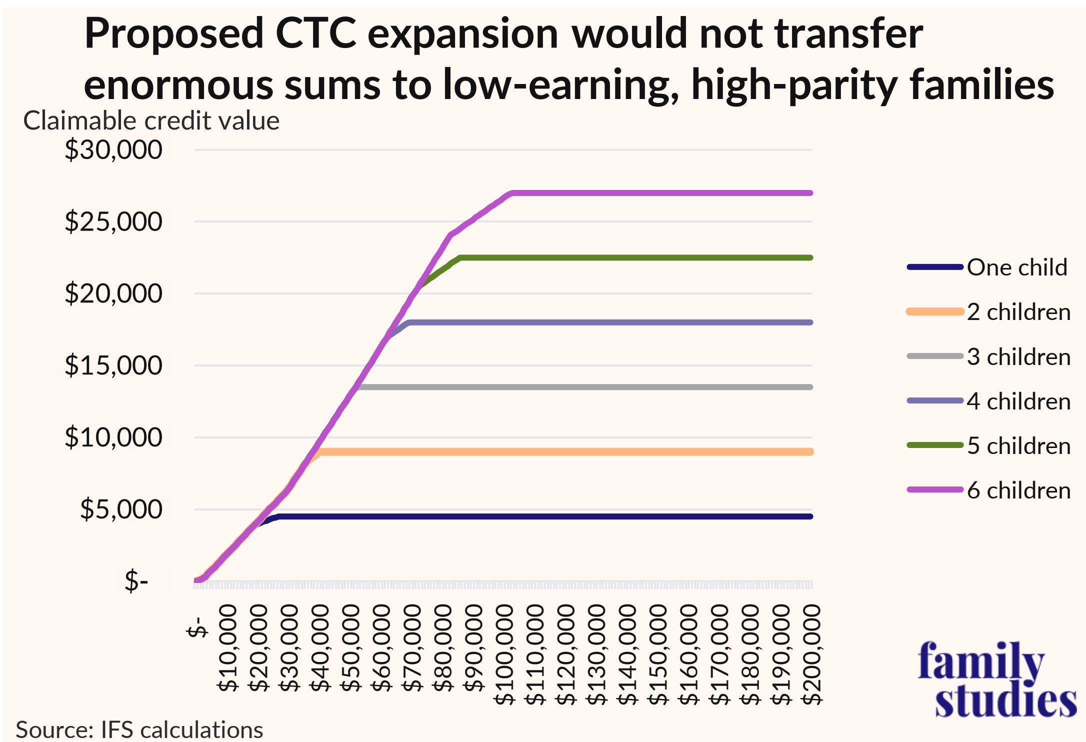

Figure 7: Claimable credit value under IFS-proposed policy, by married-couple income and child number

Source: IFS calculations

A Bigger Child Tax Credit Incentivizes More Work, More Marriage, and More Babies

What effect do these changes have on effective tax rates? With these changes made and no others, what would be effective income- and social-security tax rates, at various levels of income? For these calculations, we limit analysis to families with $200,000 or less in income, since effects at higher incomes depend on if policymakers elect to curtail costs by limiting eligibility or by reducing the phase-out threshold.

