ABORTION POLICY AFTER ROE: HOW LEGALIZATION IMPACTED INCOME OF FUTURE COHORTS

A Thesis
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By

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Building upon previous research examining the socioeconomic effects of abortion laws, this study explored how U.S. abortion legality following the Supreme Court’s decision in Roe v. Wade (1973) impacted the income of post-policy cohorts. Previous studies have suggested that children born under accessible and legal abortion will experience differential outcomes from those born under abortion restriction. Researchers theorize that when women are able to effectively plan the timing of their motherhood, those who deem themselves financially ill-prepared can delay or forgo parenthood; the selection of unprepared women away from parenthood equates to a greater proportion of children raised in households with sufficient support and resources. Using American Community Survey (ACS) data, I conducted a stratified difference-in-differences regression model that analyzed the 2019 incomes of cohorts born the year before and the year after the policy change, accounting for the presence of several U.S. state laws that had legalized abortion before 1973. I find that Roe-era constitutional abortion protections had a largely insignificant impact on income across my post-policy cohorts. However, income effects were substantial and highly significant for the Hispanic cohort. Post-Roe legalization increased annual income for Hispanics by $19,506 in 2018, equating to a roughly one-third increase in the average income for Hispanics in that year. These results suggest that legal abortion access is a significant determinant of future income for Hispanic Americans.
I’d like to dedicate this thesis to Professors John Hisnanick and Paul Treacy of Georgetown University, without whom my research would not be possible, and to my family and friends, who have always believed in me.

I thank you all from the bottom of my heart,
Diana Danielle Setness
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I. INTRODUCTION

The removal of constitutional abortion protections in the Supreme Court case Dobbs v. Jackson (2022) signified a reversal of United States abortion policy and the precedent set by Roe v. Wade (1973). As of 2023, nearly one in every three American women of childbearing age no longer has abortion access, with the procedure fully banned in 13 U.S. states and almost all without exceptions for the extreme cases of rape or incest (Shepard et al., 2022; “Tracking the States,” 2023). Women of color will likely be disproportionately affected by these state abortion restrictions. Data from the Centers for Disease Control and Prevention (CDC) shows non-Hispanic white women to have the lowest rates of abortion compared to any other racial group at 6.2 abortions per 1,000 women, with non-Hispanic black women having the highest rate at 24.4 abortions per 1,000 women (Diamant & Mohamed, 2023). The reversal of Roe v. Wade (1973) era abortion protections will affect the lives of millions of Americans, and an array of studies provide evidence as to exactly how abortion regulation impacts one’s socioeconomic outcomes.

Existing research on the effects of abortion legality predominately explores impacts felt by mothers and their children in early childhood. Studies that do analyze outcomes in adulthood focus on negative measures such as unemployment, the likelihood of living in poverty, and the receipt of welfare. By focusing my research on positive income effects for post-policy cohorts in adulthood, this analysis demonstrates how the economic health and, thus, financial opportunities of adults are affected by abortion legalization, and specifically, how post-Roe abortion protections affected the income of cohorts born adjacent to the supreme court decision in states without previous legalization.

My analysis used a difference-in-differences approach to determine the effect of post-Roe legalization on the income of our post-policy cohort. Using American Community Survey (ACS)
data from 2019, I exploited the variation in U.S. state abortion laws prior to Roe v. Wade and analyzed income differences in cohorts born adjacent to the 1973 Supreme Court decision. Assuming parallel income trajectories for those born one year before versus one year after the policy change, the only differences in income for our post-policy cohort in states without pre-Roe legalization should result from changes in cohort composition following the policy change. I stratify my sample of ACS data into five models to account for possible variation in income effects across racial cohorts. I initially predicted a positive effect of abortion legalization on adult income as a result of family planning, with a greater impact for people of color, particularly for the black respondents.

My analysis concluded that post-Roe abortion legalization had largely insignificant effects on income for the post-policy cohorts. However, my results found a substantial and highly significant income effect for Hispanic respondents. According to my regression estimates, constitutional abortion protections increased annual income for Hispanics by $19,506, an approximately one-third increase in the average income for Hispanics in 2018. These results were significant at the 1% level despite the lower sample size.

The results of my study will have implications for the future of American abortion policy. Governments should consider reducing restrictions and increasing state funding to expand the supply of abortion providers, focusing in high-need and minority dominant communities. To prevent unwanted pregnancies before they occur, policies regulating birth control should consider expanding contraceptive access and coverage, particularly in low-income and minority-dominant communities. For those who are unable or unwilling to receive an abortion, but face financial limitations in childrearing, a plethora of policies could be instituted to ensure that these families are adequately resourced to care for their children.
The structure of the paper goes as follows: Section II provides a brief history of U.S. abortion law. Section III reviews the relevant literature. Section IV provides the data and quantitative measures used in my analysis. Section V presents the empirical strategy used to estimate the effect of abortion access on income through a conceptual and empirical model. Section VI presents a report detailing my regression analysis and notable results. Section VII provides a discussion of my results and key findings, as well as their implications in public policy. Section VIII will conclude with a brief summary of my results, the limitations of my analysis, room for further research, and policy recommendations. The references used in my study are provided in Section IX.

