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# The Cost of Motherhood in a Declining Population: What Governments Ask of Women, and What They Refuse to Give

This project explores the rising pressure placed on women in countries with declining birth rates. Governments urge women to have more children—but often without offering the essential support that makes motherhood possible: affordable childcare, paid leave, health services, or job protection.

At the same time, many of these same governments restrict reproductive rights expecting women to carry pregnancies while offering little protection for their safety, freedom, or future. In this context, motherhood becomes a demand, not a choice.

Through this analysis, I focus on the financial and social toll of raising children, how gaps in policy support affect fertility decisions, and what happens when women are treated as vessels for population growth instead of as people with needs, dreams, and rights. This project is message-driven: it's meant to make people **think, feel, and recognize** the invisible costs women carry and how much is being asked of us without support.

## Sourcing the Dataset

For this project, it made the most sense to combine two different sources: **Our World in Data** and the **OECD Family Database**. Together, they offer a more complete picture of what's really going on.

**Our World in Data** provides clear, global data on fertility rates over time. It shows which countries are seeing big drops in birth rates and helps highlight the overall trend of population decline. This gave me a solid foundation for setting up the "why now?" part of the story.

The **OECD Family Database** goes deeper, showing how different countries support—or fail to support—families and mothers. It includes important indicators like paid leave policies, childcare costs, public spending on early education, and how many women stay in the workforce. This helped me highlight the gap between what governments expect from women and what they actually provide to support them.

Using both datasets made it possible to compare fertility trends with the level of support available, country by country. It also checked all the project requirement boxes: continuous and categorical variables, time and geographic components, and enough rows for meaningful analysis.

But I didn't stop there. To go beyond economics and surface the deeper human side of this issue, I brought in three more datasets focused on reproductive rights and gender equity:

- **Abortion Policy Data**: I sourced this Excel file from the Global Abortion Policies Database. It tracks whether countries have legal provisions for abortion—whether through their constitution, penal code, or health policies. I cleaned it, converted it into binary format (1 for legal provision, 0 for none), and created a composite flag to quickly show whether a country legally recognizes abortion in any form. This added a powerful layer to the story around bodily autonomy and human rights.

- **Gender Inequality Index (GII)**: Pulled from the UNDP Human Development Reports, this dataset covers gender gaps in education, labor force participation, and maternal health. I kept key indicators for both men and women to help highlight contrasts in opportunity and inequality.

- **WPS Index**: This data came from Georgetown University's Women, Peace, and Security Index. It captures broader dimensions of inclusion, justice, and security—everything from political representation and financial access to legal discrimination and violence. I cleaned the formatting, renamed columns, and removed extra headers to make it merge-ready with the rest of the data.

These three datasets helped me expand the scope of the analysis. They allowed me to move beyond "who has support?" to ask bigger questions like "who has rights?" and "who has freedom?"—which are just as important when motherhood becomes less of a personal choice and more of a societal expectation.

[Our World in Data](#)

[OECD](#)

[World Bank](#)

[World Health Organization](#)

[UNDP](#)

[GIWPS](#)

## Limitations and Ethical Considerations

**What happens when choices are taken off the table? When safety isn't guaranteed? When support comes with strings attached?**
This project doesn't try to give all the answers, but it does aim to ask the right questions.

Abortion, motherhood, and reproductive rights aren't just policy debates or numbers in a spreadsheet. They're about real people making hard decisions in systems that don't always protect them. I know data can feel detached—especially when it touches something as personal as survival, loss, or injustice. That's not what I want here. I'm not trying to pass judgment or define what's right or wrong. My goal is to understand the disconnect between what society expects women to do and what kind of actual support they're given.

I want this work to bring **clarity**, not noise. These topics are sensitive, and I've done my best to approach them with care and respect. If something in here hits close to home, it's probably because these issues are raw—and that's exactly why they matter.

Ethically, this project walks a careful line. I've pulled together data from multiple sources to explore how **support**, **rights**, and **reproductive freedom** intersect—but there are limitations. Some datasets are outdated or reported unevenly, especially for smaller or conflict-affected countries. I also had to manually align inconsistent country names, which may introduce small errors. And while the abortion policy data is simplified into a binary format, I recognize that this flattens the complexity of each country's legal landscape.

