

# The Post-2007 Declining U.S. Birth Rates imply Significant Societal Shifts in the U.S.\*

Sagith Kalaichelvam      Youngho Kim      Joseph Chung

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This paper explores several potential explanatory factors for the steep decline in birth rates in the United States between 2007 and 2020. The decline in U.S. birthrates offers some significant insights into U.S. society. Changes in birth patterns among recent young adult women moving through the childbearing age group can be directly related to the decline in birth rate from a purely statistical standpoint. We provide evidence that the steep drop in birth rates could be attributed to recent young adults' shifting interests. These shifting priorities represent changes in young adults' preferences regarding having children and aspirations for life. Resonating with the original paper, we conclude with a brief discussion of the implications of the declining birth rate in the United States and its impact on society as an entirety.

## 1 Introduction

To measure birth rates, the National Center for Health Statistics (NCHS) aggregates data on birth rates for women by age, race, education level, and other factors; the aggregated data for a particular year is the total number of births per 1000 women. Each year NCHS measures birth rates nationwide and analyzes the data to make insights into societal phenomena. For instance, in 1997, NCHS published a paper on how a mother's education level influences the birth rate. In the paper, NCHS asserted that there is a negative correlation between a mother's education level and birth rate. Their study found a direct relationship between years of education and birth rates, with the highest birth rates among women with the lowest educational attainment (cite).

Figure 1 depicts U.S. birth rate trends over the last 40 years. In the figure, we can see that the trend is fluctuating relatively stable. However, during the post-2007 recession, it takes a steep decline with no signs of coming back up.

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\*Code and data are available at: <https://github.com/UtopianYoungChung/Paper2.git>

In this paper, we decompose the decline in the birth rate between - and within - demographic groups. We then argue that any other economic, policy or social factor that has changed since 2007 does not contribute much to the decline.

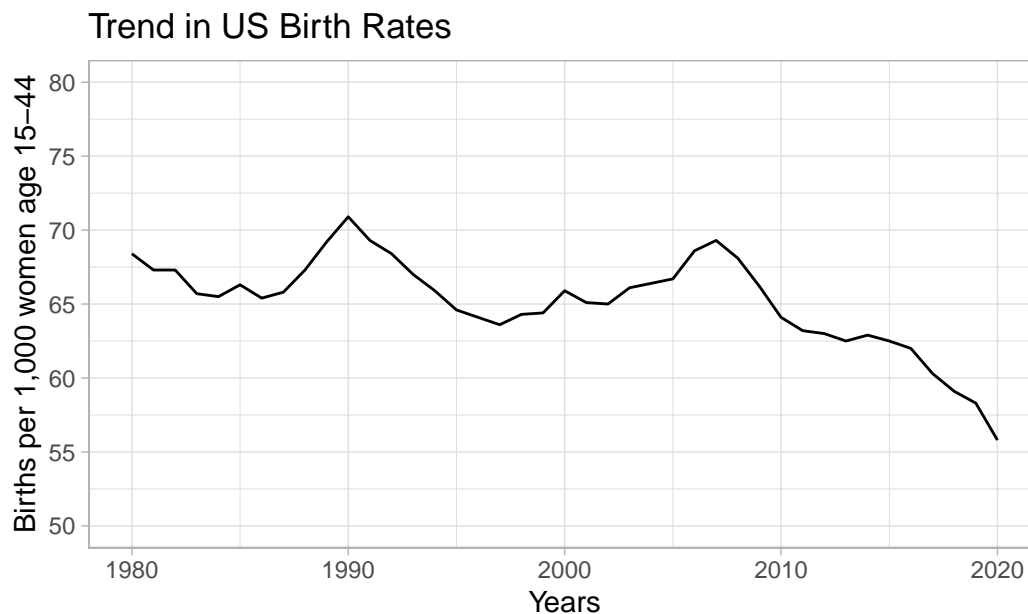
We next turn to a potential attributing factor for the declining U.S. birth rate after the 2007 recession. In our conclusion, we show strong evidence that the most recent group of young adults is significantly attributed to the post-2007 decline in the birth rate. This significance suggests an ongoing societal shift among the young women entering through childbearing age. Alarming, this societal phenomenon imposes some serious societal consequences and, therefore, should be considered at a high level. Most importantly, there are no signs of returning from the negative trend.

For instance, “Current Population Survey (CPS) Data at the NBER” (2021) and “NCHS Vital Statistics Natality Birth Data” (2021).

## 2 Data

## 3 Results

Figure 1. Trends in US birth rates over the past 40 years show a steep decline in the birth rate during the post-2007 recession (Figure 1).



Source: Birth Rates collected from CDC Vital Statistics Births Reports for 2015, 2019 and 2020.