II. BACKGROUND

The U.S. Supreme Court decided to overturn the precedent of constitutional abortion protection set by Roe vs. Wade (1973) in the recent case of Dobbs v. Jackson (2022). Congress has thus far been unable or unwilling to pass federal legislation regulating abortion. In the absence of federal regulation, abortion access and legality are now under the authority of the U.S. state legislatures. Despite the moral and philosophical arguments surrounding the legal right to an abortion, there are salient socioeconomic ramifications for U.S. state policymakers to consider.

Legal abortion access for American women has varied throughout the nation’s history depending on the era and one’s state of residence. The abortion policy of pre-civil war America was dictated by a vestige of English common law, under which abortion was legally permissible until a pregnant woman began to feel movement in her womb (“Common Law,” 1982). This policy would only last until the turn of the 20th century. By 1910, abortion was criminalized in every U.S. state, with some exceptions in cases of risk to the mother’s health (Planned
Parenthood, 2022). Criminalization did not stop the existence of abortion among American women; rather, it created a market for illicit abortion services. According to data from the Guttmacher Institute, in 1930, roughly one in five maternal deaths in the U.S. was due to an illegal abortion, constituting the cause of death for almost 2,700 women in that year (Planned Parenthood, 2022). The high maternal mortality correlated with illegal abortions is widely believed to be caused by the risky nature of medical procedures being performed by untrained and inexperienced healthcare providers.

Illegal abortion services have serious costs on society: direct costs to the public health care system by diverting funds for post-abortion complications and indirect costs to the mother through lost revenue and opportunity cost stemming from said complications. A study conducted in Mexico City found that the average cost of treating women with abortion complications from illegal procedures was around $601 to $2,100 U.S. dollars, depending on the case’s severity (Guttmacher Institute, 2007). In the aggregate, the study found that increasing access to certain early abortion services reduces government costs for Mexico City by 62%.

America’s second wave of feminism that began in the early 1960s and ensuing changes to the cultural perception of gender equality soon led several U.S. states to liberalize their abortion policies. Colorado was the first to decriminalize abortion in 1967, allowing the practice in cases of rape, incest, or “permanent physical disability” (Baker, 2022, paras. 23). By 1972, four states had legalized abortion on the basis of choice: Alaska, Hawaii, New York, and Washington. Only New York, however, allowed out-of-state residents to acquire abortion services (Baker, 2022). In the first two years of its passing, the number of legal abortions performed in New York totaled more than 400,000, roughly two-thirds of which were performed on women traveling from out of state (Jacobs, 2018).
The U.S. would not have federal abortion legality until 1973 with the established constitutional protections following Roe v. Wade. In a 7-2 decision, the U.S. Supreme Court held that “a person may choose to have an abortion until a fetus becomes viable,” usually around 24 to 28 weeks post-conception (Roe v. Wade, 1973). U.S. State laws banning abortion, including the Texas law challenged in Roe v. Wade that criminalized abortion except in cases of potential maternal mortality, were declared unconstitutional under the right to privacy contained in the Due Process Clause of the 14th Amendment (Roe v. Wade, 1973; Méndez & Klibanoff, 2022). With constitutional protection, women no longer had to travel across state lines to access abortion services for unwanted pregnancies, leading to increased access and, thus, instance of legal abortions across the country. The rate of change in legal abortion procedures from 1973 to 2020 is shown below in Figure 1; legal abortion procedures performed showed a marked increase in the years following the Roe v. Wade decision, with a plateau in the 1980s, followed by a steady decline lasting into more current times (Diamant & Mohamed, 2023).

![Figure 1: The Number of Legal Induced Abortions per 1,000 Women aged 15-44 in the U.S., According to the Guttmacher Institute: 1973 to 2003](image-url)
There are a variety of reasons for which women would choose to terminate their pregnancies. Women or couples may decide to terminate a planned pregnancy due to health complications: the mother’s life is at risk, the fetus was shown to have severe health defects, or the fetus is no longer viable. Due to the nature of physiological changes that occur during pregnancy, pregnant women can experience an exacerbation of underlying and pre-existing conditions that can compromise the health of the mother or, in some cases, cause death (Reuters, 2021). Abortions that involve medical complications to the woman are typically rare. A 2004 study by the Guttmacher Institute found that of the abortions analyzed in the study, 4% were due to physical health problems, and 3% were due to fetal health problems (U.S. Abortion Statistics, 2022).

Before Roe-era protections, most U.S. states allowed for legal abortions under specified circumstances, such as for victims of rape or incest and for health complications of the mother or fetus; though, these compose a small percentage of cases and fail to service the majority of abortion-seeking women. Florida keeps an annual record of the reason for every abortion performed within the state. According to the state’s 2021 data, 95.5% of abortions performed were due to social or economic reasons or no reason at all (U.S. Abortion Statistics, 2022). The outcome of Roe v. Wade was pivotal because it enabled all women, regardless of their reason or residency, to receive an abortion if they so choose. The rise in abortion rates following the 1973 Supreme Court decision may imply that American women, many of whom who deemed themselves financially ill-prepared for childrearing, used their new-found legal abortion access to delay or forgo parenthood. However, post-Roe legalization only expanded access for women residing in U.S. states without previous abortion legality. The varied access to abortion in states predating the Roe decision created differences in child cohorts by state legality and across
children born before and after the policy change. My research will exploit these cohort differences to analyze how constitutional abortion protection affected the income of children born adjacent to the Supreme Court decision.

