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THE EFFECTS OF *DOBBS v. JACKSON* ON POVERTY IN THE UNITED STATES

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ABSTRACT

This paper aims to examine the effects of *Dobbs v. Jackson Women's Health Organization* on poverty rates and income distribution in the United States. It builds on previous literature by exploring the macroeconomic impacts of abortion bans after the reversal of *Roe v. Wade*. Using panel data spanning from 2009 to 2022 and all 50 states, two modeling approaches are employed to examine the effects of *Dobbs* on female, child, and overall poverty rates in the United States. A difference in differences (DID) approach suggests that *Dobbs* increases total poverty by around 0.5% and child poverty by around 1%. The second model uses party composition of state legislatures as an instrumental variable in a two-stage least-squares (2SLS) regression. This model fails to find a statistical relationship between *Dobbs* and poverty which could be due to a lack of statistical power. Additional analysis using four different income groups as the dependent variables in the models suggests that those in higher earning groups may be harmed. Results from the DID and 2SLS models show that the portion of those living greater than or equal to 4 times the Federal Poverty Line (FPL) decreases by 1% and 4%, respectively after *Dobbs*. While there is minimal indication that *Dobbs* increases poverty, this question should be revisited as more data becomes available. This thesis provides an initial exploration of the post-*Dobbs* world and is part of the growing field of economic research studying abortion access and reproductive healthcare.

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Chapter 1

Introduction

1.1 *Dobbs v. Jackson* and the Link Between Abortion and Poverty

On June 24, 2022, the United States Supreme Court released the opinion for *Dobbs v. Jackson Women's Health Organization,* declaring that abortion was no longer constitutionally protected. The Court's decision prompted a wide range of reactions, both positive and negative. In a Senate Banking Committee hearing, Treasury Secretary Janet Yellen was asked to comment on a leaked first draft of the *Dobbs* decision.[1] She said, "I believe that eliminating the right of women to make decisions about when and whether to have children would have very damaging effects on the economy and would set women back decades" (Guida, 2022). Yellen was referring to the growing body of economic research about the effects of abortion access on the economy and the adverse effects of abortion restrictions on women.

To fully understand the significance of *Dobbs*, it is necessary to review the evolution of abortion policy in the United States. At first, and for a majority of its history, the U.S. outlawed abortion in all circumstances. Despite the risk of legal repercussions, millions of women sought illegal abortions. Starting in the 1960s, people began vocalizing the benefits of abortion, especially in cases when the procedure would save a woman's life during pregnancy complications. The movement to legalize abortion gained momentum when some states enacted reform bills that either legalized abortion or expanded the exceptions in which abortion was allowed. In 1970, the movement reached a precipice when a case that began in Texas gained

[1] An opinion draft was first leaked to the public in May, indicating the Court's decision before it was officially published.

national attention after a woman claimed that her state's laws were unconstitutional (Oyez, 2022). After continuous legal battles, this case, famously known as *Roe v. Wade,* reached the Supreme Court and revolutionized abortion in the United States. Abortion became federally protected during the first trimester of pregnancy, and states were given guidelines on the level of restriction they could place for the second and third trimesters (Cornell Law School Legal Information Institute, 2022). For the next couple of decades, thousands of women benefitted from more relaxed abortion laws.

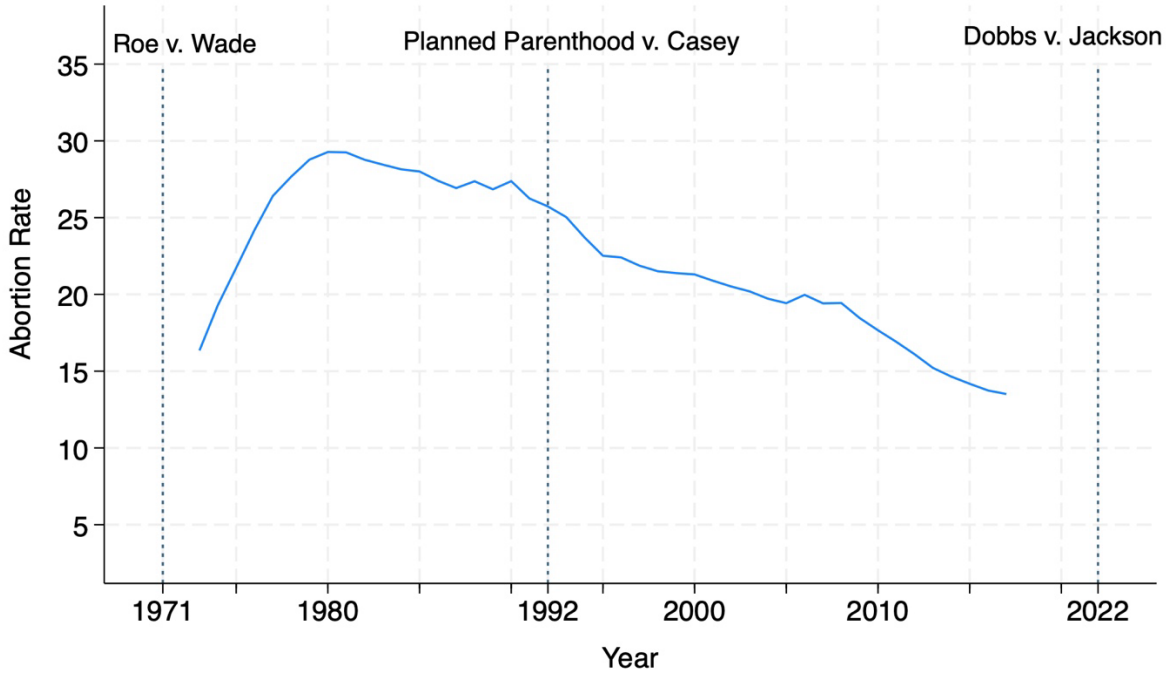
The landscape began to change in 1992, as new abortion policies were proposed and scrutinized. The Supreme Court heard *Planned Parenthood v. Casey* to decide whether a set of restrictive policies in Pennsylvania were constitutional. The Court reaffirmed part of the *Roe* decision, upholding that states are not allowed to ban abortion prior to fetal viability.[2] However, the Justices proposed a new framework that determined abortion policies could not impose an "undue burden" on individuals, giving states vaguer limitations (Cornell Law School Legal Information Institute, 1992). States that were against abortion benefitted from the ambiguous ruling and were able to enact increasingly restrictive policies, such as mandatory waiting periods.

While some people perceived *Dobbs* to be a radical shift*,* incremental changes in abortion policy began immediately following *Roe.* In the decades after it, states enacted over 1,338 restrictions and many legislators fought against it since its origins (Nash, 2021). Figure 1.1 shows a sharp increase in the U.S. abortion rate after *Roe* and a steady decline in the years after, as states began to limit abortion again. Therefore, while *Dobbs* is a landmark case in the fact that it allows states to ban abortion in totality, it is also a product of an incremental shift in

[2] Fetal viability is the ability for a fetus to be able to survive outside of the uterus. This typically occurs around 23 to 24 weeks of gestation.

reproductive policy including *Planned Parenthood v. Casey* and the numerous restrictions passed by states in the last 50 years.

Figure 1.1 Influential Court Cases and the U.S. Abortion Rate (1973-2018)



Note: The abortion rate represents the number of abortions per 1,000 women aged 15-44. These data come from the Guttmacher Institute public use data set titled "Pregnancies, Births and Abortions in the United States: National and State Trends by Age" (Maddow-Zimet et al., 2020).

