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Illegal Operation: The Effects of Overturning Roe v. Wade

Abstract

In June of 2022, the United States (US) Supreme Court reversed Roe v. Wade removing the fundamental and constitutional right to abortion. With this, the legality and access to abortion is dictated by laws at the state level. Upon the 2022 decision, Oklahoma reverted to the pre-Roe v. Wade laws criminalizing all abortions except when deemed necessary to preserve the life of the pregnant person and taking one of the strictest stances against abortion access in the US. This research seeks to understand the implications of this decision both throughout the US and within Oklahoma. By leveraging critical datasets including number of births by state in the US in both 2019 and 2023, number of births by county in Oklahoma in 2019 and 2023, and key demographic datasets like number of women and poverty level, this research seeks to understand if this decision has impacted women, minorities, and chronically underserved communities.

Overview

With the recent change in federal administration, traditionally conservative values, particularly views on abortion rights and access, have been frequently discussed in the media. This inspired my interest in understanding the changes of births and birth rates both across the nation and in Oklahoma, which reverted to strict pre-Roe v. Wade laws immediately after the June 2022 decision. This project will be in three parts: 1) looking at the nationwide change in number of births between 2019 and 2023 at state scale, 2) understanding the race demographics of Oklahoma and county level change in number of births from 2019 to 2023, and 3) taking a closer look at the relationship between poverty and births in 2023 and if the population of women as a whole and across different race demographics has changed between 2019 and 2023 in Oklahoma. I plan to use R Studio and Tidy Census to harvest American Community Survey (ACS) data for number of births in 2019 and 2023 at the state level, poverty status at the county level in Oklahoma in 2023, number of women by county in Oklahoma in 2019 and 2023 both total and across race demographics. I will use the Oklahoma State Department of Health Vital Statistics data for birth rate data only pertaining to Oklahoma including race demographic data for number of births for Oklahoma alone and total number of births in 2019 and 2023 in Oklahoma by county (see Table 1). I plan to clean the data initially and merge demographic data by county to make a wide dataset with all number of births by demographic group. For both the country scale and county scale in Oklahoma, I want to create a difference dataset to look at the percent difference in number of births between 2019 and 2023. Oklahoma analysis will include presenting number of births by demographic, a percent change of number of births by county, a correlation test between number of births and poverty status by county, population of women by race demographic in Oklahoma in both 2019 and 2023, and calculated percent change of the population of women between 2019 and 2023 both at the state and county level in Oklahoma.

The final maps and data outputs should provide insight on if and how changes in the long-standing U.S. Supreme Court decision, Roe v. Wade, has impacted the number of births among various communities throughout the nation and in Oklahoma in particular.

Methodology and Tools

For this analysis, R Studio, QGIS, and Tableau will be used to harvest data, manipulate geography, and create maps. The first steps in this project will be to harvest data from the ACS database using R Studio and from Oklahoma State Department of Health Vital Statistics and clean the data. When the data is cleaned, the data will be brought into Tableau to do the difference and percent difference field calculations. These calculations will be done at the federal, state, and county level. Next, a correlation test between the number of births and poverty datasets will be conducted using functions in R Studio. Once completed, these analyses and data will primarily be presented as maps with the necessary map elements, though the demographic groups may be displayed as a pie chart or a bar chart. Most visuals will be created and presented in Tableau Dashboards and compiled using Tableau Story Mode and then linked in my class GitHub portfolio.

Potential Challenges

Though this class has provided a solid foundational knowledge, there may still be some challenges that arise during the research process. Because I have never conducted a correlation test before, this could present a challenge. I've done some initial research into the base R Function cor.test() and easystats package, so this is where I plan to start to create this output. Additionally, time management could be a concern as the semester winds down and other classes demands increase.

Timeline

During week 13, I plan to gather and clean my data and merge the demographic data to create a wide dataset. Weeks 14 and 15, I'll create the percent difference data, start creating maps and displaying data, and create the proposed correlation coefficient data. In week 16, I'll put together the maps and dashboards paying attention to the display details and ensuring the displays are uniform across the story map.

Table 1. Proposed datasets necessary to understand the impact of overturning Roe v. Wade on number of births in the nation, number of births in Oklahoma, correlation between poverty status and number of births in Oklahoma, and the change in population of women both as a whole and across demographics in Oklahoma.

Data Title	Data Source	Year	Scale
Number of Births	ACS	2019	Country
Number of Birth	ACS	2023	Country
Number of Births by Demographic in Oklahoma	Oklahoma State Department of Health Vital Statistics	2023	State
Number of Births in Oklahoma	Oklahoma State Department of Health Vital Statistics	2019	State
Number of Births in Oklahoma	Oklahoma State Department of Health Vital Statistics	2023	State
Poverty Status in Oklahoma	ACS	2023	County
Number of Births in Oklahoma	Oklahoma State Department of Health Vital Statistics	2023	County
Population of Women in Oklahoma	ACS	2019	State
Population of Women in Oklahoma	ACS	2023	State
Population of Women by Demographic in Oklahoma	ACS	2019	State
Population of Women by Demographic in Oklahoma	ACS	2023	State
Population of Women in Oklahoma	ACS	2019	County
Population of Women in Oklahoma	ACS	2023	County
United States Geography	geoJSON created by Kelsey Karnish		Country