Roughly one-third of American women of childbearing age no longer have abortion access as of 2023, with thirteen U.S. states banning the procedure, and almost all without exceptions for the extreme cases of rape or incest (Shepard et al., 2022; “Tracking the States”, 2023). Communities of color will likely face disproportionate effects from the recent state abortion restrictions. CDC reports show that 39% of all abortions were performed on non-Hispanic Black women, despite the non-Hispanic Black demographic comprising just 12.1% of the U.S. population, and black women were 3.6 times more likely than white women to have an abortion in 2020 (U.S. Abortion Statistics, 2022; Diamant & Mohamed, 2023; Jensen et al., 2022). There were an estimated 620,000 to 900,000 legal abortion procedures performed in 2020, an increase from previous years (Diamant & Mohamed, 2023). Given the number of Americans who will be impacted by the change in abortion policy following Dobbs v. Jackson, American legislators at both the state and local levels should weigh the socioeconomic impacts of abortion regulation.

III. LITERATURE REVIEW

The impact of abortion laws is initially felt by women faced with the reality of unwanted pregnancy. While men, too, experience undesired pregnancies with their partners, women are solely responsible for childbearing and bear a disproportionate amount the burden of childrearing. An examination of data from the Australian Bureau of Statistics Time Use Survey found that as opposed to fathers, mothers have a greater time commitment to their children and spend more time alone with them, they undertake a higher degree of physical labor, particularly
with pregnancy and breastfeeding, and they are more responsible for managing of their child’s care (Craig, 2006). Mothers endure a greater degree of personal economic costs from parenthood. The Pew Research Center conducted a survey finding mothers to be more likely to experience significant career interruptions to attend the needs of their family in comparison to their male counterparts (Parker, 2015). Therefore, socioeconomic outcomes for women are likely to be disproportionately impacted by abortion regulation.

Studies suggest that the legalization of abortion improves various outcomes for young women and mothers. A 1996 study found evidence that the liberalized state abortion reforms pre-Roe reduced the instance of teen marriage, teen fertility, and teen out-of-wedlock childbearing; these results were larger and more robust for black women, but still modest for white women (Angrist & Evans). These results imply that abortion access allowed more American teens to effectively plan their parenthood, with disproportionate impacts on black women. Stephen Whitaker (2011) explored the impact of legalized abortion on high school graduation rates using the variation in state abortion regulations in the decades adjacent to Roe v. Wade. His analysis found that higher ratios of abortions to live births led to increased high school graduation rates, but only for the black males in the study.

The research team of Hajdu and Hajdu (2021) examined the long-term effects of restricting legal abortion access on children’s socioeconomic outcomes using a 1974 change in Hungarian abortion policy. By analyzing a cohort of Hungarian children born within a short period of the policy change, their study concluded that children born shortly after the change had worse socioeconomic outcomes when compared to their pre-policy peers. Their analysis found that restricting legal abortion access led to lower educational outcomes, a higher likelihood of unemployment at age 37, and an increased probability of teen parenthood.
Existing literature can provide context for the adverse outcomes mothers and their children may experience with abortion restrictions. Foster et al (2018) assert that legal abortion access enables women to effectively plan the timing of their motherhood; women can decide when they are emotionally and financially prepared to care for children. The researchers provide evidence for this in their 2018 study, in which they examined the outcomes of children born after abortion denial and children born subsequent to an abortion. The study concluded that children born post-abortion denial were born to mothers who deemed themselves unfit or ill-prepared for parenthood at that point in time, hence why they sought to terminate their pregnancies. Children born subsequent to abortion are instead born to mothers who were ready to care for them. These women could have undergone another abortion as they had previously done, but they instead chose to carry the pregnancy to term. The researchers concluded that children born after the denial of abortion had worse economic outcomes; they were more likely to live in low-income families and households that could not afford basic living expenses.

Researchers Gruber et al (1999) explored how children’s living standards are impacted by abortion decisions using the idea of the marginal child: would the marginal child who was not born because of abortion access have grown up in different circumstances than the average child? Gruber and his team utilized the variation in the timing of abortion legalization across the U.S., finding that those born immediately after legalization experienced a significant fall in various adverse outcomes. The researchers found that the marginal child would have had a 40-60 percent greater likelihood of living in poverty, receiving welfare, being a part of a single-parent household, and dying in infancy (1999). The impact of abortion regulation on the socioeconomic outcomes of subsequent generations is similarly present in their adolescence and adulthood.
Charles & Stephens (2006) analyzed substance abuse among 12th graders in states with and without legalized abortion before Roe-era protections. The results of the study suggest that the legalization of abortion leads to a lower likelihood of adolescent substance abuse. In a 2001 study on U.S. crime rates, researchers Donohue and Levitt found a link between legalized abortion in the United States and a fall in violent and property crime. Their evidence showed that the legalization of abortion could account for approximately half of the drop in crime observed from the 1970s to the 1990s, roughly 18 years after Roe vs. Wade.