Underneath the political discourse and legal battles surrounding abortion, economic research demonstrates a clear relationship between abortion access and financial hardship. All pregnancies, planned or otherwise, come with a cost. High healthcare expenses, disruptions in the ability to participate in the workforce, and the need for childcare are burdens that almost all expecting parents must face, regardless of income. However, those who seek abortions tend to be of lower income than the rest of the population. Out of all patients seeking an abortion, 75% of them are poor or low-income, and financial concerns are the most frequently cited reason for women obtaining an abortion (Biggs et al., 2013; Greene Foster et al., 2022; Jerman et al., 2016). Poor is defined as living below the Federal Poverty Line (FPL), and low-income is defined as

living between one and two times the FPL. Moreover, the FPL is an annual income threshold set by the U.S. government to determine individual's eligibility for certain public services and is often used to gauge people's poverty status. Along with finances affecting people's motivation for seeking an abortion, there is evidence that being denied an abortion can have drastic negative impacts. Greene Foster (2020) found that an abortion denial increases a woman's likelihood of living in poverty by four times. Studies have also shown that denial can lead to increased debt, a higher likelihood of receiving public assistance, and greater odds of children living in poverty if their mother is denied a wanted abortion (Greene Foster et al., 2018; Greene Foster et al., 2022; Miller et al., 2020).

While existing literature has demonstrated that limiting access to abortion harms women's financial well-being and worsens their economic outcomes, few studies have been conducted after *Dobbs.* Since the decision, the entire policy landscape has changed. In hopes of a reversal of *Roe v. Wade*, 14 states enacted "trigger bans" on abortion which took effect almost automatically after *Dobbs* was released (Nash & Guarnieri, 2022). New research should examine if these bans produce similar economic consequences, or if the severity of the new abortion landscape has an even greater impact than what has previously been examined. Therefore, this thesis begins to fill this gap by examining the effects of *Dobbs v. Jackson* on poverty and income in the United States.

1.2 Aim of Thesis and Research Questions

This thesis will build off of previous studies in two ways. First, it explores the harmful effects of abortion bans resulting from the *Dobbs* decision. Second, compared to other studies that use samples of individuals to assess trends, this thesis uses a macroeconomic approach by

examining the entire United States. Abortion is a particularly polarizing and sensitive topic, but this thesis refrains from promoting any particular political agenda. The methods used in this thesis quantify the effects of *Dobbs* using careful analysis to avoid any unnecessary bias.

This paper addresses three primary research questions:

i. Have *Dobbs v. Jackson,* and the resulting bans on abortion from the decision, exacerbated poverty?

ii. Has the *Dobbs* decision specifically impacted female and child poverty?

iii. Which income groups are the most affected by the decision and by how much?

To answer these questions two methods of analysis are utilized. First, a differences-in-differences (DID) model is used to find the treatment effect of the abortion bans enacted after *Dobbs.* Second, an instrumental variable approach using a two-stage least-squares regression (2SLS) serves as a robustness check and addresses the issue of endogeneity of poverty and abortion policy. The model uses the partisan composition of state legislatures as an instrument.

The remaining sections of this thesis are as follows. Chapter 2 presents a literature review. Chapter 3 provides background on the variables, dataset, and presents key summary statistics. Chapters 4 and 5 review the specification and results for the DID and 2SLS models, respectively. Finally, Chapter 6 provides further discussion of results, considerations for future research, and policy implications.

Chapter 2

Literature Review

2.1 Early Economic Frameworks for Abortion and Fertility

One of the earliest theories on fertility and family planning comes from Gary Becker. He suggests that demand for children is dependent on income, where parents weigh both the quality and quantity of their potential children, also known as the Quality-Quantity Trade-Off (Becker, 1981). He also explains that a planned pregnancy is an endogenous choice, which implies that an unplanned pregnancy is an exogenous shock. Without directly addressing the benefits of abortion, Becker's theories lay an essential groundwork for understanding why abortion can be an interesting question to economists. Specifically, his work explains how abortion can act as a form of insurance for the exogenous shock of an unplanned pregnancy and introduces a new mechanism in the demand for children.

In the five years leading up to *Roe v. Wade,* a few states adopted abortion ban repeals and legalized abortion before the rest of the United States. Years later, researchers treated this change as a natural experiment to understand how abortion access affected women's labor market and fertility outcomes. Abboud (2020) found evidence that abortion access delayed the onset of motherhood and, in turn, improved mothers' labor market outcomes via increased wages for the states that adopted ban-repeals. Additionally, Angrist and Evans (1996) found that abortion access decreased marriage, fertility, and out-of-wedlock childbearing for teenage girls. Moreover, they found a strong causal chain among Black women, showing that increased access

to abortion increases schooling and employment rates. The evidence from ban repeals showed that a decision like *Roe* would have a positive impact on women's economic and personal lives.

After the landmark decision of *Roe v. Wade* (1973), research vastly changed, and many new empirical models emerged. Specifically, demand for abortion became a focus of many scholars; Rothstein's (1992) model found that disposable income, the percentage of single women, the presence of state funding, unemployment rates, and divorce rates are among many of the statistically significant factors driving demand for abortion. Some scholars also looked to differentiate the effects of abortion access and the contraceptive pill, which became more popular around the same time that abortion was legalized. While contraception and abortion are distinct medical practices, both can be used to prevent an unwanted birth from occurring. Ex-post analysis from Myers (2017) compared the effects of the contraceptive pill to abortion to determine which had a greater impact on fertility and marriage for women under the age of 19. She found that the pill did not influence fertility and marriage, while abortion access decreased a woman's probability of giving birth by 3.2 percentage points and her probability of marrying by 2.3 percentage points. Therefore, despite the importance of the pill in other contexts, abortion is a significant factor in fertility outcomes and plays a major role in giving women more autonomy in their personal and reproductive lives.

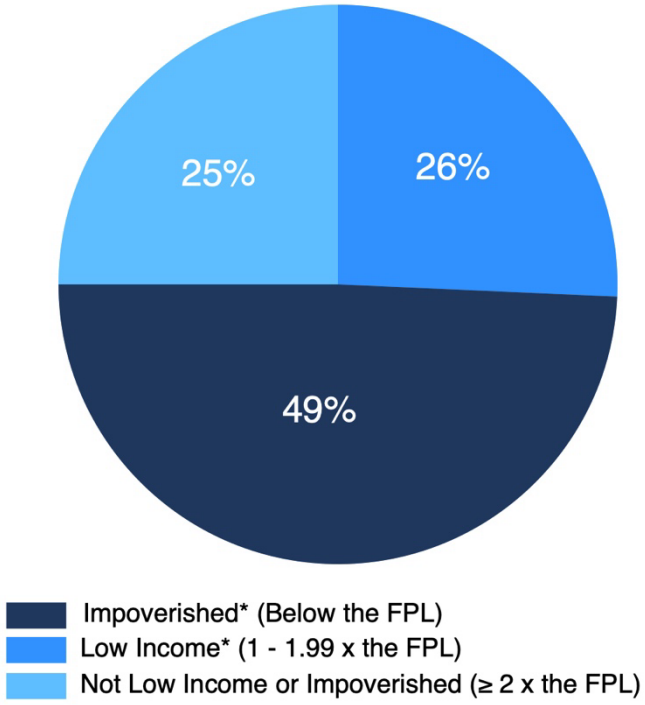
It is important to note that *Planned Parenthood v. Casey* remains a significant case in the abortion policy landscape and allowed for a new wave of restrictions to be enacted, despite the strong emphasis on *Roe v. Wade* in previous theories. As a whole, early models show that abortion access can have numerous possible benefits. Research in the last decade has shifted to encapsulate new empirical methods and focus on who is getting an abortion and why. Of these

newer methods, demographic estimation and surveys have contributed to a greater understanding of abortion and economics.

2.2 Characteristics, Motivation, and Barriers for Abortion Patients

While the Centers for Disease Control and Prevention (CDC) publishes annual abortion statistics, they are limited to the information provided by state health departments, resulting in inaccurate and limited measurements. The Guttmacher Institute conducts national surveys and collaborates with researchers to publish their findings to help fill the gaps. Analysis by Jerman et al. (2016) found that 60% of abortion patients were in their twenties, and 25% were in their thirties. Contrary to popular belief, 59% of patients gave birth previously, meaning many were already caregivers to other children. Jerman et al. (2016) also found that a majority of patients identify as religious (62%). The most common religious group identified was Catholics at 24%, followed by 17% mainline Protestants and 13% evangelical Protestants. Additionally, as shown in Figure 2.1, 75% of women receiving an abortion were low-income. Of that group, 49% were living in poverty (below the FPL), and 26% were living between 1.00 and 1.99 times the FPL (often considered to be low income). In the year 2017, the overall female poverty rate was around 14.16%, meaning that impoverished women are extremely overrepresented among abortion patients.