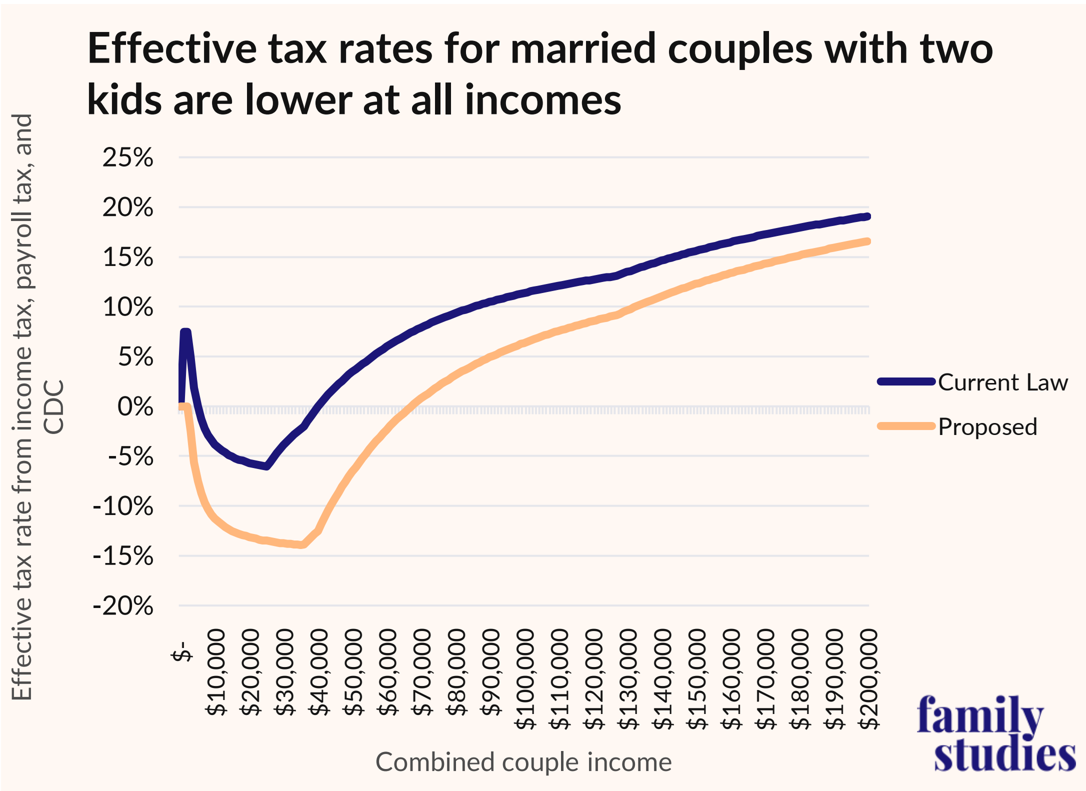

Figure 8: Current and counterfactual effective tax rate for a married couple with two children incorporating income taxes, payroll taxes, and child tax credits

Source: IFS calculations

For a hypothetical married couple with two kids, this proposal reduces taxes across the board. Obviously, exact reductions would depend on what other policies are used as budget-balancers for the cost of this expansion, but the largest reductions in effective tax rates under this proposal flow to families with about $40,000 in earnings. These are families with workers in the household who are holding down real jobs but may be struggling to make ends meet. At the U.S. median household income of $88,000, our proposal amounts to a tax cut worth 6% of income for a 2-child family.

What about unmarried couples?

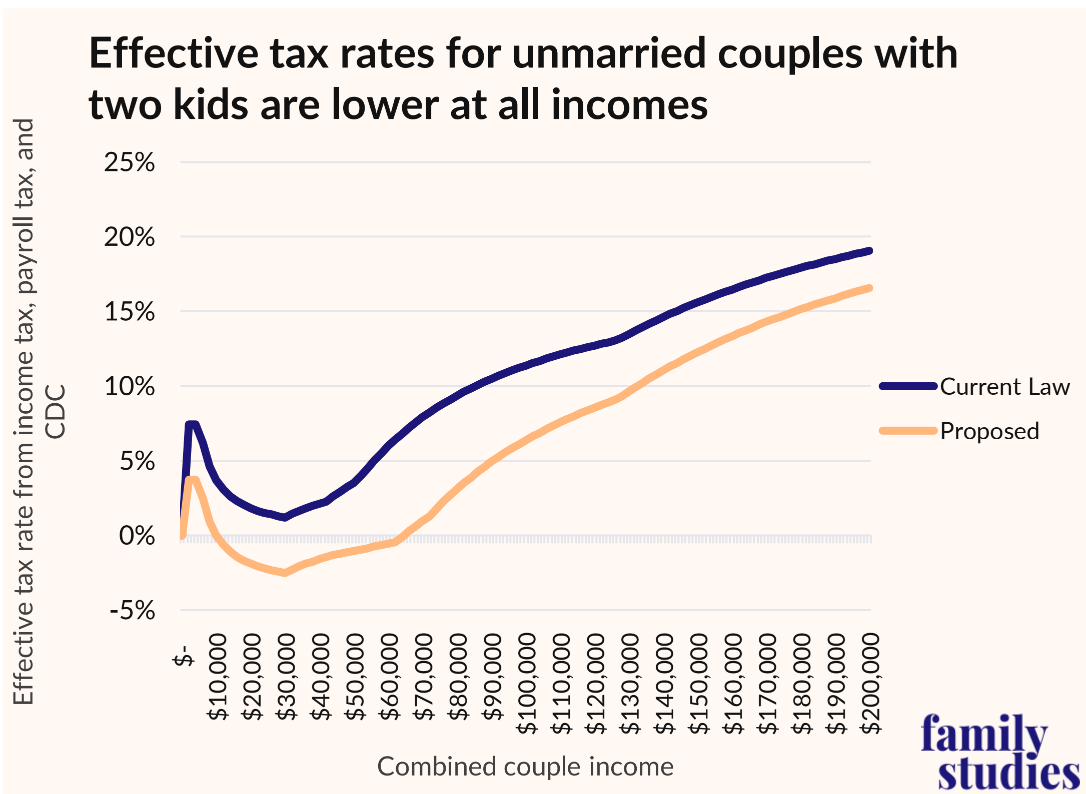

Figure 8: Current and counterfactual effective tax rate for an unmarried couple with two children incorporating income taxes, payroll taxes, and child tax credits

Source: IFS calculations

Our proposal would also cut taxes for unmarried couples, but by less. In practice, the interaction of tax brackets and refundability rules means that our suggested policy incentivizes marriage to a considerable degree.