The current body of literature exploring the effects of legalized abortion predominately examines socioeconomic impacts on mothers and their children in the early stages of life. Studies that do analyze effects into one’s adulthood focus on adverse socioeconomic outcomes such as unemployment, the likelihood of living in poverty, and the receipt of welfare. By focusing my research on positive income effects for post-policy cohorts long into their adulthood, this analysis will demonstrate how the economic stability of adults are affected by abortion legalization, and specifically how post-Roe abortion protections affected the income of cohorts born adjacent to the supreme court decision.

IV. DATA AND METHODS

Data Description

My analysis used the IPUMS database to pull aggregated data from the American Community Survey (ACS) collected by the U.S. Census and U.S. Bureau of Labor Statistics (Ruggles et al., 2023). The ACS is a household survey that was developed by the U.S. Census Bureau in 2005 to replace the former long form. The ACS is an annual collection of extensive socioeconomic, housing, and demographic data for roughly 3.5 million American households (ACS, 2022). The survey is collected through telephone calls, mailed questionnaires, and in-
person interviews (ACS, 2022). The specific data used in this analysis will be pulled from 2019, as that year has the most recent economic data unaffected by the COVID-19 pandemic. This particular data set was selected for analysis due to several of its advantages. The substantial scope of the ACS data collection allows me to conduct my research with a larger sample size than would be possible with other surveys. The data collected by the U.S. Census is generally known for its legitimacy and reliability; its use in my analysis should minimize bias from errors in the data collection process. The main advantage of using ACS data is its included measure of one’s state of birth, which is central to my methodology. There are limitations to using this particular data set. Namely, socioeconomic variables for the parents of survey respondents are absent from the dataset, preventing my analysis from controlling for parental wealth at the time of their child’s birth.

To isolate my analysis to those whose parents would have been affected by Roe vs. Wade decision, I restricted the data set to respondents born in the United States, reducing the sample size from 3,239,533 individuals to 2,815,557. My analysis will be limited to those born in the two years directly adjacent to Roe v. Wade to closely capture the effect of the policy change without a significant reduction in sample size. After selecting my two cohorts for those born in 1972 and 1974, my analysis is left with 58,147 observations. This research is based on legality and not accessibility; there is no need to consider the relative supply of abortion providers, nor ease of access. Therefore, the years directly adjacent to 1973 and constitutional abortion protection should be sufficient for the purposes of this paper. The final restriction of data excludes those not in the labor force due to the use of income as my outcome variable of interest, leaving me with a final sample size of 48,074 observations. An evaluation of my sample data did not find evidence of missingness for any variable used in my analysis.
Quantitative Measures

The dependent variable and measure of adult earnings for my analysis is *Total Income*, which quantifies each survey respondent’s total personal pre-tax income or losses from all sources for the previous year, measured in nominal U.S. dollars (Ruggles, 2023). Sources of personal income can include wages and salaries, personal business or farm revenue, interest on loans, and rental payments. Due to my selection of 2019 data, the total income for each respondent will be from the previous year of 2018.

One’s year of birth was used to define our pre- and post-policy cohorts: those born in 1972 and 1974. I created the binary variable *Born1974* that equals “1” if a respondent was born in 1974 and equals “0” if they were born in 1972. The pre- and post-policy cohorts are additionally split by state legality of abortion prior to Roe v. Wade. The state control group is composed of four U.S. states: New York, Washington, Hawaii, and Alaska. These were the only American states to legalize a woman’s right to abortion on the basis of choice prior to the 1973 supreme court decision, thus granting women in those states early access to the treatment of interest: the ability to postpone parenthood if desired. The remaining forty-six U.S. states and the District of Columbia compose the treatment group, as their access to the treatment of interest was only acquired after the 1973 supreme court decision.

My analysis controls for six demographic characteristics that affect one’s income. Controls for domestic characteristics include gender, encoded with a *female* dummy variable; marital status, encoded with a dummy variable for whether a respondent is married with their spouse present in the household; and the number of children, encoded with a *2+ Children* dummy variable that is equal to “1” if the respondent has two or more children presently in the household and “0” if they do not. My analysis includes additional variables to control for general
characteristics that may affect one’s income: a binary variable 4+ years of college for acquiring four or more years of college to control for one’s level of education; a binary variable Northeast for respondents living in the American northeast is used to control for regional differences; a binary variable rural, equal to “1” if the respondent does not live in a metropolitan or suburban area, and equal to “0” if they do not.

Table 1: Descriptive Statistics for Cohorts Born in 1972 and 1974

<table>
<thead>
<tr>
<th>States</th>
<th>Variable</th>
<th>Treatment</th>
<th>Control</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cohort Born in 1972</td>
<td>Observations</td>
<td>22,202</td>
<td>2,624</td>
<td>19,578</td>
</tr>
<tr>
<td></td>
<td>Total Income</td>
<td>73,415</td>
<td>85,340</td>
<td>-11,924*</td>
</tr>
<tr>
<td></td>
<td>(82,369)</td>
<td>(96,629)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>.484</td>
<td>.473</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>Married, Spouse Present</td>
<td>.657</td>
<td>.645</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>2+ Children</td>
<td>.633</td>
<td>.636</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>4+ Years of College</td>
<td>.417</td>
<td>.476</td>
<td>-0.059*</td>
</tr>
<tr>
<td></td>
<td>Northeast</td>
<td>.132</td>
<td>.525</td>
<td>-0.393*</td>
</tr>
<tr>
<td></td>
<td>Rural</td>
<td>.115</td>
<td>.074</td>
<td>0.040*</td>
</tr>
</tbody>
</table>