I know this project touches on some **deeply personal** and **highly sensitive** topics. Even though the data is public and anonymized, there's always a risk of misinterpretation especially when it comes to reproductive rights and maternal health. My aim isn't to make sweeping claims, but to highlight patterns and prompt deeper thinking about the systems shaping women's choices particularly when those systems don't support or protect them.

## Data Profile

This project brings together five open datasets that each reveal a different angle on motherhood, support systems, and gender equity. Together, they give me a fuller picture of the systemic gaps women face—and how those gaps connect to fertility decline around the world.

### Fertility Rates (Our World in Data)

**Children born per woman (Total Fertility Rate)**
This is the foundation of the whole project. It shows how many children women are having, country by country, from 1960 to now. The dataset is clean and structured well, with "Entity" for country, "Year," and the number of children per woman. I renamed "Entity" to "Country" and converted column names to lowercase for consistency.

This dataset lets me spot long-term trends, recent declines, and regional patterns. It gives strong time-series data that I can compare with policy and support systems.

📷 Fertility Rate Dataset

| | Entity | Code | Year | Fertility rate (period), historical |
|---|---|---|---|---|
| 0 | Afghanistan | AFG | 1950 | 7.25 |
| 1 | Afghanistan | AFG | 1951 | 7.26 |
| 2 | Afghanistan | AFG | 1952 | 7.26 |
| 3 | Afghanistan | AFG | 1953 | 7.27 |
| 4 | Afghanistan | AFG | 1954 | 7.25 |

## OECD Family Database (PF3.4 – Childcare Support)

**Gross Fees, Net Costs for Two-Earner Families & Single Parents**
These three sheets from the OECD Family Database cover different types of childcare costs. I renamed the sheets to clarify the contents and checked for any formatting or data type issues.

Each sheet shows the financial burden of childcare in different family setups. This dataset helps illustrate how high out-of-pocket costs can discourage women—especially mothers—from staying in the workforce or having more children.

📷 Gross Childcare Fees data

| | Country | Region | Childcare fee |
|---|---|---|---|
| 0 | Germany* | Berlin | 1.00 |
| 1 | Austria* | Vienna | 3.00 |
| 2 | Iceland* | Reykjavik | 6.00 |
| 3 | Latvia | NaN | 7.00 |
| 4 | Sweden | NaN | 8.00 |

## Abortion Policy Data

**Abortion_Law_Binary (Global Abortion Policies Database)**
This Excel file tracks whether countries have legal frameworks in place for abortion—anything from constitutional rights to medical codes. I converted the original data into a simple binary format (1 = legal provision exists, 0 = doesn't), then created a composite flag that marks whether a country has *any* legal support for abortion.

This dataset brings in a rights-based dimension. It lets me explore whether women have control over their reproductive choices, which is crucial when evaluating state support versus restriction.

📷 Abortion Policy Binary Dataset

| | Country | Reproductive Health Act | General Medical Health Act | Constitution | Criminal/ Penal Code | Civil Code | Ministerial Orders/ Decrees | Case Law | Health Regulation or Clinical Guideline | EML/ Registered List | Medical Ethics Code | Document relating to Funding | Abortion Specific Law | Law on Medical Practitioners | Law on Health Care Services |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Afghanistan | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 1 | Albania | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 2 | Algeria | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 3 | Andorra | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| 4 | Angola | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |

## Gender Inequality Index (GII)

**UNDP Gender Inequality Index (GII-CLEAN)**
This dataset offers structured insight into labor force participation, education, and inequality between men and women. I removed extra headers and reformatted the file to only include relevant indicators, especially those related to men, to make the gender gaps more visible.

GII helps me explore questions like: Are men expected to be providers by default? Do women face more economic barriers? These patterns complement what I'm seeing in the fertility and policy data.

📸 Gender Inequality Index Dataset

| | Unnamed: 0 | Unnamed: 1 | Unnamed: 2 | Unnamed: 3 | Unnamed: 4 | Unnamed: 5 | Unnamed: 6 | Unnamed: 7 | Unnamed: 8 | Unnamed: 9 | Unnamed: 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | NaN | NaN | NaN | NaN | SDG3.1 | SDG3.7 | SDG5.5 | SDG4.4 | NaN | NaN | NaN |
| 1 | NaN | NaN | Gender Inequality Index | NaN | Maternal mortality ratio | Adolescent birth rate | Share of seats in parliament | Population with at least some secondary education | NaN | Labour force participation rate | NaN |
| 2 | NaN | NaN | Value | Rank | (deaths per 100,000 live births) | (births per 1,000 women ages 15–19) | (% held by women) | (% ages 25 and older) | NaN | (% ages 15 and older) | NaN |
| 3 | HDI rank | Country | NaN | NaN | NaN | NaN | NaN | Female | Male | Female | Male |
| 4 | NaN | NaN | 2022 | 2022 | 2020 | 2022 | 2022 | 2022 | 2022 | 2022 | 2022 |