The figure below shows how much the above hypothetical unmarried couple's income—net of income taxes, payroll taxes, and CTC/ACTC benefits—would increase if they got married, under current law and our proposed policy design.

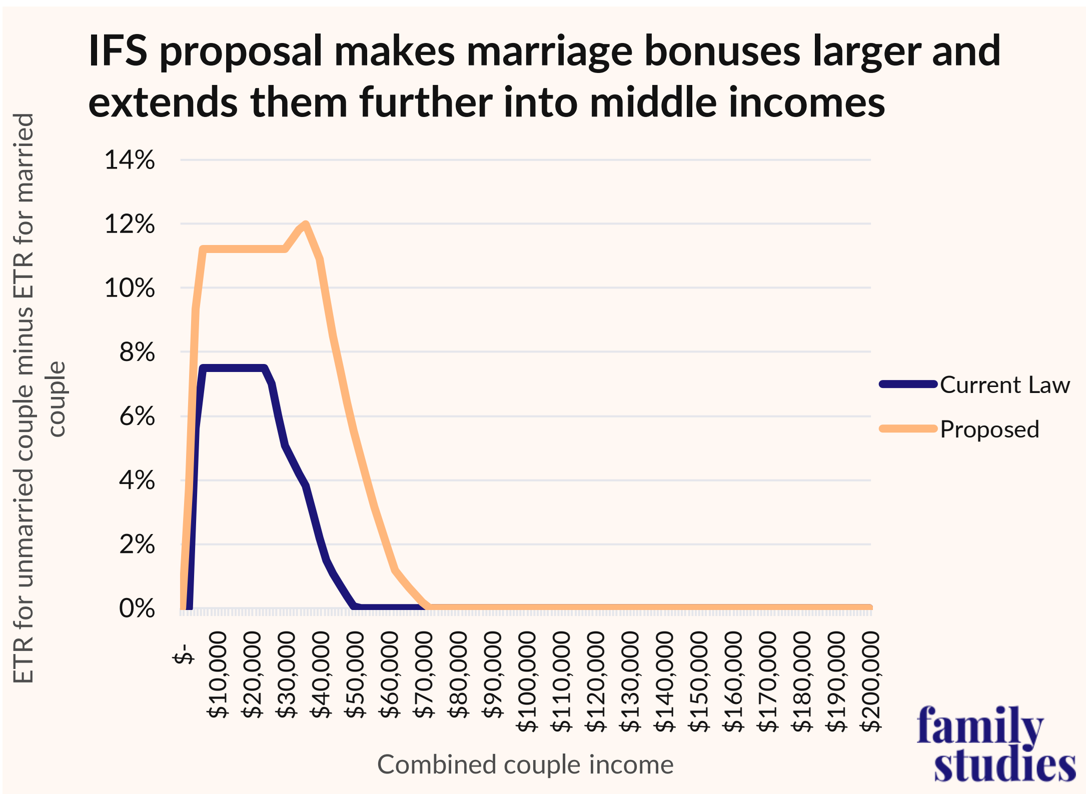

Figure 9: Current and counterfactual net tax returns to marriage a couple with two children incorporating income taxes, payroll taxes, and child tax credits

Source: IFS calculations

As can be seen, we propose a rather large marriage bonus for households below the median household income. Unmarried parents would face strong positive rewards for getting and staying married, which is beneficial for the children they are raising. [12]

[12] Grant Bailey & Wendy Wang, "Family Structure Matters for Rich Kids, Too," IFS, April 17, 2025.