| Cohort Born in 1974 | Observations      | 20,821    | 2,427    | 18,394     |
|                   | Total Income       | 72,341    | 84,213   | -11,871*   |
|                   | (81,541)           | (98,325)  |          |            |
|                   | Female             | .479      | .484     | -0.005     |
|                   | Married, Spouse Present | .656    | .657     | -0.0009    |
|                   | 2+ Children        | .666      | .675     | -0.008     |
|                   | 4+ Years of College| .412      | .494     | -0.082*    |
|                   | Northeast          | .124      | .503     | -0.379*    |
|                   | Rural              | .118      | .070     | 0.048*     |

Note: Unstandardized coefficients; standard errors are in parentheses
*p ≤ 0.05, two-tailed tests

To account for the correlation between income and race, my analysis will consist of five models categorized by racial group: Aggregate, White, Non-White, Black, and Hispanic (Wilson, 2022). The variables race and hispan from the IPUMS data were used to create the racial groups
for each model. The *race* variable used is a categorical variable with the following distinctions: (1) White, (2) Black/African American, (3) American Indian or Alaska Native, (4) Chinese, (5) Japanese, (6) Other Asian or Pacific Islander, (7) Other race, (8) Two major races, (9) Three or more major races. For the purposes of this analysis, I used the *race* variable to create binaries for white, non-white, and black racial cohorts. The *hispan* variable used is a categorical variable with the following distinctions: (0) Not Hispanic, (1) Mexican, (2) Puerto Rican, (3) Cuban, (4) Other, (9) Not Reported. To define the Hispanic cohort, all responses except “Not Hispanic” and “Not Reported” in the *hispan* variable were coded as “1”.

**V. EMPIRICAL STRATEGY**

**Conceptual Model**

Post-roe constitutional protection granted American women the ability to plan the timing of parenthood, and possibly delay it if they deem themselves financially or otherwise unprepared. The ability to plan parenthood changed the proportion of American families who were ready and willing to raise their children. This subsequently created differences in child cohorts born before or after the supreme court ruling, including differential economic outcomes in adulthood.

![Conceptual Model of the Causal Route of Abortion Legalization on Income](image-url)
I used a difference-in-differences model to evaluate the difference in earnings between two comparable cohorts born shortly before and after Roe v. Wade in 1973, while accounting for state laws that legalized abortion before the Supreme Court decision. The first difference is between my pre- and post-policy cohorts, capturing the effect of the change in abortion policy on income for those born in 1974 versus 1972. Survey respondents born in 1974 compose the treatment group, and those born in 1972 are the control group. This single regression would be insufficient to capture the impact of the policy change without considering the handful of U.S. states that legalized abortion prior to Roe v. Wade. An additional difference must be used to divide our cohorts based on whether or not they were born in a state that allowed legal abortion on the basis of choice before 1973. Those born in New York, Washington, Hawaii, and Alaska did not experience a change in abortion policy as a result of their previous state legality; respondents born in these states compose the state control group. Survey respondents from the remaining forty-six states and the District of Columbia will compose the state treatment group.

My analysis was conducted under the assumption that once controlled for pre-Roe state abortion laws, the trajectories of economic outcomes for those born one year before versus one year after the establishment of constitutional protection will differ solely as a result of the change in abortion policy, assuming that no other meaningful changes coincided with the Supreme Court ruling that would have altered the income of subsequent cohorts. Due to the closeness of the cohorts’ age and composition, this assumption should hold true. Moreover, my model assumes that legal abortion access allowed women in 1974 the ability to terminate their pregnancy if they deemed themselves unprepared for any number of reasons, while mothers giving birth in 1972 did not.
**Empirical Model**

This paper uses a Difference-in-Differences regression specification to estimate the effect of abortion legalization on adult income that goes as follows:

\[
\hat{Income}_i = \beta_0 + \beta_1 \text{Born1974}_i + \beta_2 \text{IllegalState}_i + \beta_3 \text{Born1974} \times \text{IllegalState}_i + \beta_4 \mathbf{X}_i
\]

Where the dependent variable \(\hat{Income}_i\) denotes the total personal pre-tax income for individual \(i\) in 2018, \(\beta_1\) is the estimated effect of being born in 1974 as opposed to 1972, \(\beta_2\) is the estimated effect of being born in a state without abortion legality based on choice prior to Roe, \(\beta_3\) is the Difference-in-Differences estimate on the effect of constitutional abortion protections on one’s total income for those born in 1974 and in states without legal abortion access pre-Roe, \(\beta_4\) represents the control variables, and \(\beta_0\) is a constant. The regression is repeated in five models with different racial cohorts. Model 1 aggregates all racial cohorts; Model 2 is restricted to white respondents; Model 3 is restricted to non-white respondents; Model 4 is restricted to black respondents; Model 5 is restricted to Hispanic respondents.