Figure 2.1 Income Breakdown of Abortion Patients in 2017



Note: The two groups with an asterisk represent those included in the "low income" group for the analysis by Jerman and colleagues (2016) since they are below the threshold (less than 2 times the FPL).

Apart from the descriptive demographic measures of abortion patients, it is also important to understand their motivations for receiving the procedure. Finer and colleagues (2005) used a qualitative survey and quantitative research design to understand the reasons women have abortions. Around 75% of respondents in their study cited that they simply could not afford a baby at the moment, and the financial responsibility that comes with a child would be a significant burden. The researchers commented on the variety of factors that drive women to seek an abortion. They write, "The decision to have an abortion is typically motivated by multiple, diverse, and interrelated reasons. The themes of responsibility to others and resource limitations, such as financial constraints and lack of partner support, recurred throughout the study." Biggs, Gould, and Greene Foster (2013) conducted a similar study and found that 40% of women mentioned financial reasons for seeking an abortion, making it the most cited concern

within their entire study. Additionally, many of the women in the Biggs et al. (2013) study expressed concern that they would require public assistance or that their jobs would not pay them enough to support an additional child. Overall, the literature indicates that choosing to get an abortion is often weighed by a multitude of factors, including obligations to current and potential children.

Despite the already difficult decision to get an abortion, many people who choose to seek one face many barriers to obtaining care. As discussed in Chapter 1, a total of 1,338 abortion restrictions have been enacted at the state level since *Roe v. Wade* (Nash, 2021). These restrictions include mandatory waiting periods, required counseling, parental notification and/or consent, and limitations to federal funding. In some cases, restrictions can make seeking an abortion almost impossible. In 2021, Texas banned abortion after 6 weeks of pregnancy (Nash, 2021). To put that into perspective, most people find out that they are pregnant at around five to six weeks into their pregnancy (Branum & Ahrens, 2017).

On top of financial and policy-based constraints, geographical barriers can add an additional burden for abortion-seekers. The number of clinics that provide abortions can be a deciding factor on whether abortion is readily available to those who want one. Moreover, the number of clinics often correlates with the ideological direction of the policy environment. States with abortion bans after *Dobbs* often had fewer open clinics in the years leading up to the decision. For example, Mississippi, South Dakota, and North Dakota all had only one clinic in operation as of 2021. The trend is also observed in the ratio of patients per clinic. States that imposed abortion bans after *Dobbs* had a mean of 345,586 women per abortion clinic in 2017,

while states without bans had a mean of 103,935 women per clinic (Schroeder et al., 2022).[3] Fewer clinics often result in a greater need for women to travel outside of their state to obtain care. Jerman et al. (2016) demonstrated that 7% of all abortion patients had to travel out of their state of residence to receive care in 2014.

Ultimately, barriers accumulate beyond geography and policy. Social pressure, religion, and stigma can also prevent people from seeking the care they want. While many states made abortion extremely difficult to obtain before *Dobbs*, the shift in policy has only made it more challenging for women.

2.3 The Economic Consequences of Abortion Denial

Apart from formal analysis, the theory as to why abortion restriction can harm the economic lives of people is relatively straightforward. By nature, abortion denial results in the requirement to carry a pregnancy to term. This results in healthcare costs for prenatal care, birth, and postpartum recovery. If the mother or caregivers choose to refrain from adoption, then being denied an abortion also implies the cost of raising a child. Existing literature estimates that the expected cost of raising a child (from birth to the age of 17) for a middle-income family is $233,610; for lower-income families, the expected cost is approximately $162,000 (Lino et al., 2017). Whether the burden is placed directly on a mother, or a whole family, being denied an abortion can cause a major shock to household expenses. Moreover, many women who seek an abortion already have a child, meaning that an additional household member might constrain

[3] This estimate is calculated using ANSIRH data on clinics and population estimates from the KFF. This statistic is not directly reported by Schroeder and colleagues (2017) but was calculated using their estimates for clinics in 2017.

resources further. Previous studies have supported this theory, citing that some women seek an abortion to prioritize the care of children they already have (Finer et al., 2005).

While this thesis attempts to take a macro approach to the economic consequences of abortion restriction, previous studies have looked at the micro level. The Turnaway Study is a landmark panel study that examines the effects of unwanted pregnancy on women's lives; it utilizes more direct comparison groups than previous studies and follows a group of women for multiple years.[4] The study compared the outcomes of two groups seeking abortions: those who successfully obtained an abortion but were near the gestational limit and those who were turned away because they were barely past the gestational limit; they are called the Near Limit and Turnaway groups, respectively (Greene Foster, 2020). Over fifty scientific papers and peer-review journal articles have been published using the Turnaway Study's data.

Similar to the findings of Jerman and colleagues (2017), the study found that, of all the women seeking an abortion (both Near Limit and Turnaway groups), 76% self-reported not having enough money to cover housing, transportation, and food, and 51% were living below the FPL (Greene Foster et al., 2022). One of the most essential takeaways from the study reported that the Turnaway group has four times greater odds of living below the FPL after abortion denial (Greene Foster, 2020). Children born as a result of abortion denial are also more likely to live below the FPL, compared to children born in a prior pregnancy (Greene Foster et al., 2018).

The financial distress of an abortion denial extends beyond the likelihood of living in poverty. In the period after being denied, the Turnaway group was six times more likely to receive TANF, WIC, and SNAP (Greene Foster et al., 2022). Miller, Wherry, and Greene Foster

[4] Previous work has often compared women who received abortions to those who wanted to carry their pregnancies to term. Additionally, many studies carried out retroactive surveys that drew on reflection rather than measurable data.

(2020) published additional findings from the Turnaway Study data to the National Bureau of Economic Research (NBER) and reported that the Turnaway group experienced higher rates of financial distress, including an average of $1,750 more debt (>30 days overdue) compared to the same individual's pre-birth levels, an 81% increase in bankruptcy, eviction, and tax liens due to abortion denial. These negative effects peaked during the year of birth and the three years following.

Extensive research on a smaller subset of women in the Turnaway Study reveals evidence as to why we might observe a greater impact from *Dobbs v. Jackson.* Moreover, demographic trends suggest that women seeking an abortion are already struggling financially. Therefore, given the literature, it is important to investigate the possible financial effects of the abortion bans resulting from *Dobbs.*

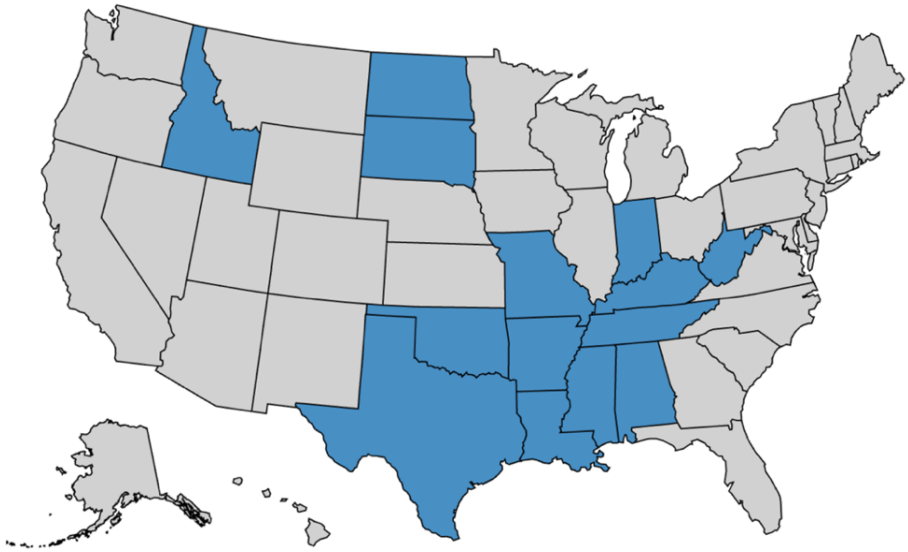
Chapter 3

Data

3.1 Key Variables and Dataset Building

The panel data used for this study span from 2009 to 2022, with a total of 650 observations. Each observation is identified by both the state and year.[5] The "total ban" states include Alabama, Arkansas, Idaho, Indiana, Kentucky, Lousiana, Mississippi, Missouri, North Dakota, Oklahoma, South Dakota, Tennesee, Texas, and West Virginia (*Abortion Policy Tracker*, 2023; "Tracking Abortion Bans Across the Country," 2022). All states that banned abortion at any point in 2022 are included, regardless of whether they passed legislation immediately after or in the following months.[6] Figure 3.1 shows the fourteen states included in the treatment group and are thus designated as "ban states."

