

Potential Factors of Decreasing Birth Rates in the US since the Great Recession and Beyond*

Reproduction of 'The Puzzle of Falling US Birth Rates since the Great Recession'(Kearney, Levine & Pardue, 2022)

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February 10, 2024

Decreasing birth rates became the conversation topic globally in recent years. Kearney, Levine, and Pardue (2022) analyzed possible factors in demographical, economical and social aspects from the period 1980 to 2020. By reproducing some applications of the 'The Puzzle of Falling US Birth Rates Since the Great Recession,' this paper demonstrate potential factors correlating aspects on economics, religions, laws and enforcement applied in each states.

1 Introduction

- 1) broader context to motivate
- 2) some detail about what the paper is about
- 3) a clear gap that needs to be filled
- 4) what was done
- 5) what was found
- 6) why it is important - replacement level fertility
- 7) the structure of the paper - 1. trend in US Birth Rates 2. Trends in Birth Rates by Population Subgroup 2.1 Five-year age group 2.2 Race and ethnicity

In an economical aspect, birth rates are important factor that decides the growth of a country. The paper is about the factors that was not discussed in the Kearney's paper. They pointed out that as of 2007, the Great Recession, was the turning point of declining tendency in birth rates, however, it is beyond just demographical, economical, social and political factors. In this paper we will

Over the 40 years,

*Code and data are available at: <https://github.com/Chay-HyunminPark/Social-Science-Study>.

- what was done, why and what was found, 3-4 paragraphs

We replicate the paper by Kearney, Levine, and Pardue (2022) with a focus on the following research questions:

- What is the trend in the US birth rates over the period 1980 to 2020?
- How does the birth rates vary by the age group?
- How does the birth rates vary by the race and ethnicity of mothers'?

The original code in the replication package is written in Stata. However, this paper utilizes R (R Core Team 2020) to analyze a dataset from the replication package. Packages such as ggplot2 (Wickham et al. 2016) for creating graphical representations, kableExtra (Zhu et al. 2021) for enhancing table aesthetics, and lubridate (Grolemund et al. 2021) for handling date-related operations were employed. Additionally, the Tidyverse framework (Wickham et al. 2019) ensures cohesiveness, while Dplyr (Wickham et al. 2021) facilitates data manipulation.

2 Data

2.1 Methodology

The data for the trend in US Birth Rates, births per 1,000 women age 15-44 from the period 1980 to 2020 was acquired from CDC Vital Statistics Births Reports for 2015, 2019 and 2020 (Martin and Mathews 2017; Martin and Driscoll 2021; Hamilton and Osterman 2021). Another trends in Birth Rates by Population Subgroup, specifically birth rates by age group, race and ethnicity are again gathered from CDC Vital Statistics Births Reports. Original paper uses single-age population counts, among all races from 1969-2019 and by race and Hispanic origin from 1990-2019, from the CDC SEER database (CDC NCI 2021). Data is available freely at <https://seer.cancer.gov/popdata/download.html> and raw files can be found in the data/pop/folder of the original replication package.