Similar studies exploring the impacts on abortion regulation have been done using the same variation in pre-Roe state abortion laws used in this study but with different methods (Whitaker, 2011; Gruber et al., 1999). The 2001 study conducted by Donohue and Levitt, in which they concluded that legalized abortion could account for as much as half of the drop in crime in the U.S. from the 1970s to the 1990s, used a variety of methods that notably included a difference in difference estimation.

Difference-in-difference models can be a valuable tool for policy analysis. The distinction of groups pre- and post-policy change and between those who did or did not experience the change in policy due to previous state laws allows for causal effects to be
obtained using observational data, though if and only if the model assumptions hold true. The use of a difference in differences specification allows for my analysis to account for changes due to factors apart from the change in abortion policy that, if unaccounted for, would bias my regression estimates. A significant limitation of this model is its inability to account for the women residing in states without legal abortion before Roe who could have traveled to legal states such as New York to receive an abortion. Of the approximately 400,000 abortion procedures performed in New York in the two years following its state legalization of abortion, nearly two-thirds of procedures were performed on women who traveled from outside New York State (Jacobs, 2018). This model is additionally unable to factor for instances of illegal abortion that occurred prior to constitutional protections.

Literature by Foster et al (2018) and Hajdu et al (2021) suggests that in general, my post-policy cohort should have been born to parents better equipped for childrearing. I hypothesize that post-Roe abortion legalization will show a positive effect on income as a result of the financial preparedness of the parents. I predict the effect will vary in magnitude across racial cohorts, with effects being lowest for white respondents and greatest for black respondents.

VI. RESULTS

My analysis found largely insignificant income differences across age groups, implying no income penalty for the younger cohort despite the two additional years of potential labor (see Table 2). Income differences by age were uniquely significant for the Hispanic cohort. Hispanics born in 1974 make an estimated $20,660 less per year than their 1972 counterparts ($p \leq 0.001$). Income in states without pre-Roe abortion was significantly lower across most model specifications. In the aggregated model, respondent income was $5,236 lower in states without pre-Roe legality ($p \leq 0.001$). Hispanics showed the largest discrepancies in incomes across state
groups; those in states where abortion was not legal prior to Roe reported an average income $15,615 lower than those in states with previous legality ($p \leq 0.001$). The income disparity implies that the four states with pre-Roe abortion legality – Hawaii, New York, Alaska, and Washington – are comparatively wealthy states.

Table 2: Difference in Differences Estimates of Total Personal Pre-Tax Income, 2018

<table>
<thead>
<tr>
<th></th>
<th>Model 1 (Aggregate)</th>
<th>Model 2 (White)</th>
<th>Model 3 (Non-White)</th>
<th>Model 4 (Black)</th>
<th>Model 5 (Hispanic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Born in 1974</td>
<td>-2,081 (2,161)</td>
<td>-1,053 (2,450)</td>
<td>-5,939 (4,178)</td>
<td>-5,756 (5,075)</td>
<td>-20,660***</td>
</tr>
<tr>
<td>Illegal State</td>
<td>-5,236*** (1,631)</td>
<td>-4,832*** (1,829)</td>
<td>-9,946*** (3,343)</td>
<td>-4,841 (3,965)</td>
<td>-15,615***</td>
</tr>
<tr>
<td>Diff-in-Diff Estimate</td>
<td>885 (2,284)</td>
<td>-250 (2,584)</td>
<td>6,338 (4,464)</td>
<td>4,825 (5,309)</td>
<td>19,506***</td>
</tr>
<tr>
<td>Female</td>
<td>-35,982 *** (705)</td>
<td>-38,984*** (784)</td>
<td>-17,152*** (1,508)</td>
<td>-9,925*** (1,549)</td>
<td>-22,129 (2,052)**</td>
</tr>
<tr>
<td>Married Spouse Present</td>
<td>13,274*** (808)</td>
<td>13,151*** (922)</td>
<td>11,711*** (1,608)</td>
<td>7,925*** (1,632)</td>
<td>10,473***</td>
</tr>
<tr>
<td>2+ Children</td>
<td>8,966*** (802)</td>
<td>9,275*** (902)</td>
<td>5,569*** (1,603)</td>
<td>4,545*** (1,592)</td>
<td>4,866**</td>
</tr>
<tr>
<td>4+ Years of College</td>
<td>52,039*** (724)</td>
<td>52,278*** (803)</td>
<td>47,058*** (1,587)</td>
<td>34,102*** (1,641)</td>
<td>47,809***</td>
</tr>
<tr>
<td>Northeast</td>
<td>6,863*** (986)</td>
<td>6,580*** (1,073)</td>
<td>4,764* (2,521)</td>
<td>2,562 (2,657)</td>
<td>10,443***</td>
</tr>
<tr>
<td>Rural</td>
<td>-15,018*** (1,117)</td>
<td>-16,232*** (1,212)</td>
<td>-9,196*** (2,890)</td>
<td>-10,994*** (3,242)</td>
<td>-7,828</td>
</tr>
<tr>
<td>Constant</td>
<td>60,807*** (1,730)</td>
<td>62,841*** (1,952)</td>
<td>52,968*** (3,475)</td>
<td>46,966*** (4,090)</td>
<td>64,223***</td>
</tr>
<tr>
<td>Observations</td>
<td>48,074</td>
<td>40,876</td>
<td>7,198</td>
<td>4,447</td>
<td>3,747</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>0.1615</td>
<td>0.1619</td>
<td>0.1437</td>
<td>0.1107</td>
<td>0.1483</td>
</tr>
</tbody>
</table>

Note: Unstandardized coefficients; standard errors are in parentheses
*p $\leq 0.1$, ** $p \leq 0.05$, *** $p \leq 0.01$, two-tailed tests
Due to the disparate baseline wealth between the four states with pre-Roe legalization and the remaining 47 states, a single difference analysis across state groups would have produce biased results and suggested that abortion restriction lowers income for all racial cohorts. The model of the black cohort was unique in its absence of a significant difference in income across the treatment and control states ($p \leq 0.222$).