Figure 3.1 Abortion Bans in Effect After *Dobbs v. Jackson*



Note: The states shown in blue are the fourteen states that have banned abortion after *Dobbs*.

[5] The dataset, regressions, and results were created with both Stata and Excel.
[6] The states included in the treatment group are current as of December 2023. North Dakota had a trigger ban in place, but the policy was blocked by the courts until April 2023. The state is still included in the treatment group because its only clinic shut down upon the release of the *Dobbs* decision ("Abortion in North Dakota," 2024).

The poverty rates used in this thesis are known as poverty guidelines. A poverty guideline is determined by the U.S. Department of Health and Human Services (HHS) and is often used for administrative purposes or to determine a person's eligibility for services or programs such as Medicaid (Institute for Research on Poverty at UW Madison). In contrast to poverty guidelines, the U.S. Census Bureau publishes poverty thresholds each year which are highly precise estimations of poverty. Poverty thresholds are often considered the gold standard for statistical analysis of poverty. However, due to data limitations and the timing of this thesis, the only available estimates for poverty rates after *Dobbs* were the guidelines from the HHS. As of 2022, the poverty threshold as a measure of annual income is $13,590 for an individual and $18,310 for a family of two; for families larger than two, an additional $4,000 to $5,000 is added for each additional member (HealthCare.Gov, 2023).[7]

Three different types of poverty thresholds are used in this thesis. All are sourced from the Kaiser Family Foundation (KFF) and based on their estimation of poverty using data from the American Community Survey (ACS).[8] The percentage of people living below the Federal Poverty Line (FPL) is a measure to gauge poverty across all demographic groups; this number can be understood as the overall poverty rate (*Distribution of Total Population by Federal Poverty Level*, 2022). This study also examines child poverty which is defined as the percentage of children below the age of 18 living below the FPL (*Poverty Rate by Age*, 2022). Lastly, female poverty is defined as the percentage of females that live below the FPL (*Nonelderly Adult Poverty Rate by Sex*, 2022). Additional analysis includes a breakdown of income groups based

[7] While the thresholds and guidelines are different estimates for the poverty rate, they are based on the same income parameters.
[8] The ACS has missing data in the year 2020 due to various limitations caused by the COVID-19 pandemic. Therefore, this year is not captured in the model.

on the FPL. On top of the overall poverty rate, there are three groups: those with income 1-1.99 times the FPL, those 2-3.99 times the FPL, and greater than 4 times the FPL. These data are also sourced from the KFF estimates using the ACS (*Distribution of Total Population by Federal Poverty Level*, 2022).

Creating a model to predict poverty requires a careful selection of control variables. The model includes demographic breakdowns based on age, race, and sex. These data are also sourced from KFF and are based on the ACS (*Population Distribution by Age*, 2022; *Population Distribution by Race/Ethnicity*, 2022; *Population Distribution by Sex*, 2022). They are included as controls because poverty occurs at higher rates among children, females, and racial minorities (Brady, 2023). The specific race groups selected for the model include Black, White, and Hispanic people. Smaller groups were omitted from the regressions because including all of them would not allow for a reference group, causing an issue of perfect multicollinearity.[9] In addition, the model factors in the percentage of children born to unmarried parents as they are some of the most vulnerable and likely to experience poverty (Brady, 2023). These data were calculated using the CDC WONDER database by dividing the number of children born to unmarried mothers by the total number of children born in each state for a particular year (*CDC WONDER Natality 2007-2022 Dataset*, 2022).[10]

Apart from demographic poverty controls, there are controls for state spending that capture education and health measures. The National Association for State Budget Officers (NASBO) provides a State Expenditure Report including the total funds used towards Temporary

[9] Asian, Pacific Islander, Indigenous, and Native American are the specific groups that are not included in the model. While data were collected for them, these variables did not significantly impact the results of the regressions when included and have less explanatory power in controlling for poverty.

[10] California passed a law in 2017 which put a statutory restriction on the recording of mother's marital status after birth, leading to some missing data.

Assistance for Needy Families (TANF), Medicaid, elementary and secondary education, and a miscellaneous category titled "other" (capturing housing and environmental projects as well as Children's Health Insurance Program (CHIP)) (*State Expenditure Report Overview: Fiscal 2020-2022*, 2022). In creating the dataset for this study, each measure from the NASBO was adjusted for inflation and divided by state population totals sourced from the KFF (*State Expenditure Report Historical Data Set, 1991-2022*, 2022; *Total Number of Residents*, 2022; World Bank, 1960). Additionally, the model includes inflation-adjusted average Supplemental Nutritional Assistance Program (SNAP) benefits per beneficiary (*Average Supplemental Nutrition Assistance Program (SNAP) Benefits Per Person*, 2022; World Bank, 1960). Many states have expanded access to Medicaid coverage for pregnant women, therefore the model includes the eligibility cutoffs, as a percent of the FPL, for pregnant women to be covered by Medicaid. All of these spending controls were included because there is evidence that poverty-alleviating spending such as SNAP, TANF, Medicaid, and CHIP all help reduce poverty (Varghese, 2016).

In the DID model, seen in Chapter 4, the $treat$ and $post$ variables are binary. $Treat$ represents states that have total bans on abortion, and $post$ represents observations in 2022. The two variables are interacted to estimate the DID coefficient for the model. In the 2SLS model, the instrument used is the percentage of Republican legislators in both chambers of the state legislature.[11] These data were sourced from the National Conference of State Legislators (NCSL) (*State Partisan Composition*, 2023). To find the total percentage of Republicans in a state legislature, the sum of the House and Senate Republican representatives was divided by the total number of representatives in both chambers.[12]

[11] Justification for the use of this instrument can be found in Section 5.1.
[12] The NCSL did not report data on Nebraska due to its unicameral legislature, so the state is not included in the analysis for the 2SLS model in Chapter 5.

3.2 Summary Statistics

The summary statistics described in this section represent the mean for each variable spanning from 2009 to 2022, including all 50 U.S. states. All averages reflect the mean of state-level data and are not weighted by population. As shown in Table 3.1, the average poverty rate for children (18.4%) is the highest among the three poverty rates used in this paper. Female poverty is second highest (14.7%), and the overall poverty rate is the lowest (13.8%), describing poverty across the whole population for all genders and age groups. The overall poverty rate is equivalent to those living below the FPL. The mean portion of the population living between 1-1.99 times the FPL is 17.7%, and the mean portion of the population living between 2.00-3.99 times the FPL is 30.8%. The proportion of those living with income of 4 times the FPL or greater has the highest mean of 37.7%.

The majority of the population is White, with a mean of 69.5%. The percentage of Black and Hispanic is 10.1% and 11.5%, respectively.[13] An average of 39.1% of all births in the U.S. from 2009 to 2022 were to unmarried mothers. Moreover, the largest portion of the population is under 18 years old, with a mean of 24.3%. The female share of the population is 50.9% on average and the male share is 49.1% on average.