Finally, economists often worry about implicit marginal tax rates (IMTRs), i.e., the share of a marginal extra dollar earned which an individual would get to keep after taxes and benefit phase-outs. The figure below shows IMTRs for our hypothetical married couple:

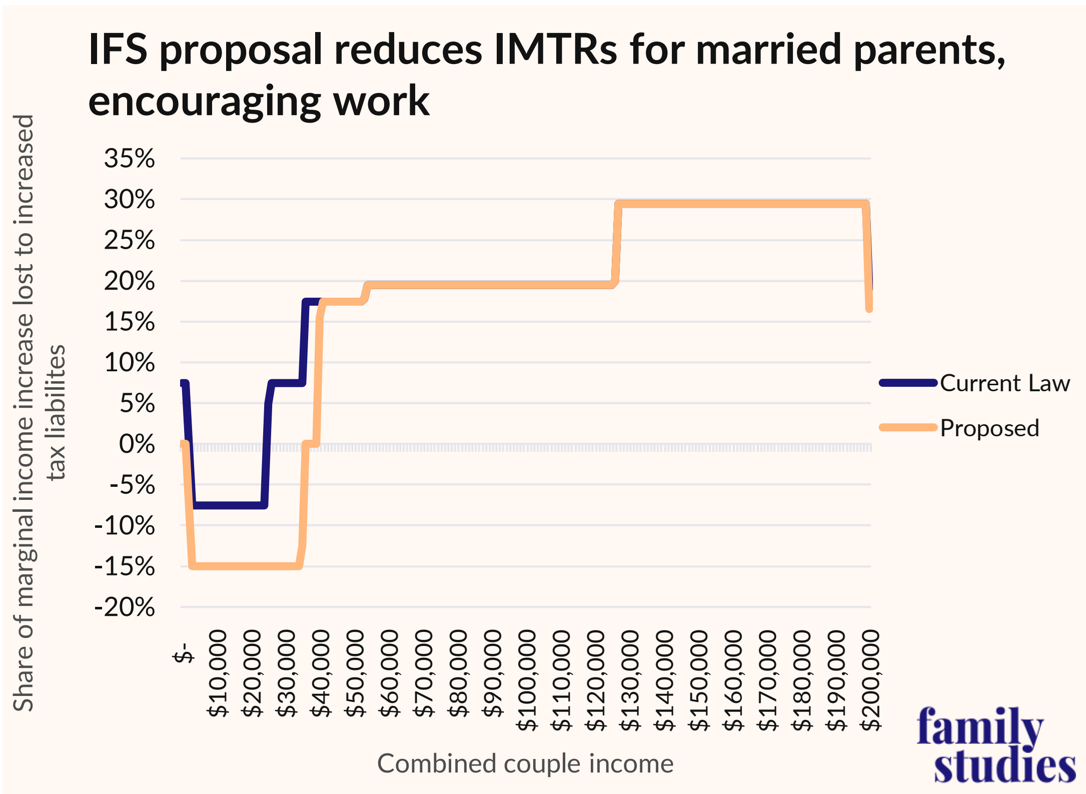

Figure 10: Current and counterfactual implicit marginal tax rate for a married couple with two children incorporating income taxes, payroll taxes, and child tax credits

Source: IFS calculations

Our proposal reduces IMTRs at low-to-moderate incomes. Thus, we manage to increase the generosity of the CTC, encourage marriage, extend nonrefundability further down the income brackets, increase refundable tax credits, and yet strengthen work incentives. The figure below shows the combined IMTR for unmarried couples.

Again, our proposal strengthens work incentives, in this case all the way up to almost $80,000 in earnings for unmarried couples with two children. In other words, we would expect this child tax credit to both increase fertility and increase employment, which is similar to what has been observed for many other pronatal policies.