My difference-in-differences analysis found that post-Roe legalization had an insignificant effect in the aggregated model, indicating a null relationship between post-Roe legality and income for the general population ($p \leq 0.698$). Estimates for white, non-white, and black respondents had similarly null effects to the aggregated model. This result suggests that abortion legality had no impact on annual income for the vast majority of respondents. The difference-in-differences estimate was only statistically significant for the Hispanic cohort. Abortion legalization had a significant positive impact of $19,506$ on total personal income for Hispanic respondents ($p \leq 0.002$), more than double the magnitude of estimates in the other four models. My regression estimates show that for Hispanics in states where abortion only became legalized following Roe v. Wade, annual income in 2018 was $19,506$ more than in states with pre-Roe legalization.

The sample sizes were smaller for respondents of color, with Model 5 of the Hispanic cohort having the smallest sample size of 3,747 observations compared to 40,876 in Model 2 of the white cohort. The reduced number of observations in my non-white cohorts implies that the significance of abortion legalization is likely understated. This result is substantial; an additional $19,506$ equates to a 32.8% increase in the average annual income of $59,398$ for post-policy Hispanics in treatment states.
The models’ demographic controls had expected effects on income. Being female and living in a rural area both had significant negative effects; women have traditionally had lower incomes in the U.S. due to historical and domestic factors, and rural areas tend to have fewer and well-paying job opportunities. Domestic characteristics, such as being married with one’s spouse present in the household and having two or more children, showed a significant positive effect on income; this is likely due to the increased financial support of a marital unit and the additional income needed for childrearing. Having completed four or more years of college education had an expected positive effect, as increased levels of education expand one’s access to high-paying job opportunities. Living in the northeast region of the U.S. had a positive effect on income, though it was insignificant for the black cohort and just mildly significant for the non-white cohort. This result is not surprising, as the concentration of lucrative jobs is denser in the high-cost metropolitan areas of the northeast in fields such as finance, law, and medicine.

VII. DISCUSSION

My analysis found that the Roe v. Wade decision had a largely insignificant effect on total personal income. These results are inconsistent with my initial hypothesis that post-Roe legalization would positively affect income, with especially strong effects for black respondents. However, my estimated effects did find variation across racial cohorts. Hispanics were especially impacted by the change in abortion policy. Post-Roe legalization had a profoundly significant effect on income for my Hispanic cohort. My results show an estimated $19,506 in additional annual income as a result of the policy change; this is equal to a nearly one-third increase in income. A variety of factors could be underlying the strength of this effect for Hispanics.

One possible explanation for the positive correlation is the increased proportion of children in the post-Roe cohort born to prepared and resourced parents, assuming that parents
could have opted to terminate their pregnancy if they deemed themselves unfit for parenthood. Research from Gruber et al (1999) suggests that those in the pre-Roe cohort would have been more likely than their post-Roe peers to face adverse socioeconomic conditions in childhood, such as living in poverty or being a part of a single-parent household. However, this theory cannot explain the unique significance of my result for Hispanics. There may have been differences in the proportion of women at childbearing age across racial groups at the time of Roe. If there were comparatively more Hispanic women of childbearing age in the early 1970s, then the change in abortion policy would affect a greater proportion of Hispanic women as opposed to other racial communities. There may have also been cultural factors underlying my results that influence one’s decision to have an abortion. If a pregnancy would prevent someone from performing their occupational obligations, say if the nature of their occupation was physically intensive, the person would be inclined to end the pregnancy to prevent negative financial ramifications for their household.

My analysis found no effect of post-Roe abortion legalization on total personal pre-tax income for the majority of the model specifications. The effect of post-Roe legalization was surprisingly low for the black cohort considering existing research showing a disproportionate effect of abortion laws on black populations (Jones et al., 2019). The low statistical power of the results may be due to my model specification. An analysis of the treatment effect on treated, such as that conducted by Foster et al (2018), would better capture the impacts of abortion legalization. Assuming that white women may have had comparatively greater financial resources, my findings imply that the income of white cohorts may have been less responsive to post-Roe legalization as a result of their increased ability to access abortion prior to 1973. There is already a precedent for traveling out of state to receive abortion services (Jacobs, 2018); and,
at the time, the average income for whites was comparatively higher than that of blacks and Hispanics. In 1970, the average annual income for white Americans was $65,714 compared to $44,960 for blacks and $48,719 for Hispanics (Kochhar et al., 2018). Given the prevalence of women traveling out of state to receive abortion procedures and the comparatively higher level of income for white Americans, it may be reasonably deduced that the families of white respondents in the treatment states could have used their greater resources to travel across state lines to receive abortion services. With white women in a choice financial position, they may have had greater access to contraceptive care and could have better accommodated unintended pregnancies compared to women of other ethnicities. If this is true, the negative effect for whites could have been caused by the lower levels of wealth in my treatment states rather than as a result of the treatment. However, this hypothesis does not explain the null results for the black and non-white cohorts.