From 2009 to 2022, the average share of Republicans in state legislators is 53%. The most spending per capita is for Medicaid, with an average of $1,971 per year. Elementary and secondary education spending comes in second, with an average of $1,553 per year. The mean TANF spending per capita is $50.41 and the mean of uncategorized state expenses including cash transfers is $37.53. Adjusted for inflation, the mean SNAP benefits per beneficiary are

[13] Persons of Hispanic origin may be of any race, all other racial groups are non-Hispanic. These estimates might appear lower than U.S. Census data, however they are biased downward because the averages are not weighted by population.

$162.21 per month. Finally, the average percentage of the FPL for states to cover pregnant women with Medicaid is 206.30%.[14]

Table 3.2 shows the difference in means between the states with abortion bans resulting from *Dobbs v. Jackson* and the states that have not enacted total bans on abortion (again, for all 50 states spanning 2009 to 2022). States with abortion bans have higher poverty rates overall and for women and children. Child poverty is 4.84% higher on average in ban states. Female poverty is 3.72% higher, and overall poverty is 3.40% higher. These states also had 18.99% more Republicans in the state legislatures. Elementary and secondary education spending per capita is an average of $1,176 lower for ban states. Medicaid spending per capita is $98.38 lower, monthly SNAP benefits per beneficiary are $9.48 lower, and other expenses are $26.61 lower, on average. However, TANF spending is $5.47 more on average. Overall, ban states provide less funding to the most vulnerable populations, have smaller investments in human capital via education spending, and have higher poverty rates.

[14] The income to determine someone's poverty status is still dependent on household size.

Table 3.1 Summary Statistics for All States (2009 to 2022)

	Mean	σ	Observations
	Poverty Measures		
% Population living in poverty	13.78	3.192	650
% Females living in poverty	14.68	3.279	650
% Children living in poverty	18.44	5.199	650
% People living 1.00-1.99 times the FPL	17.68	3.058	650
% People living 2.00-3.99 times the FPL	30.83	2.744	650
% People living ≥ 4 times the FPL	37.72	7.383	650
	Demographics		
% Population that is white	69.5	15.7	650
% Population that is black	10.1	9.31	645
% Population that is Hispanic	11.5	10.3	650
% Births recorded with unmarried mothers	39.1	7.79	700
% Population under 18 years old	24.3	2.17	650
% Population aged 19 to 25	9.00	0.71	650
% Population aged 26 to 34	11.9	0.82	650
% Population aged 35 to 54	26.4	1.55	650
% Population aged 55 to 65	13.1	1.15	650
% Population over 65 years old	15.3	2.40	650
% Population that is male	49.1	0.77	650
% Population that is female	50.9	0.77	650
	Public Policy and Spending		
% Republican legislators in state house and senate	53.11	18.72	735
Elementary & secondary educ. spending, per capita	$1,553	527.2	700
TANF spending, per capita	$50.41	65.35	700
Medicaid spending, per capita	$1,971	623.7	700
Other expenses and cash transfers, per capita	$37.53	93.11	700
Avg. SNAP benefits per beneficiary	$162.21	39.41	700
Threshold for Medicaid coverage for pregnant women (as a % of the FPL)	206.30%	0.468	700

Note: All spending variables are adjusted for inflation to the 2022 price levels.

Table 3.2 Summary Statistics Between Ban and No Ban States, Including a Difference in Means (2009 to 2022)

	Poverty Measures						
		No Ban States (treat=0)			Ban States (treat=1)		
	Δ Mean	Mean	σ	Obs.	Mean	σ	Obs.
% Population living in poverty	3.40	12.82	2.76	468	16.22	2.93	182
% Females living in poverty	3.72	13.64	2.73	468	17.36	3.05	182
% Children living in poverty	4.84	17.08	4.56	468	21.93	5.12	182
% People living 1.00-1.99 times the FPL	3.26	16.77	2.82	468	20.03	2.29	182
% People living 2.00-3.99 times the FPL	1.72	30.35	2.89	468	32.07	1.83	182
% People living ≥ 4 times the FPL	-8.38	40.07	6.94	468	31.69	4.51	182
	Public Policy and Spending						
		No Ban States (treat=0)			Ban States (treat=1)		
	Δ Mean	Mean	σ	Obs.	Mean	σ	Obs.
% Republican legislators in state house and senate	18.99	47.69	17.73	525	66.68	13.53	210
Elementary & secondary educ. spending per cap.	-$1,177	$6,793	2744	468	$5,616	1134	182
TANF spending, per capita	$5.47	$48.87	46.32	504	$54.35	98.76	196
Medicaid spending, per capita	-$98.38	$1,998	660.0	504	$1,900	513.8	196
Other expenses and cash transfers, per capita	-$26.61	$44.98	104.3	504	$18.37	49.94	196
Avg. SNAP benefits per beneficiary	-$9.48	$170.87	42.81	503	$161.39	27.86	196

Note: The difference in means between states with and without bans on abortion. ΔMean is the mean of ban states minus the mean for no-ban states. All spending variables are adjusted to inflation to represent 2022 price levels.

Chapter 4

Differences-in-Differences Approach

4.1 DID Model Specification

A differences-in-differences (DID) approach is used as the first method of analysis. It is a classic model employed to study the effects of a specific treatment on a subset of a population. By marking 2022 as the time of treatment and designating the fourteen states that have banned abortion as the treatment group, a quasi-experimental analysis is possible. The approach helps to differentiate the effect of the *Dobbs* decision from the pre-existing differences in outcomes between the treatment and control groups. The model can be defined as:

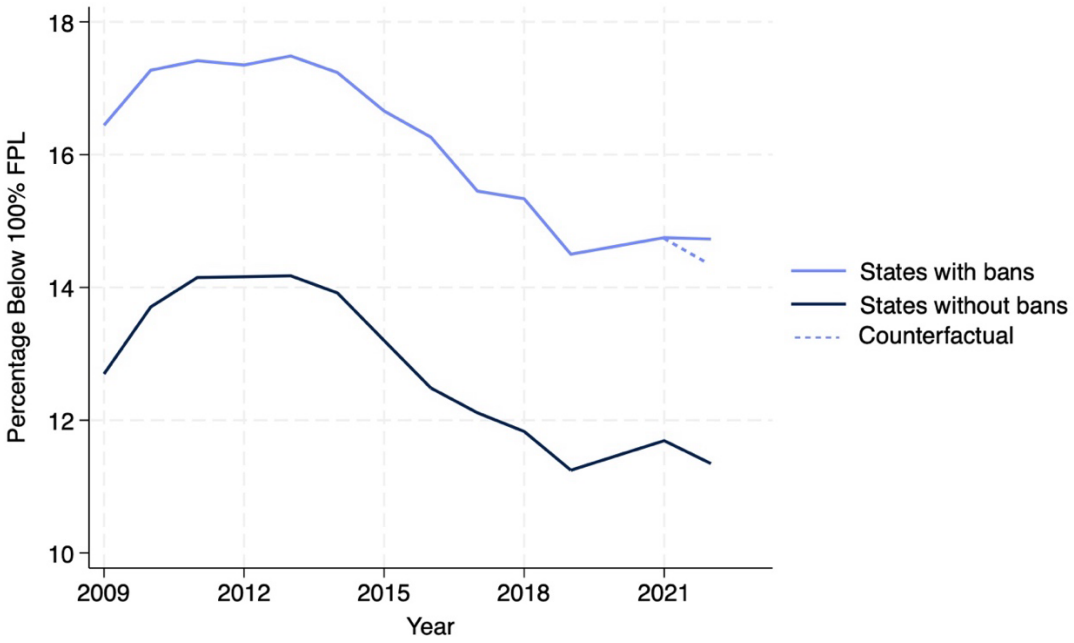
$$poverty_{it} = \alpha_0 + \beta\, post_t + \gamma(treat_i \times post_t) + \delta\, controls_{it} + \varepsilon\, year_t + \zeta\, state_i + \mu_{it}$$

As explained in Section 3.1 $treat$ is a dummy variable representing the states that have banned abortion, and $post$ is also a dummy variable indicating observations during or after 2022. The $treat$ and $post$ variables are interacted with each other to get the pure treatment effect estimate.[15] The controls include a wide array of variables: race, sex, and age demographics, the percent of births to unmarried mothers, inflation-adjusted average SNAP benefits, inflation-adjusted per capita Medicaid, schooling, and "other" expenditures by state, and Medicaid eligibility cutoffs for pregnant women. The year variable represents dummy variables for the years 2009 to 2019. The model was run separately with the poverty rates and income groups as dependent variables. The control variables are identical in all of the regressions.

