

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

Sagith Kalaichelvam      Youngho Kim      Joseph Chung

20 February 2023

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.

---

\*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.

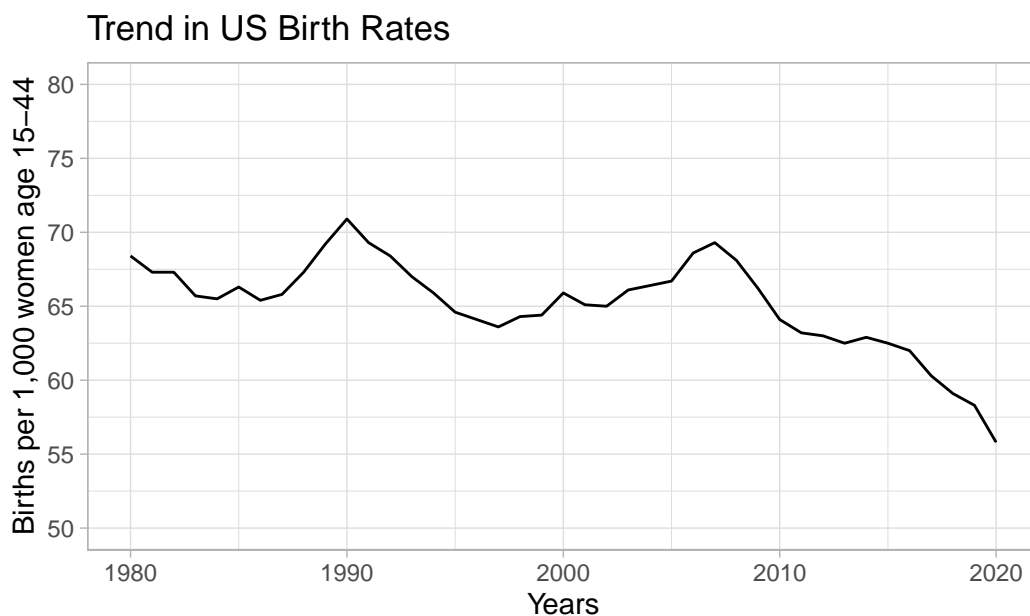
We next turn to a potential attributing factor for the declining U.S. birth rate after the 2007 recession. In our conclusion, we show strong evidence that the most recent group of young adults is significantly attributed to the post-2007 decline in the birth rate. This significance suggests an ongoing 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, Section 2 and Section 4.1.

## 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 14 to 44 from 1980 to 2020

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).

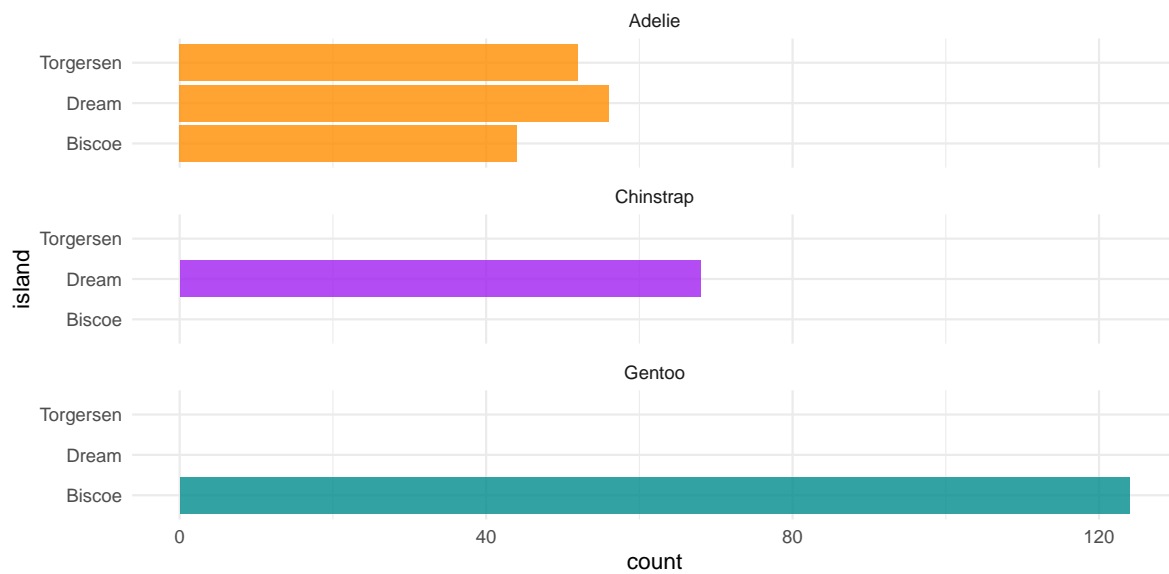


Figure 2: Relationship between Changes in Birth Rates 2004-2008 to 2014-2019

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

Figure 4.