While my research has illuminated the correlation between abortion access and adult income, it is based on several assumptions that may not hold true. As previously stated, women in treatment states could have traveled across state lines to receive an abortion, thus falsifying our assumption that only women in control states could have access to abortion pre-Roe. Women without pre-Roe protections could have similarly resorted to illicit means, receiving abortions from doctors on the black market if legal options were unavailable in their state of residence. The observational scale of the data and the large sample used in this research should be reflective of the U.S. population, and my results may not be equally applicable to abortion policies in other countries with materially disparate characteristics. The extent to which my research can be applied is dependent upon country-level characteristics. Disproportionate effects of abortion legality across racial cohorts may be unique to the United States. Countries with more
homogenous racial demographics may not see a differential effect by race. The effect on income may vary depending on the financial resources offered by one’s government, job, or community for the purpose of childrearing. Greater access to resources could potentially allow parents to raise their children with less financial burden, thus reducing the need of abortion for financial or socioeconomic reasons.

U.S. state legislatures will now decide the legality of abortion following the recent reversal of constitutional protections in Dobbs v. Jackson and the inability or unwillingness of Congress to pass federal abortion legislation. Laws regulating abortion have measured impacts on the economic well-being of American families that should be duly considered in the legislative process. My analysis found that Roe v. Wade substantially increased the wealth of the post-policy generation for Hispanics, and state laws restricting abortion access would likely have the reverse effect. One’s income level can determine what opportunities for real estate or other financial investment are available, their prospects in higher education, and their overall quality of life. Going forward, U.S. state governments should favor laws that protect legal abortion rights in order to reduce racial inequalities and promote the economic prosperity of America’s future generations.

Legal protections may be insufficient in providing American women options in family planning, considering the steep drop in U.S. abortion providers since the 1980s (Diamant & Mohamed, 2023). Lowered restrictions and increased government resources should be leveraged to increase the number of abortion providers, with a particular focus on high-need and minority-dominant neighborhoods. My results have additional implications beyond abortion legality and access. Before unwanted pregnancies even occur, contraceptives can be used as a powerful tool for prevention. Unfortunately, low-income and minority women are less likely to use
contraceptives, and when they do, they are more likely to use less effective contraceptive methods, such as condoms (AGOG, 2022). The lower likelihood of contraceptive use could be largely attributed to the health system barriers faced by low-income women. Women with fewer financial resources are less likely to be insured, which is a significant risk factor for the nonuse of prescription contraceptives (AGOG, 2022). Policies regulating birth control, such as Medicaid and the Affordable Care Act (ACA), should consider expanding contraceptive access and coverage, particularly in low-income and minority-dominant communities.

Financial and socioeconomic constraints are among the most commonly cited reasons for abortion (Jones, 2019). For those who are unable or unwilling to receive an abortion but still face financial limitations in childrearing, an array of policies could be instituted to ensure these families are able to properly care for their children. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) could be expanded to more successfully meet the financial needs of low-income families. The U.S. federal government could establish a socialized system of guaranteed maternity leave that would remove some of the financial burden associated with childbearing and rearing, particularly for women. If American families are terminating their pregnancies as a result of financial barriers, the national government should have a vested interest in minimizing these barriers negatively affecting its citizens.

VIII. CONCLUSION

A woman’s right to choose the outcome of her pregnancy can have societal consequences beyond the individuals seeking an abortion. My analysis found no relationship between post-Roe abortion access and adult income for all but the sample’s Hispanic respondents, whose results were positive and highly significant. The ability of Hispanic parents to terminate unwanted pregnancies improved economic outcomes for their children long into their adulthood.
My research faced limitations due to missing contextual information in the data. Results would likely have been more robust with a restriction of my analysis to respondents born into low-income families. This restriction could have potentially eliminated statistical noise from financially prepared parents in both periods who would have had their children regardless of the policy change and abortion legalization. Additionally, my inability to establish a relationship between abortion and income for non-Hispanic respondents may result from illegal or out-of-state abortions preceding post-Roe legalization. Further iterations of my research could be conducted with methods that limit the control group’s exposure to pre-Roe abortion alternatives, such as by omitting residents bordered by states with pre-Roe abortion legality. The contribution of this analysis was establishing a significant relationship between abortion legality and adult income for Hispanic Americans. My methods could be applied to future research exploring the effect of abortion regulation on other economic outcomes, such as homeownership, educational attainment, and family equity.

The regulation of abortion has measured impacts on the economic health of American families that policymakers should consider. I have shown abortion access to increase income for future Hispanic cohorts, but much is still unknown as to the effects of abortion on other economic outcomes. With Roe v. Wade recently overturned in Dobbs v. Jackson and the issue of abortion legality falling to the U.S. state legislatures, it is critical for researchers to further explore the effect of abortion access on the economic health of subsequent generations of Americans to best advise legislative decision-making.
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