Figure 1: Trends in U.S. Birth rates of 1000 women between age 15 to 44 from 1980 to 2020

Figure 1 shows that overtime, the number of births in the United States is dropping steadily, while it slightly went up on peak around 1990, 2001, and 2007. Most likely the hikes of going up during these years might have been into other factors that made more people among the selected population to have kids. After 2007, the number of births drastically dropped a lot. Nowadays, among 1,000 women from age 15 to 44, only about 56 births will occur. While, in the past around the 1980s, and 1990s, the number of births was around 65 to 70 range. The line in the graph shows that in the near future much lower amount of people will have kids, and this can be due to other factors from their lifestyle which is making them to decide to not have more kids.

Figure 3.place it here with Figure 6

Figure 4. place it here with Figure 7

Figure 2. place it here with the Figure 4 from the Original paper (Figure 2).

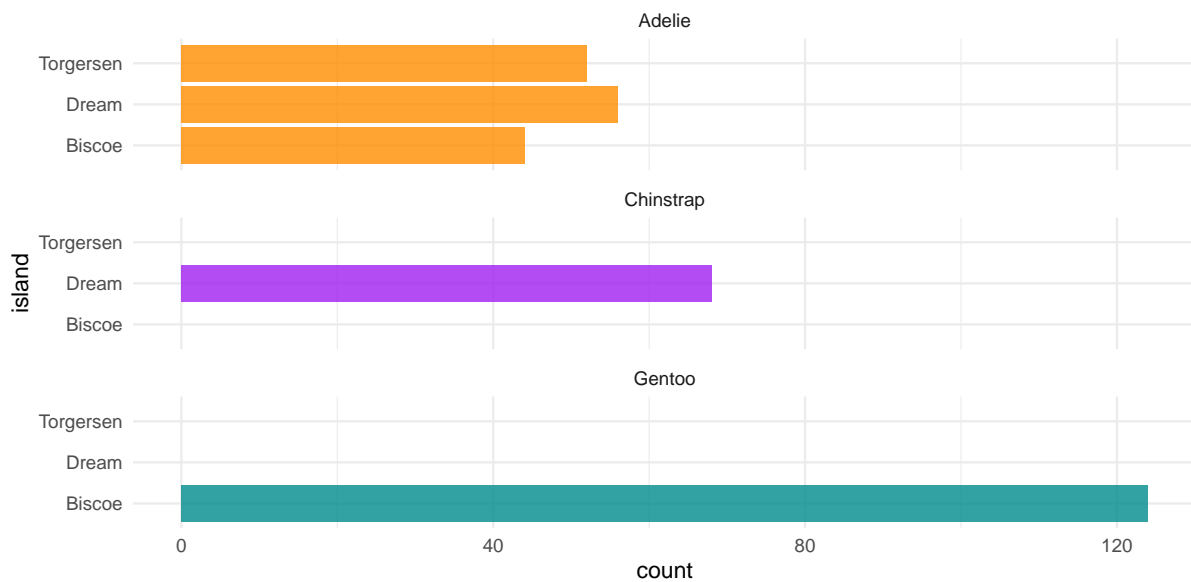


Figure 2: Relationship between Changes in Birth Rates 2004-2008 to 2014-2019

Figure 3. place it here with the Figure 2-a from the Original paper

Figure 4.