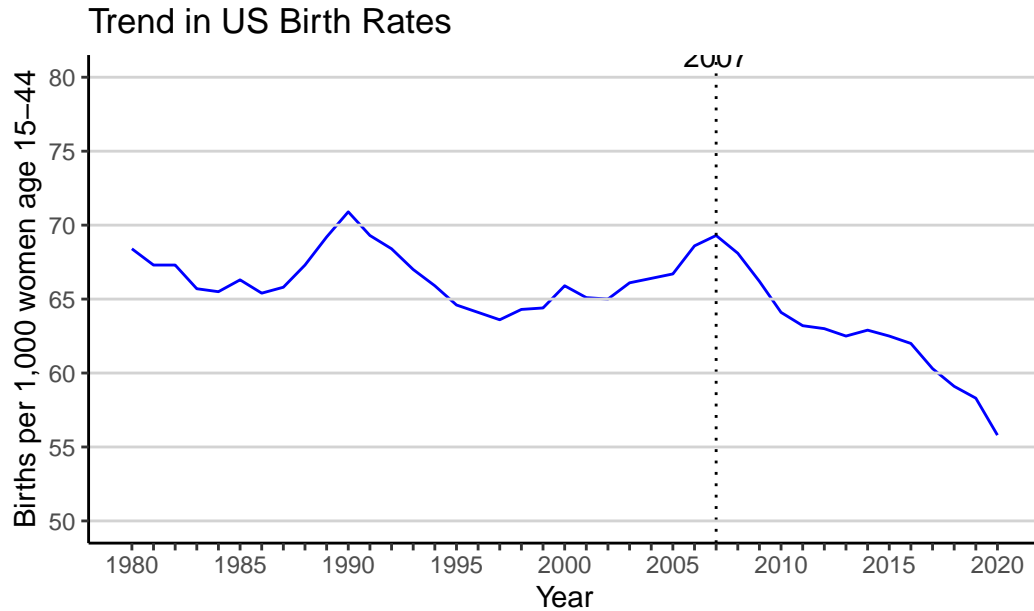
2.2 Features

From now on, every white refers to non-Hispanic, caucasian. Every black refers to non-Hispanic, African American. Hispanic refers to people with Hispanic ethnicity majority from south America.

3 Results

The results section should convey findings. ## Table, graph, table, graph

3.1 Source



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

Figure 1: Trend in US Birth Rates

Figure 1 Trend in US Birth Rates, not just the Great Recession was there another events?
, , economic crisis other than great recession

Figure 2 A, , , -> 30
high willingness to give births, showing ascending pattern in birth rates over the 40
years.

Table 1: Trends in Birth Rates by Population Race and Ethnicity

Year	Births per 1,000 women		
	White	Black	Hispanic
1990	62.8	89.0	107.7
1991	60.9	87.0	106.9
1992	60.0	84.5	106.1
1993	58.9	81.5	103.3

Year	Births per 1,000 women		
	White	Black	Hispanic
1994	58.2	77.5	100.7
1995	57.5	72.8	98.8
1996	57.1	70.7	97.5
1997	56.8	70.3	94.2
1998	57.6	70.9	93.2
1999	57.7	69.9	93.0
2000	58.5	71.4	95.9
2001	57.7	69.1	95.4
2002	57.6	67.5	94.7
2003	58.9	67.1	95.2
2004	58.9	67.1	95.7
2005	59.0	67.2	96.4
2006	60.3	70.7	98.3
2007	61.0	71.4	97.4
2008	60.5	70.8	92.7
2009	59.6	68.9	86.5
2010	58.7	66.6	80.2
2011	58.7	65.4	76.2
2012	58.6	65.0	74.4
2013	58.7	64.6	72.9
2014	59.5	64.5	72.1
2015	59.3	64.1	71.7
2016	58.8	63.3	70.6
2017	57.2	63.1	67.6
2018	56.3	62.0	65.9
2019	55.3	61.4	65.3
2020	53.2	59.0	62.8

Figure 3 B, major religion of Hispanic, Black, White religious reason of each race and ethnicity

4 , , -whether they accept the abortion or not, cultural perspectives, whether marriage affects the decision of keeping a child or not.<- financial reason