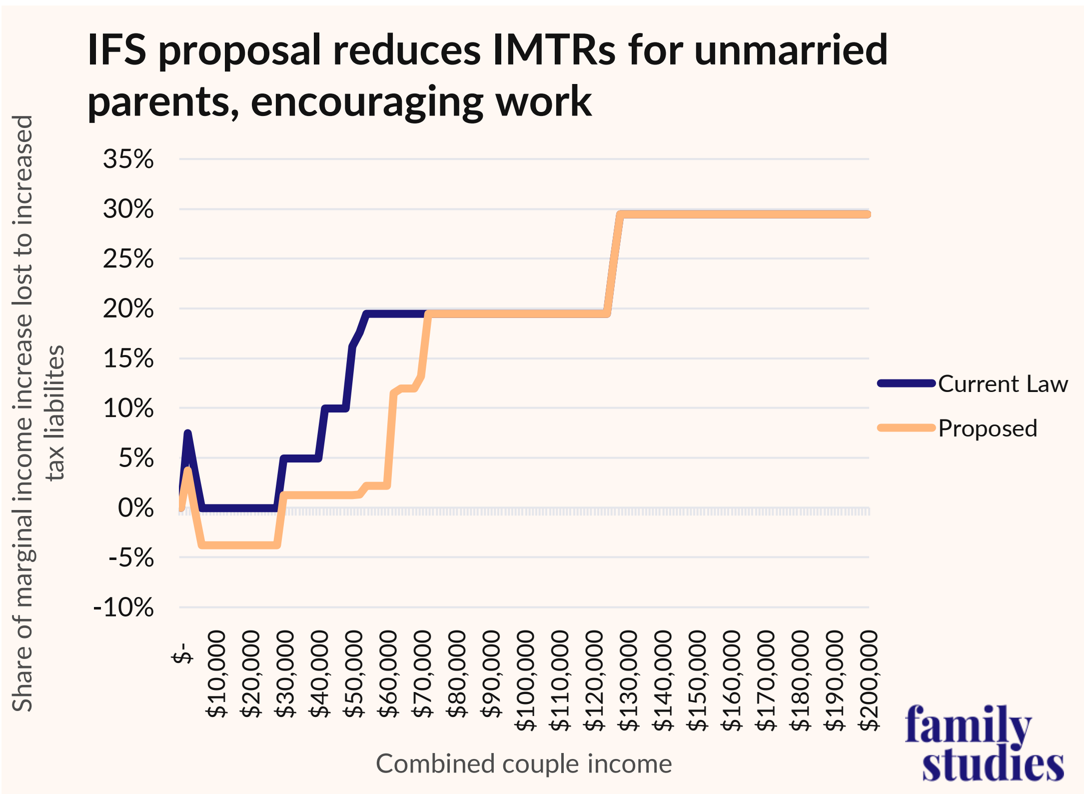

Figure 11: Current and counterfactual implicit marginal tax rate for an unmarried couple with two children incorporating income taxes, payroll taxes, and child tax credits

Source: IFS calculations

America Can Afford to Pay for Pronatalism

If policymakers want more Americans to get married, have kids, and support their families with money they earn through stable employment, then the child tax credit should be expanded along the lines we suggest. Such an expansion would come at a cost: somewhere between $200 and $350 billion in additional spending per year over the next five years. This is a somewhat larger fiscal impact than even the most generous CTC proposals currently under discussion by Congress, and thus finding ways to pay for a policy that large may be challenging. The currently prevailing strategy of consolidating the earned-income tax credit (EITC) and eliminating head-of-household filing status (and other poorly structured or outdated programs) won't do it: these approaches can only yield $50-$75 billion per year. Moreover, consolidating other programs that benefit families should not be the only strategy used to pay for new family benefits: it's robbing Peter's family to pay Paul's family.

We would rather encourage policymakers to find revenue sources that also improve life for families by addressing significant drivers of social problems and family breakdown. Policymakers could consider special per-usage-minute excise taxes on pornography providers or producers, social media companies, and higher tax rates on gambling—similar to excise taxes already charged on gun manufacturers, gasoline, airline tickets, fishing equipment, indoor tanning services, ship passengers, expensive insurance policies, and alcohol, for example. In 2023 the Federal government raised $209 million from excise taxes on fishing gear and bows-and-arrows and $68 million from taxes on tanning salons; these are small amounts overall, but they point to the absurdity of leaving addictive pornography and social media untaxed. Likewise, excise taxes on gambling (especially addictive online gambling) already exist: a paltry 0.25% of wagers are charged as an excise tax, which raised $375 million in federal revenues in 2024 vs. industry revenues of almost $72 billion. Across all excise taxes, the Federal government raised almost $100 billion in revenue in 2023; new excise taxes for addictive digital products or higher rates for existing products like alcohol would be a reasonable way to cover at least a few billion of the revenue needs for an expanded child tax credit.

Likewise, if the child tax credit is to be claimable against social-security taxes paid, policymakers could consider adjusting FICA taxes, such as by raising or removing the cap on incomes against which payroll taxes are calculated. High-earners do not pay payroll taxes on their whole incomes, while working-class families do. Since reimbursing the child tax credit against payroll taxes in principle worsens the de facto actuarial outlook for Social Security and Medicare, it would be reasonable to find new Social Security and Medicare-related revenues. Removing the taxable income cap entirely would yield about $200-$300 billion in revenues per year; more than enough to pay for the entire child tax credit expansion, and so the cap need not be removed entirely, but could simply be raised to a moderately high threshold.

The key point in all of this budgetary exercise is simple: there are plenty of revenue options available for policymakers to pay for a much larger Child Tax Credit without simultaneously raising income taxes for the bottom 90-95% of Americans. None of the pay-fors are outside of the range of things the Federal government already does and mostly amount to cleaning up poorly designed policies anyways. Policymakers should be willing to raise taxes on things that are harmful to family life or that impact relatively few families, in order to create a more broad-based culture of strong marriage, steady work, and higher fertility.