[15] Typical DID regressions include the $treat$, $post$, and $treat \times post$ variables. Since $treat$ is time invariant, it is not included in the regression due to the perfect multicollinearity that arises when also utilizing state fixed effects.

To ensure that the parallel trends assumption holds, a formal test was conducted to ensure that the pre-treatment trends in outcomes were similar for both the treatment and control groups. The poverty variables were regressed on the pre-treatment year dummy variables (2009 to 2021), the treatment variable (if the state has a total ban on abortion post-*Dobbs*), and an interaction variable between each of the year dummies and the treatment variable. Since none of the interaction term coefficients are statistically significant, the parallel trends assumption holds. The results of this test can be found in Table A.1. Figure 4.1 further addresses the parallel trends assumption by showing that the states with and without bans followed similar trends for their overall poverty rates over time. Moreover, the states without bans showed a decrease in poverty in 2022, while the states with bans saw no change.

Figure 4.1 Overall Poverty Rate from 2009 to 2022 Between Ban and No Ban States



Note: States with bans tend to have higher poverty overall but track with the no-ban states over time. The counterfactual is included to show the possible outcome without *Dobbs v. Jackson*. The ban states would likely see a similar decrease in poverty to the no-ban states.

In *Mastering 'Metrics*, Angrist and Pischke (2015) warn of serial correlation with economic panel data identified by the year and state, and they strongly suggest utilizing clustered standard errors to avoid exaggerating regression results. The regression in this chapter follows this advice and utilizes clustered standard errors as well as state-level fixed effects. As previously mentioned, there is a question of simultaneous causality between abortion access and poverty. Chapter 5 provides a strategy to address this issue.

4.2 Results for DID

Table 4.1 provides the results for the DID model across each measure of poverty. The results suggest that a total ban on abortion increases overall poverty and child poverty. Specifically, the resulting bans on abortion from *Dobbs v. Jackson* increase the overall poverty rate by 0.473% ($p < 0.1$) and the child poverty rate by 0.909% ($p < 0.05$) in the states that have banned abortion.

Table 4.1 DID Estimation of the Effects of *Dobbs* on Poverty Rates

	Overall Poverty	Female Poverty	Child Poverty
$treat_i \times post_t$	0.473*	0.362	0.909**
	(0.243)	(0.282)	(0.451)
$post_t$	-0.376*	-0.342	-0.887**
	(0.199)	(0.258)	(0.332)
R-squared	0.769	0.671	0.762
Observations	644	644	644
Number of states	50	50	50

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: The poverty rates in this table range from 0% to 100%. The results for the control variables are not included. See Table A.2 for the full results.

The results for female poverty are not statistically significant for this model and have a lower R-squared compared to the other two models. The coefficients on the post variable for both child and overall poverty rates suggest that these two rates trended downward in 2022.

Table 4.2 displays the results for the effects of *Dobbs* on four income groups. The variable "Below the FPL" indicates the poverty rate and shows identical results as the "Overall Poverty" rate estimate in Table 4.1. The other variables indicate the percentage of the population that makes up a certain income bracket. Generally, two times or below the FPL is considered low income, whereas below the FPL is considered impoverished.

Table 4.2 DID Estimation of the Effect of *Dobbs* Income Groups

	Below the FPL[16]	1-1.99 x the FPL	2-3.99 x the FPL	≥ 4 x the FPL
$treat_i \times post_t$	0.473*	0.389*	0.188	-1.048***
	(0.243)	(0.211)	(0.259)	(0.362)
$post_t$	-0.376*	-0.0740	0.436*	0.0222
	(0.199)	(0.130)	(0.218)	(0.271)
R-Squared	0.769	0.815	0.327	0.879
Observations	644	644	644	644
Number of states	50	50	50	50

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: The income groups in this table are also measured from 0% to 100%. The complete results with control variables can be found in Table A.3.

[16] The percentage of those below the Federal Poverty Line (FPL) is equivalent to the overall poverty rate, therefore this column repeats the results shown in Table 4.1 for the overall poverty rate. The name of this column changed to provide cohesive names in this table.

There is weak statistical significance for those below the Federal Poverty Line (FPL) and those considered low income (1-1.99 x the FPL). However, both of these groups increase by 0.473% and 0.389% respectively ($p < 0.1$). The highest income group (≥ 4 x the FPL) decreases by around 1.048% due to the resulting bans on abortion from the *Dobbs* decision ($p < 0.05$). Additionally, the estimation for the highest income group has a particularly high R-squared compared to the other estimations in this paper. There are no significant results for those in the middle-income range of 2 to 3.99 times the FPL, and the R-squared value for this regression is particularly low, indicating that the model does not explain much of the variation in this income group. Implications of these results are discussed in Chapter 6.

Chapter 5

Instrumental Variable Approach

5.1 First Stage Model Specification and Instrument Justification

While the DID model provided an initial exploration of the relationship between *Dobbs* and poverty, a two-stage least squares (2SLS) regression using an instrument variable can address endogeneity in the data and serve as a robustness check. As discussed in previous sections, poverty and abortion can have a cyclical relationship. Thus, there is the question: does poverty cause abortion or does lack of access to abortion increase poverty? As previously explained, many women cite financial restrictions as a reason for obtaining an abortion and 75% of all abortion patients are low-income or impoverished (Finer et al., 2005; Jerman et al., 2016). Additionally, Greene Foster and colleagues (2022) found that women who are denied an abortion are more likely to be in poverty in the years following their denial, suggesting that restrictions to abortion can increase poverty.

The percentage of Republican legislators in the state legislature was selected as the instrument for this model due to its ability to predict the likelihood of a total ban on abortion without directly affecting poverty.[17] The first stage utilizes a probit model since the total ban variable is binary. The model is expressed in the following equation:

$$P(totalban_i = 1 | \, controls_{it}, \, percentRep_{it}) = \Phi(\alpha \, + \, \delta \, precentRep_{it} \, + \, \varepsilon \, controls_{it})$$

The control variables in this model are identical to those of the DID model, minus the year dummy variables.[18] There are demographic percentages based on race, age, and sex, as well

[17] Use of percent Republican is purely for convenience. The percent of Democrats in state legislatures could have also been used, but the tendency for Republican politicians to be pro-abortion bans makes the intuition clearer.
[18] Including the year dummy variables would cause perfect multicollinearity because the years preceding the ban would perfectly predict the total ban variable.

as spending variables by each state's government. The percentage of children born to unmarried mothers and the Medicaid eligibility threshold for pregnant women are also included in this regression. The standard errors are clustered by state.

An important feature of a 2SLS regression is a valid instrument. There are multiple factors to justify the use of the percentage of Republicans in state legislatures as an instrument in this analysis. First, the instrument does not correlate with the error term ($r = -0.0018$), and it is strongly correlated with the total ban dummy variable ($r_{pb} = 0.8959$).[19] An ideal instrument would have a random experimental assignment. However, in the context of this study, it would be impossible to find an instrument that is entirely random. Despite this, using clustered standard errors and state fixed effects should account for the consistent voting behaviors commonly seen in state elections; states that are "red" or "blue" are accounted for. Including year dummy variables also controls for the general trend of party dominance across time. With both of these controls in place, the instrument presents itself more closely to random assignment because it shows the marginal changes between years, which could be attributed to random chance.