Map

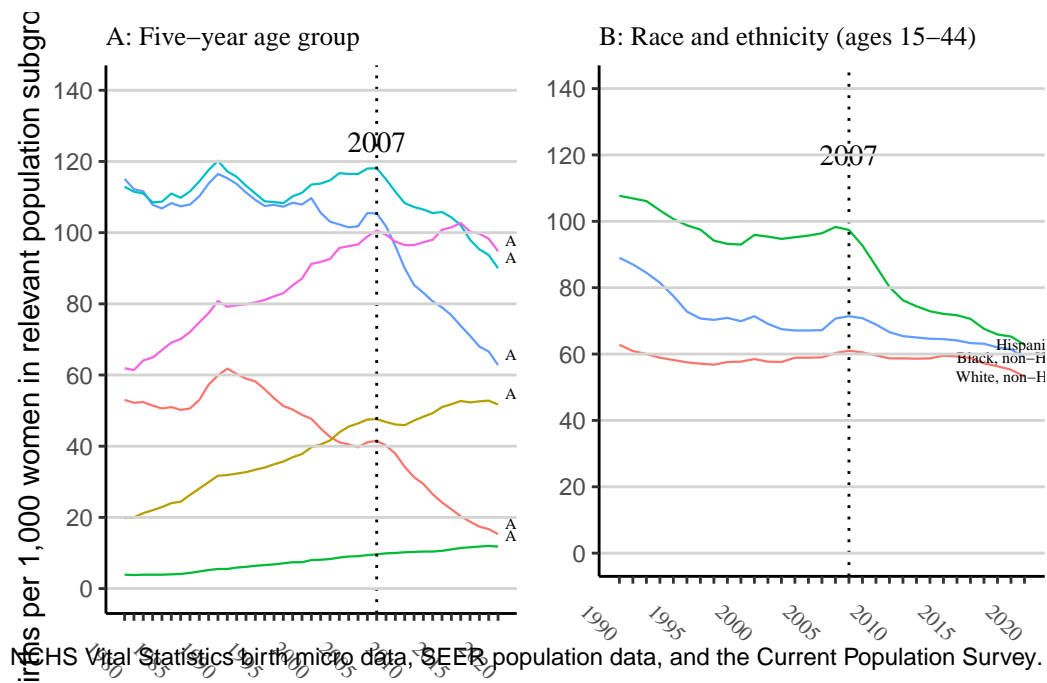


Figure 2: Trends in Birth Rates by Population Subgroup

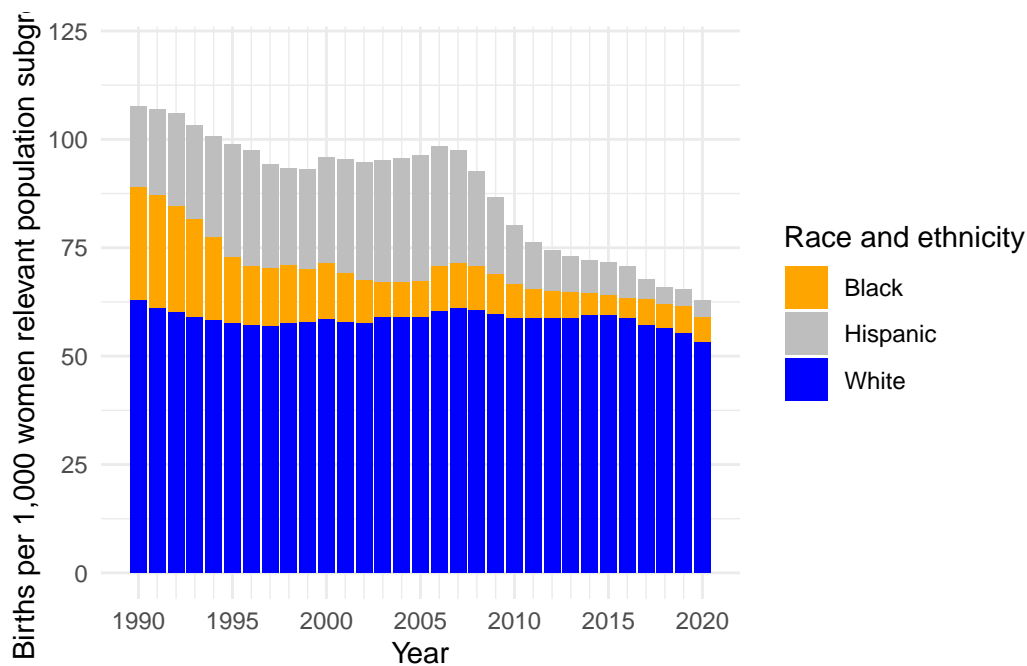


Figure 3: Trends in Birth Rates by Population Race and Ethnicity

5 Discussion

In the discussion section, and any other relevant section, please be sure to discuss ethics and bias, with reference to relevant literature.

5.1 Findings

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.

5.2 Ethical Implication

5.3 Accounting for bias

5.4 Limitation

5.5 Future Research

6 References