Appendix A: Literature Review

Changes in Annual or Monthly Cash Payments for Children Given Throughout Childhood

Paper	Location	Period	Group for Effect Estimate	Discounted Benefit Amount as % of GDP Per Capita or Group Income if Provided	Estimated % Effect on Births
- -	-	-	-	-	-
Kalwij (2010)	16 W. European countries	1965-2003	All births	12%	1%
Luci-Greulich & Thevenon (2013)	OECD	1982-2007	All births	87%	3%
Almlund (2025)	Denmark	2010	All births	-33%	-11%
Galloway & Hart (2015)	Northern Troms, Norway	1989	All births	6%	3%
Riphahn & Wiynck (2017)	Germany	1996	High income, first children	2%	-9%
			Low income, first children	26%	-27%
			High income, second children	2%	23%
			Low income, second children	1%	-45%
Sandner & Wiynck (2023)	Germany	2011	Low-income	-87%	-7%
Brewer et al (2012)	United Kingdom	1999	Low-income	58%	15%
Reader et al (2025)*	United Kingdom	2017	Third birth	-81%	-4%
Bokun (2024)	Poland	2016	All births	160%	27%
Chirkova (2013)	Russia	2007	Second birth	66%	37%
Gabos et al (2009)	Hungary	1950-2006	All births	20%	4%
Cohen et al (2009)	Israel	2003	All births	-29%	-29%
Yonzan et al (2024)	Alaska, USA	1982	All births	52%	13%
Garganta et al (2017)	Argentina	2009	Low-income	55%	40%
Zhang et al (1994)	Canada	1920-1990	All births	34%	2%
Parent & Wang (2007)	Quebec, Canada	1974	Short-run	17%	19%
			Long-run	17%	-1%
Milligan (2005)	Quebec, Canada	1987	All births	23%	5.50%
			First birth	5%	4%
			Second birth	11%	9.70%
			Third birth	85%	17.20%
Kim (2014)	Quebec, Canada	1987	All births	23%	0%
Ang (2015)	Quebec, Canada	1987	All births	23%	2%
Malak et al (2019)	Quebec, Canada	1987	Short-run	23%	9%
			Long-run	23%	2%

Changes in Lump-Sum Cash Payments for Children Given At Time of Birth

Paper	Location	Period	Group for Effect Estimate	Discounted Benefit Amount as % of GDP Per Capita or Group Income if Provided	Estimated % Effect on Births
Boccuzzo et al (2008)	Friuli-Venezia, Italy	2000	Second birth	13%	3%
			Third birth	19%	12%
Pinto et al (2021)	Armenia	2009	3rd or higher birth	34%	33%
Gonzalez and Trommlerova (2023)	Spain	2007	All births	12%	3%
			All births	-10%	-6%
Kim (2024)	South Korea	2000	All births	12%	5%
Drago et al (2010)	Australia	2004	All births	7%	1%
Parr (2011)	Australia	2004	All births	7%	2%
Langridge et al (2012)	Australia	2004	All births	7%	12%
Sinclair (2013)	Australia	2004	All births	7%	5%
Bonner and Sarkar (2020)	Australia	2004	All births	7%	2%
Reich (2024)	Australia	2004	All births	7%	7%

Changes in Generosity of Maternity Pay or Wage Replacement

Paper	Location	Period	Group for Effect Estimate	Discounted Benefit Amount as % of GDP Per Capita or Group Income if Provided	Estimated % Effect on Births
Hiriscau (2024)	Romania	1990	Second birth	21%	21%
Tudor (2016)	Romania	2004	All births	56%	29%
Raute (2019)	Germany	2007	All births	10%	15%
Ang (2015)	Quebec, Canada	2006	All births	42%	24%

Changes in Tax Benefits

Paper	Location	Period	Group for Effect Estimate	Discounted Benefit Amount as % of GDP Per Capita or Group Income if Provided	Estimated % Effect on Births
Landais (2003)	France	1980	High earners	33%	2%
Laroque and Salanie (2008)	France	2000	All births	73%	14%
Chen (2010)	France	1945	High earners	18%	29%
Chen (2010)	France	1950	High earner first births	-37%	-19%
Azmat & Gonzalez (2010)	Spain	2003	All births	23%	5%
Whittington et al (1990)	United States	1970-1990	All births	6%	10%
Crump et al (2011)	United States	1980-2010	Short run	6%	1%
			Long run	6%	1%
Parr (2011)	Australia	2004	All births	5%	10%
Elmallakh (2023)	France	2014	High earners	-33%	-52%