It is also important to note that the instrument provides a simplification of the world by treating the two chambers of a state legislature as one entity. There might be a situation in which the chambers are split. However, there is reason to think this is unlikely. Because a total ban on abortion is a relatively extreme policy, even among Republicans, it would require a significant percentage of Republicans to ensure the policy passes. In 2019, the observed mean for the percentage of Republicans in states that went on to ban abortion was 71.15% while the mean for states that did not ban abortion was 45.64%. Furthermore, a large majority of Republican

[19] The correlation used for the ban variable and the instrument was a point biserial which is used when one of the variables is binary. A Pearson's correlation was used for the error term and the instrument.

legislators would also increase the probability of a Republican governor, which would lower the likelihood that an abortion ban would be vetoed. Therefore, there is enough evidence to suggest that the instrument is sufficiently selected for this model.

5.2 Second Stage Model Specification and Adjusted Methodology

The second stage regression of the 2SLS model utilizes the estimated values of the total ban variable as an independent variable as well as multiple controls. Demographic, spending, and public policy controls are included along with year dummy variables from 2009 to 2019.[20] The model utilizes robust standard errors, and it is formally defined as:

$$poverty_{it} = \alpha_{it} + \beta\left(\widehat{totalban}_{it}\right) + \gamma\, controls_{it} + \delta\, year_t + \varepsilon\, state_i + \mu_{it}$$

This model requires special methodology since the built-in commands in Stata do not provide the option for a probit first stage. In *Mastering 'Metrics*, Angrist and Pischke (2015) caution readers to avoid manual 2SLS since the results would generate incorrect standard errors. Despite this concern, Wooldridge (2002, p. 223) provides an alternative way to ensure validity.[21] He suggests performing the first stage regression using probit to estimate the fitted probabilities of the total ban variable ($\widehat{totalban}$), then using the *xtivreg* command with $\widehat{totalban}$ as an instrument for the $totalban$ variable.[22] Therefore, the equation above is essential for the intuition behind the model for this chapter, but it is important to note that, while $\widehat{totalban}$ appears to be a regressor, it is used as an instrument in the *xtivreg* command. Additionally, the panel data

[20] The spending, demographic, and policy controls are identical those in the first stage. Refer to Section 5.1 for specific details.
[21] This is referenced specifically in *Procedure 18.1* (Wooldridge, 2002).
[22] Ries (2004) provides a particularly helpful explanation for this methodology on the Stata listserv.

options (e.g. *xtprobit, xtivreg*) were used for the probit and instrumental variable regression commands, and the second stage uses robust standard errors.[23]

5.3 Results for 2SLS

Table 5.1 provides results for the IV regression examining the effects of *Dobbs v. Jackson* on poverty rates. This model does not suggest a statistically significant relationship between a total ban on abortion and poverty in the United States. No coefficient for the estimated probability of a total ban is significant (at the 10% level). The within R-squared values for the overall and child poverty rates are greater than 0.75, and above 0.65 for female poverty, suggesting that the selected independent variables for the model capture a considerable amount of the variation in poverty, despite not finding significant results. The first-stage regression results for the 2SLS model can be found in Table A.4.

Table 5.1 IV Estimation of the Effect of *Dobbs* on Poverty Rates

	Overall Poverty	Female Poverty	Child Poverty
$\widehat{totalban}$	-0.113	-0.601	0.858
	(1.379)	(1.609)	(2.747)
Within R-Squared	0.754	0.654	0.752
Observations	631	631	631
Number of states	49	49	49

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Poverty rates in this table range from 0% to 100%. Full results can be found in Table A.5.

[23] Table A.7 provides results for the regression if the panel data commands were not employed. These results show a completely different picture and demonstrate the importance of employing the correct methods.

Table 5.2 shows that a total ban on abortion does not affect the portion of those with income ranging from 1 to 1.99 times the FPL. However, there is an observed effect for the upper two income groups. A ban increases the percentage of the population living in the 2 to 3.99 times the FPL range by 4.179% ($p < 0.01$) and decreases the group living ≥ 4 times the FPL by 4.685% ($p < 0.1$). It is worth noting that the model estimating the portion of those living at 2 to 3.99 times the FPL has a particularly lower R-squared value of about 0.18. The greater than 4 times the FPL group has both statistical significance to the 10% level and an R-squared of 0.85. These results are somewhat surprising, as the main hypothesis was that the poverty rate would increase. However, a decrease in the highest income group shows a possibility that *Dobbs* could affect a wide range of income groups.

Table 5.2 IV Estimation of the Effect of *Dobbs* on Income Groups

	Below the FPL[24]	1-1.99 x the FPL	2-3.99 x the FPL	≥ 4 x the FPL
$\widehat{totalban}$	-0.113	0.698	4.179*	-4.685*
	(1.379)	(1.021)	(2.159)	(2.424)
Within R-squared	0.754	0.809	0.176	0.846
Observations	631	631	631	631
Number of states	49	49	49	49

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Note: Income groups in this table range from 0 % to 100%. Table A.6 displays the full results.

[24] This is the same as "Overall Poverty" in Table 5.1.

Table A.7 provides results for the 2SLS model when fixed effects are omitted and the *xt* option is not used for the two stages of estimation. Therefore, the data are treated as a cross-section rather than panel data. The results of this analysis are not included in the main body of this thesis to prevent misleading information and the appearance of significant findings, since the methodology would be completely incorrect. However, it is worth noting that some minor adjustments can change the results of the model entirely.

Chapter 6

Discussions and Future Considerations

The results from this thesis suggest minimal evidence that *Dobbs v. Jackson* has increased poverty in the United States. The differences-in-differences (DID) model estimates that the resulting bans on abortion from *Dobbs* increase the overall poverty rate by 0.5% and the child poverty rate by 0.9% ($p < 0.1$ for both); no statistical effect was observed for female poverty. The IV approach using a 2SLS regression shows that *Dobbs* has no effect on poverty across all three rates measured ($p > 0.1$ for all).

A surprising result emerged in the analysis of income groups, however. Those with income 4 times or higher than the Federal Poverty Line (FPL) were negatively impacted by the *Dobbs* decision. The DID model indicates a 0.91% decrease in the size of this group ($p > 0.05$), and the IV comparison shows a 4.7% decrease ($p > 0.1$). These results suggest that the negative effects of abortion restrictions may extend beyond those living in poverty. This finding has not been observed or emphasized in existing literature. Therefore, future research should expand its focus to other income groups and examine if this relationship is consistently observed.

The causal mechanism that might be driving the results observed in the model estimating poverty is best explained by previous research. Abortion denial can have harmful impacts on women and their children (Greene Foster et al., 2018; Greene Foster et al., 2022; Miller et al., 2020). In the states that have banned abortion, countless patients have lost access to important reproductive healthcare, and the harm that was observed in smaller studies will certainly affect the greater population (if the samples in previous research were representative).

There is less of a clear explanation for the decrease in the highest income group, and previous research has not indicated why this relationship may be observed. One reason why the

wealthiest group could be decreasing is due to increased taxes aimed at funding an influx of demand for public assistance (due to abortion denials). The data may also show this effect because unplanned pregnancies and caring for a child are almost universally expensive to all families, regardless of income.

An important caveat of this thesis is that a majority of the results have a p-value of greater than 0.1. There are many possible explanations for the general lack of statistical significance in these results. First, the U.S. abortion rate leading up to *Dobbs* was around 11 per 100,000 women aged 15 to 44 (0.001%). Even if a majority of abortion seekers are low-income or impoverished, it is likely that the number of women being denied an abortion after *Dobbs* is so low that it cannot be observed in the national poverty rates. Another reason why the results from the models have minimal statistical significance is due to timing and data availability. The "post" time frame of data is only one year in length. It is possible that there simply has not been enough time to observe the effects of the *Dobbs* decision since the typical pregnancy lasts around nine months. Not having more observations in the years after the decision is a key caveat to this study, and it is hard to predict whether the results will change once more data become available. Finally, another possible factor in these results could be attributed to measurement error in the variables which would reduce the statistical significance of estimated coefficients.