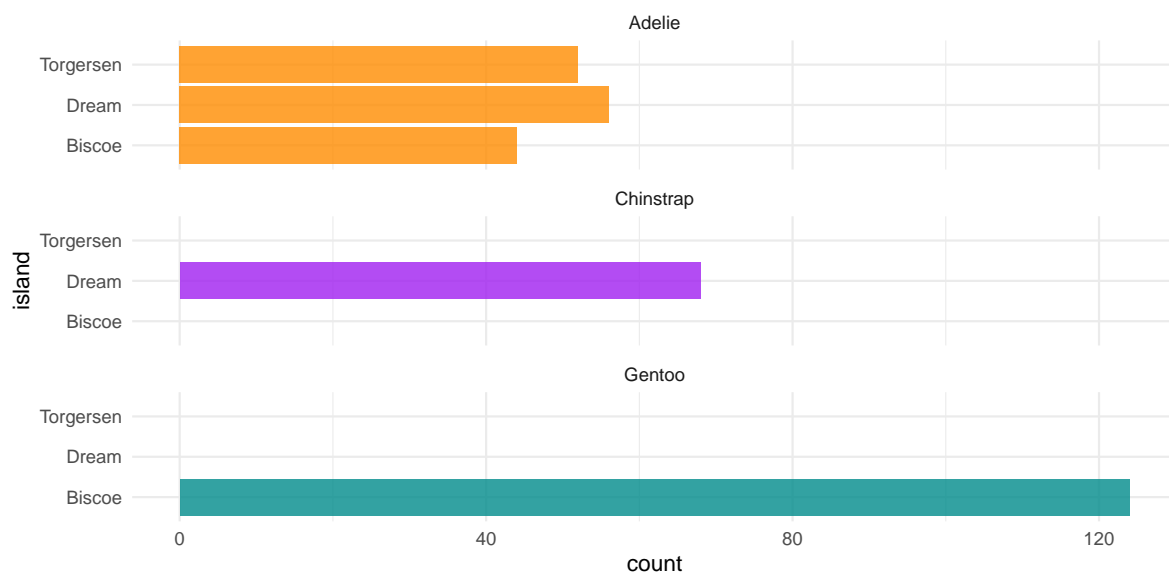
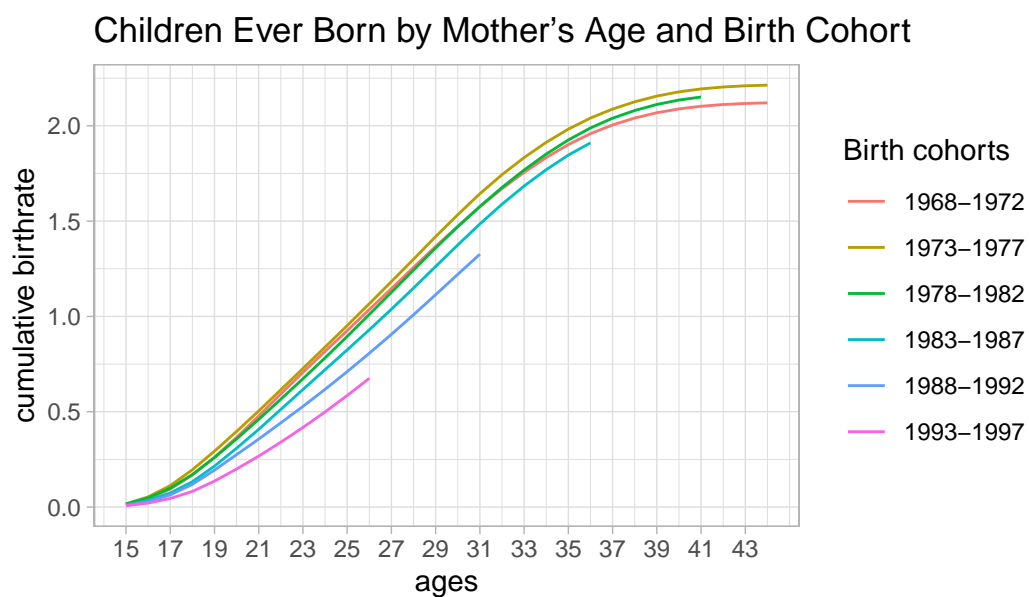


Figure 3: Trends in Birth Rates by Population subgroup Five-year age group



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 First discussion point**

If my paper were 10 pages, then should be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

### **4.2 Second discussion point**

### **4.3 Third discussion point**

### **4.4 Weaknesses and next steps**

Weaknesses and next steps should also be included.

## **Appendix**

### **A Additional details**

## B References