Changes in Cash Benefits for At-Home Care

Paper	Location	Period	Group for Effect Estimate	Discounted Benefit Amount as % of GDP Per Capita or Group Income if Provided	Estimated % Effect on Births
Aassve & Lappegard (2008)	Norway	1998	All births	22%	17%
Gathmann & Sass (2018)	Thuringia, Germany	2006	First births	23%	-7%
			2nd birth	23%	5%
			3rd+ birth	23%	6%

Appendix B: Statistical Models

Replication data in a Stata-standard .dta file format and relevant code used in a .do file format have both been posted to an OSF repository at the following URL: https://osf.io/6vhm2/

GDP per capita data is supplied by the Maddison Project Database; for a handful of countries for which Maddison data is missing, data from the World Bank is used instead.

Fertility, population density, infant mortality, sex ratio, net migration, and life expectancy data are all taken from the U.N. World Population Prospects (WPP) 2024 version, with a limited number of exceptions for total fertility rate (TFR). The U.N. WPP has several countries for which its estimates are somewhat deficient due to data quality issues (in a few countries), border changes, or other factors. This is the case for Armenia, as well as for some of our control-group countries—Georgia, Azerbaijan, Moldova, and Ukraine. For these, we adopt an alternative

TFR series that is highly similar to the U.N. WPP but reflects a constant-territory baseline (relevant for the cases of Georgia, Moldova, and Ukraine) and which accounts for massive changes in TFR driven by revisions to underlying population denominators after major censuses (relevant for Georgia, Armenia, Azerbaijan, and Moldova). Re-estimating models with unmodified U.N. WPP data yields highly similar results. Results of difference-in-differences modeling are shown in the table on the next page.

We also provide an event-study style estimate below, as is conventional for difference-in-differences models. As can be seen, there is a clear change in fertility rates after pronatal policies are implemented.

Estimated Effect of Recent Pronatal Policies in Differences-in-Differences Style Framework

	Model 1	Model 2	Model 3	Model 4
Had Policy X After Year	0.091	0.594	0.140	0.136
standard error	*0.046*	*0.035*	*0.025*	*0.025*
t-statistics	*1.97*	*17.05*	*5.56*	*5.46*
$10,000 higher GDP per capita				0.052
standard error				*0.008*
t-statistics				*6.22*
500 more people per square mile				-0.034
standard error				*0.018*
t-statistics				*-1.92*
Increase of M:F ratio by 10				0.032
standard error				*0.008*
t-statistics				*3.78*
Increase of infant mortality by 10 per 1,000 births				0.068
standard error				*0.013*
t-statistics				*5.09*
Life expectancy rises by 5 years				0.030
standard error				*0.016*
t-statistics				*1.93*
Net migration rate rises by 5 per 1,000				-0.004
standard error				*0.001*
t-statistics				*-4.01*
Country fixed effects	X	X	X	X
Year fixed effects		X	X	X
Country linear time trends			X	X
Included countries	160	160	160	160
Country-year observations	5120	5120	5120	5120
Within-R squared	0.00	0.47	0.89	0.89
Between-R squared	0.06	0.06	0.51	0.45
Overall-R squared	0.02	0.06	0.41	0.36
F-statistic	3.88	135.95	200.24	199.41