## Women, Peace, and Security (WPS) Index

**Georgetown University's WPS Index (CLEAN)**
This one zooms in on women's safety, legal protections, and inclusion in public life. It required some cleaning—dropping category headers, renaming columns, and removing region summaries—but the final result was rich with insights.

It includes indicators like intimate partner violence, proximity to conflict, political violence targeting women, and access to justice. These aren't just "soft metrics"—they help explain why motherhood is often a risk or burden in some places.

📸 **WPS Index Data**

| | WPS Rank | Unnamed: 1 | Women, Peace and Security Index | Education | Employment | Financial Inclusion | Cell Phone Use | Parliamentary Representation | Absence of legal discrimination | Access to justice | Maternal mortality ratio | Son bias | Intimate partner violence | Community safety | Politic violenc targetin wome |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 2023 | Country | 2023 | 2016-2021 | 2018 - 2022 | 2021.000000 | 2022.0 | 2023.000000 | 2023.000 | 2022.000 | 2020.00 | 2022.0 | 2018.0 | 2020-2022 | 2022 |
| 1 | 1 | Denmark | 0.932 | 13.15695 | 76.963542 | 100.000000 | 100.0 | 43.575419 | 100.000 | 3.960 | 4.66 | 105.7 | 3.0 | 78 | 0 |
| 2 | 2 | Switzerland | 0.928 | 13.48301 | 78.443396 | 99.017936 | 91.0 | 39.344262 | 88.125 | 3.893 | 7.38 | 105.1 | 2.0 | 85 | 0 |
| 3 | 3 | Sweden | 0.926 | 12.76821 | 79.986675 | 100.000000 | 100.0 | 46.418338 | 100.000 | 3.806 | 4.51 | 105.7 | 6.0 | 74 | 0 |
| 4 | 4 | Finland | 0.924 | 13.04684 | 77.650152 | 99.078510 | 100.0 | 45.500000 | 97.500 | 3.419 | 8.34 | 105.2 | 8.0 | 78 | 0 |

## Defining Questions to Explore

**Now that I've gathered and cleaned the data, I want to focus the analysis around some key questions.** These questions help guide the story I'm trying to tell about support, inequality, and the choices (or lack of) women face in a world with declining birth rates.

And by "choice," I mean it in the broadest sense. The choice to have children or not. The choice to wait. The choice to raise them safely, or not raise them at all. This includes girls forced into motherhood through abuse or rape, women pressured by governments to reproduce while receiving little support, and a system that punishes those who choose not to parent by funneling children into overburdened adoption systems.

It also includes the growing number of women who are denied life-saving medical care in pregnancy, because doctors are legally forced to prioritize the fetus over the mother. When support is missing and rights are stripped away, motherhood stops being a personal decision and starts looking more like a mandate. That's what I want to explore.

## Key Questions for Analysis

These are powerful and well-thought-out questions—they clearly reflect the themes you've been developing around support, rights, and agency. Here's how we can organize them into a cleaner, more structured list that flows well and avoids repetition, while keeping everything you want to explore:

1. **Reproductive Rights & Fertility Trends**
   - Do countries with stronger legal recognition of abortion also show more stable or voluntary fertility patterns?
   - In countries where abortion is legally recognized, are people having children more by choice rather than by force?
   - How does the level of reproductive freedom (access to abortion, justice, safety) shape fertility rates and women's autonomy?
   - Does having reproductive rights lead to healthier, more intentional family planning?

2. **Government Support & Family Outcomes**

- Do countries with stronger family support policies (like paid leave or low childcare costs) have higher or more stable fertility rates?

3. **Health & Safety Impacts**
   - How do abortion restrictions correlate with maternal mortality or other safety indicators for women?
   - Are women in countries with high legal discrimination also more likely to lack access to safe maternal care?
   - How does proximity to conflict or political violence targeting women relate to declining fertility or weaker support policies?