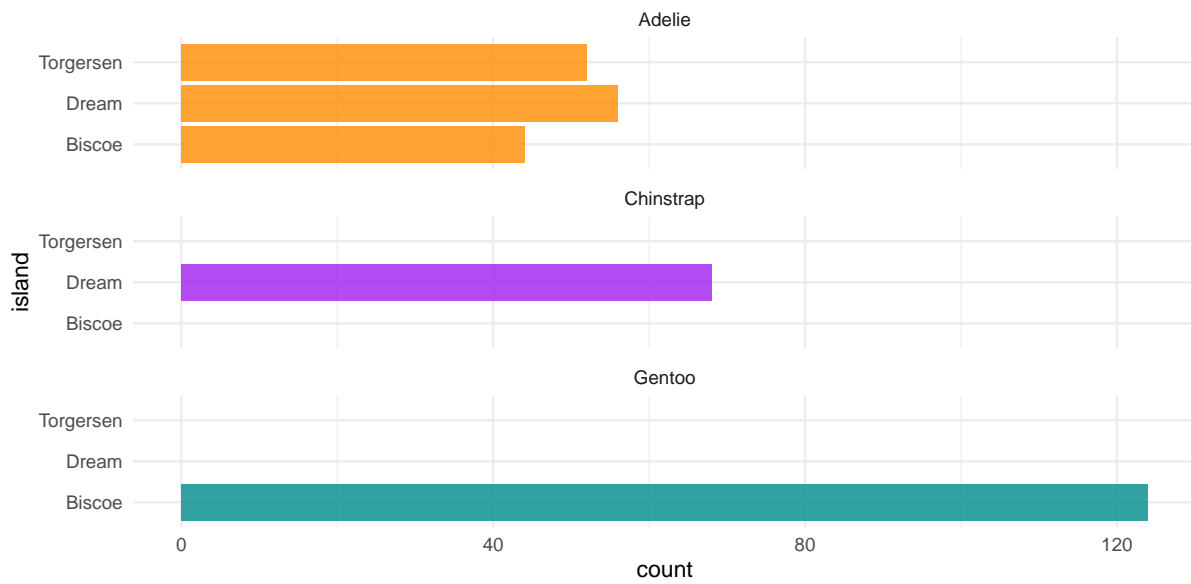
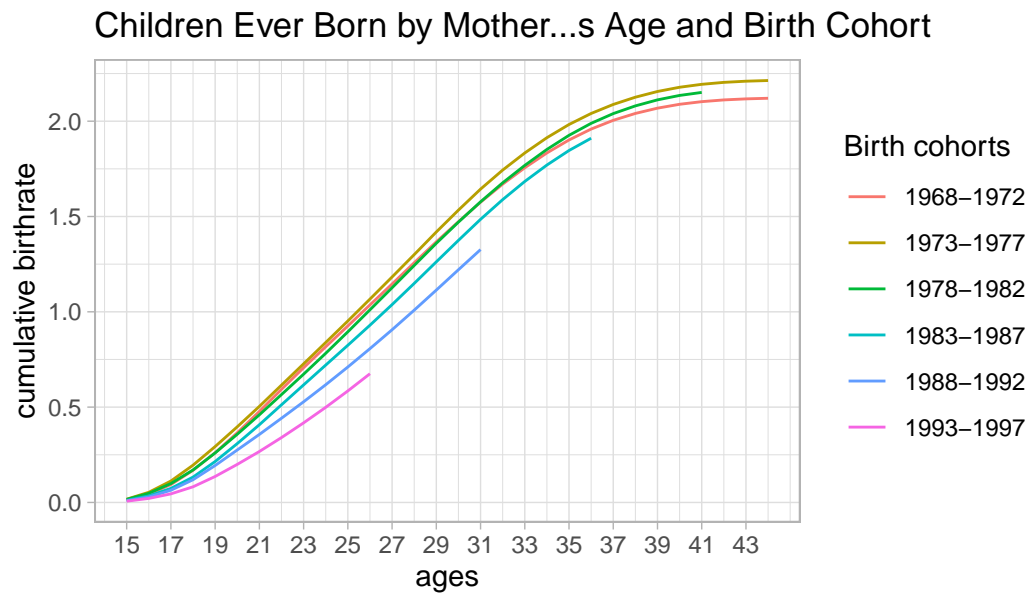


Figure 3: Trends in Birth Rates by Population subgroup Five-year age group



based on NCHS Vital Statistics birth microdata and CDC SEER population data. See the Data Appendix for specific details.

Figure 4: cohorts

## **4 Discussion**

### **4.1 Bias and Ethical Concerns**

As we know that this data was collected and created by other human beings just as how we are. There are some ethical concerns that could affect the accuracy of our data because humans can make mistakes, they can make decisions based on their preferences, which can affect the whole dataset. So, this analysis is only valid based on our dataset, which can be modified if the original dataset was changed.

According to the original data provided which shows different races such as White, Black, and Hispanic. They have included Hispanic based on all colours, which kind of erases the identity of Black and Indigenous Hispanic people. This tends to be a bit racism because the information provided on the data did not specifically indicate whether or not the Hispanic category includes everyone that identifies as Hispanic, or is it just people that look like Hispanic.

### **4.2 Data Collection Concerns**

This dataset tends to collect a huge data information of population among the people from the United States, and considers lots of factors from race, birth rates by age, student debts, etc. Having too much information mean that when the data was collected there is a possibility of human error, calculation error, and chances of small modification of data due format of reporting error. So, the way how the data was collected can have lots of problem because people can make mistakes easily.

### **4.3 Causes and Impacts of Declining Birth Rates**

#### **4.3.1 Age**

When it comes to the age of all the population from the United States and comparing it from the past to now. It shows that more people tend to have kids much later than before. While, less people have kids earlier than the past. During the past, more people tend to have kids much earlier. There are several reasons why more people had kids at early age because back then people use to get marry much earlier, and many people were unemployed or doing a job for self-employment, which was not even an educated or professional job. The modern lifestyle that is being adapted in the past few decades tends to make people to focus on all other areas of life, which makes them to marry much later, and have kids late. Nowadays, many marriages happen at the age of late 20s or early 30s, while they tend to have their first child around early to mid 30s.

#### **4.4 Second discussion point**

#### **4.5 Third discussion point**

#### **4.6 Weaknesses and next steps**

Weaknesses and next steps should also be included.

## **Appendix**

### **A Additional details**

## References

- “Current Population Survey (CPS) Data at the NBER.” 2021. *National Bureau of Economic Research*. <https://data.nber.org/morg/annual/>.
- “NCHS Vital Statistics Natality Birth Data.” 2021. *National Bureau of Economic Research*. <https://data.nber.org/data/vital-statistics-natality-data.html>.