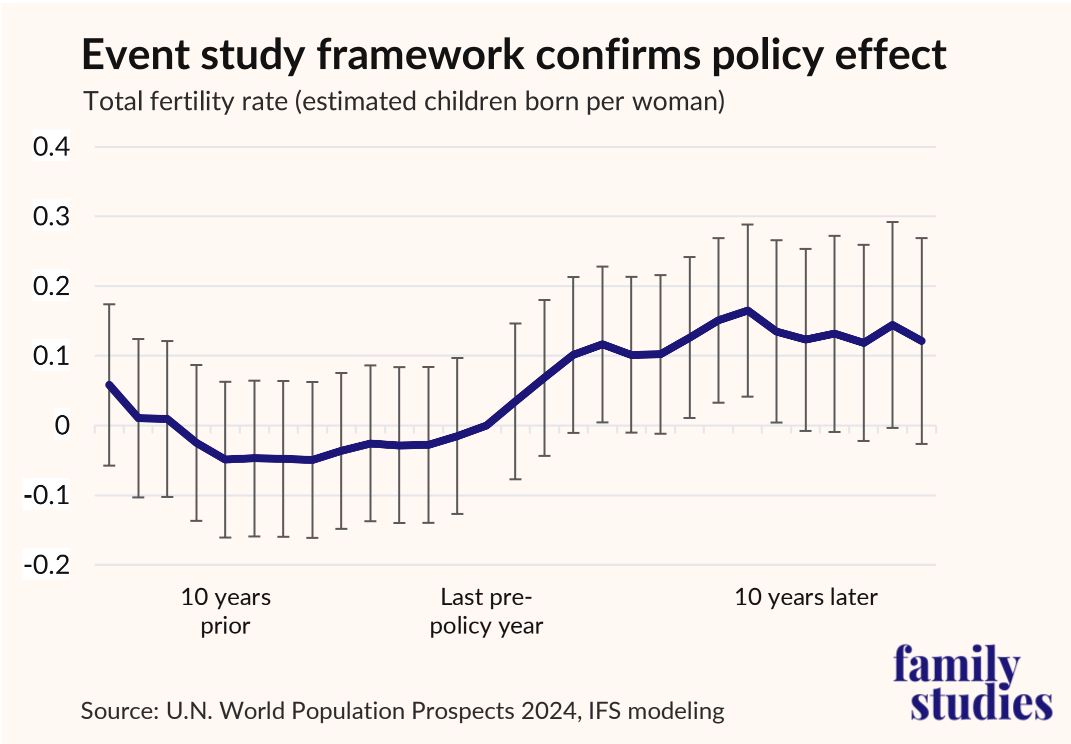

Figure A1: Event-study estimates of pronatal policy effects

Source: IFS calculations

For synthetic-control models, the “synth” package in Stata was used. Synthetic controls were estimated in order to match GDP, infant mortality, sex ratio, density, life expectancy, and net migration of countries in their pre-intervention periods, with additional weights provided to bias the model toward countries on the same continent, with similar histories under communism, recency of independence, and presence of either a Muslim or Buddhist population plurality. The table below provides basic model statistics for each synthetic model and a summary of observed effects.

Country	Policy Year	Pre-Intervention Model Error Magnitude	TFR in 2000	Error / TFR	Direction of Effect	Donor Pool Restrictions	Other Notes
Estonia	2003	0.11	1.37	8%	Neutral/Mixed		
Australia	2004	1.00	1.78	56%	Positive	New Zealand excluded from donor pool due to 2005 policy change	
New Zealand	2005	0.71	1.96	36%	Neutral/Mixed	Australia excluded from donor pool due to 2004 policy change	
Czechia	2005	0.20	1.28	15%	Positive		
Mongolia	2006	1.40	2.12	66%	Positive		
Russian Federation	2007	0.08	1.43	6%	Positive		
Latvia	2008	0.16	1.59	10%	Neutral/Mixed		
Japan	2010	0.22	1.36	16%	Positive	Korea excluded from donor pool due to 2012 policy change	
Bulgaria	2012	0.24	1.50	16%	Neutral/Mixed	Romania excluded from the donor pool due to 2014 policy change	
Republic of Korea	2012	0.11	1.27	9%	Negative	Japan excluded from the donor pool due to 2010 policy change	Pronatal policy shift could equally reasonably be dated to 2003-2005
Armenia	2014	0.40	1.60	25%	Positive		
Romania	2014	0.23	1.56	15%	Positive	Bulgaria excluded from the donor pool due to 2012 policy change	
Hungary	2015	0.18	1.45	13%	Positive	Poland excluded from the donor pool due to 2016 policy change	Pronatal policy shift could be dated as early as 2012 or as late as 2017
Canada	2015	0.38	1.60	24%	Neutral/Mixed		
Poland	2016	0.23	1.39	17%	Neutral/Mixed	Hungary excluded from the donor pool due to 2015 policy change	
Lithuania	2017	0.16	1.63	10%	Negative		
Slovakia	2018	0.13	1.55	8%	Neutral/Mixed		

Of the 17 interventions considered, eight appear unambiguously positive, two seem negative, and seven had hard-to-determine effects. Limiting to just the 12 cases for which relatively high-quality synthetic controls could be estimated (i.e., those for which the pre-intervention model error was less than 20% of fertility in 2000), there were five positive cases, two negative cases, and five with neutral or mixed effects. On the whole, the synthetic control approach confirms the impression of the difference-in-differences approach that fertility generally increases after pronatal policies are implemented.

Author

Lyman Stone

Lyman Stone is the Director of the Pronatalism Initiative at the Institute for Family Studies. He is also the Director of Research for the population consulting firm Demographic Intelligence, a Senior Fellow at the Canadian think tank Cardus, and a PhD Candidate at McGill University. His work on demography and fertility has been covered widely in most papers of record in North America, as well as many in Europe and Asia.

Institute for family studies

Contact Us

(434) 326-7583

Info@Ifstudies.Org

513 E. Main St., Unit 1502
Charlottesville, VA 22902