Going forward, more research should be done to investigate the economic effects of *Dobbs.* Specifically, the question posed in this thesis should be reevaluated when more data are available. Additionally, scholars should reevaluate this question with more accurate measures of poverty and income groups. Due to data availability, the poverty rate variables are the U.S. HHS guidelines often used for eligibility checks for government programs, which fall short of a more accurate measure published by the U.S. Census Bureau (often used for statistical analysis).

Finally, more should be understood about the effects of *Dobbs* on those in higher income brackets. The unexpected findings in this paper suggest that abortion policy might affect more than just the poorest Americans.

While no forthright policy suggestions can be made from the results of this study, the intuition behind the economics of abortion access should be considered carefully by policymakers and stakeholders. All legislation should be written with the consideration of the potential externalities imposed on others. For many, beliefs about abortion are unwavering and inextricably linked to their moral and personal identities. It is often easier for people who do not seek abortion to hold on to their opinions more tightly. For those in opposition to abortion and the lawmakers who are in support of banning abortion, one possible avenue for continuing to reduce the incidence of abortion is to examine poverty as a root cause. Many people who choose to seek an abortion feel as though there is no other option, and having more financial support and treating poverty more broadly could help decrease the need for abortions.

As the post-*Dobbs* world continues to unfold, economic and policy research will become all the more important. Recent developments, such as the ruling by the Alabama Supreme Court which considers human embryos in IVF procedures to be children, suggest that *Dobbs* has granted states the freedom to carve their own paths in reproductive policies (Chandler, 2024). Careful analysis should attempt to shed light on both the intended and unintended consequences of these changes. Regardless of one's opinion on *Dobbs*, there is no denying that the changes witnessed in this decade will have lasting impacts. The best we can do is commit to accurate and transparent analysis.

Appendix

Table A.1 Parallel Trends Assumption Test

	Overall Poverty	Female Poverty	Child Poverty
treat	3.311***	3.878***	4.719***
	(0.831)	(0.843)	(1.378)
2009	1.350***	0.883***	3.433***
	(0.188)	(0.221)	(0.309)
2010	2.358***	1.969***	5.061***
	(0.188)	(0.221)	(0.309)
2011	2.803***	2.558***	5.719***
	(0.188)	(0.221)	(0.309)
2012	2.814***	2.714***	5.750***
	(0.188)	(0.221)	(0.309)
2013	2.828***	2.758***	5.447***
	(0.188)	(0.221)	(0.309)
2014	2.569***	2.656***	5.061***
	(0.188)	(0.221)	(0.309)
2015	1.853***	1.883***	4.169***
	(0.188)	(0.221)	(0.309)
2016	1.139***	1.197***	2.647***
	(0.188)	(0.221)	(0.309)
2017	0.764***	0.919***	2.114***
	(0.188)	(0.221)	(0.309)
2018	0.483**	0.519**	1.628***
	(0.188)	(0.221)	(0.309)
2019	-0.100	0.0194	0.611**
	(0.188)	(0.221)	(0.309)
2020	0.344*	0.286	0.989***
	(0.188)	(0.221)	(0.309)
treat*2009	0.435	0.0821	0.521
	(0.356)	(0.417)	(0.583)
treat*2010	0.255	-0.168	0.458
	(0.356)	(0.417)	(0.583)
treat*2011	-0.0464	-0.179	-0.358
	(0.356)	(0.417)	(0.583)
treat*2012	-0.122	-0.456	-0.346
	(0.356)	(0.417)	(0.583)
treat*2013	0.00833	-0.362	0.0647
	(0.356)	(0.417)	(0.583)
treat*2014	0.146	0.268	-0.0937
	(0.356)	(0.417)	(0.583)
treat*2015	0.467	0.168	1.071*
	(0.356)	(0.417)	(0.583)
treat*2016	0.0282	-0.240	-0.231
	(0.356)	(0.417)	(0.583)
treat*2017	0.194	0.0675	0.512
	(0.356)	(0.417)	(0.583)
treat*2018	-0.0579	-0.454	0.00754
	(0.356)	(0.417)	(0.583)
treat*2019	-0.252	-0.442	-0.370
	(0.356)	(0.417)	(0.583)
treat*2021	0.0706	-0.285	0.354
	(0.356)	(0.417)	(0.583)
Constant	11.35***	12.23***	13.81***
	(0.440)	(0.446)	(0.729)
Observations	650	650	650
Number of states	50	50	50

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.2 Full DID Estimation Results

	Overall Poverty	Female Poverty	Child Poverty
treat*post	0.473*	0.362	0.909**
	(0.243)	(0.282)	(0.451)
post	-0.376*	-0.342	-0.887**
	(0.199)	(0.258)	(0.332)
% Population that is black	-0.0441	-0.0631	-0.0396
	(0.203)	(0.205)	(0.288)
% Population that is white	-0.242	-0.255*	-0.431*
	(0.161)	(0.150)	(0.218)
% Population that is Hispanic	0.224	0.141	0.0985
	(0.244)	(0.257)	(0.343)
Inflation adj. monthly SNAP	0.0190**	0.0208**	0.0243
	(0.00912)	(0.00820)	(0.0157)
% Births with unmarried mothers	0.0131*	0.0211**	0.0208*
	(0.00733)	(0.0100)	(0.0104)
TANF expenditures	0.00170	0.00182	0.00138
	(0.00116)	(0.00117)	(0.00200)
Medicaid expenditures	0.000442**	0.000608**	0.000455*
	(0.000202)	(0.000232)	(0.000262)
Education spending	-0.000102*	-8.63e-05	-0.000226***
	(5.62e-05)	(7.70e-05)	(8.36e-05)
Other expenditures	-0.000390	0.000352	-0.000987*
	(0.000269)	(0.000243)	(0.000567)
% Population that is female	-0.248	-0.296	-0.333
	(0.242)	(0.277)	(0.390)
% Population under 18 years old	0.122	0.0717	0.128
	(0.171)	(0.226)	(0.258)
% Population aged 19 to 25	-0.638**	-0.527*	-0.843**
	(0.245)	(0.296)	(0.320)
% Population aged 26 to 34	-1.160***	-1.224***	-1.330***
	(0.228)	(0.269)	(0.323)
% Population aged 35 to 54	-0.973***	-0.950***	-0.992***
	(0.158)	(0.187)	(0.219)
% Population aged 55 to 64	-0.538**	-0.503*	-0.331
	(0.227)	(0.292)	(0.319)
Medicaid threshold for pregnancy	0.00146	0.00327	-0.000603
	(0.00194)	(0.00275)	(0.00304)
2009	6.502***	6.174***	9.388***
	(1.116)	(1.155)	(1.748)
2010	6.573***	6.285***	9.725***
	(1.008)	(1.048)	(1.500)
2011	6.733***	6.676***	9.858***
	(0.946)	(0.972)	(1.439)
2012	6.436***	6.443***	9.546***
	(0.909)	(0.955)	(1.351)
2013	6.101***	6.239***	8.900***
	(0.790)	(0.815)	(1.189)
2014	5.564***	5.737***	8.244***
	(0.781)	(0.810)	(1.148)
2015	4.437***	4.668***	6.786***
	(0.672)	(0.656)	(1.033)
2016	3.469***	3.644***	5.219***
	(0.639)	(0.652)	(0.973)
2017	2.629***	2.922***	3.859***
	(0.582)	(0.587)	(0.887)
2018	2.130***	2.391***	3.247***
	(0.524)	(0.516)	(0.800)
2019	1.109**	1.364***	1.702**
	(0.470)	(0.461)	(0.740)
Constant	84.18***	88.20***	107.9**
	(30.42)	(32.43)	(45.20)
Observations	644	644	644
R-squared	0.769	0.671	0.762
Number of states	50	50	50

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.3 DID Effect of *Dobbs v. Jackson* on All Income Groups

	Below the FPL	1-1.9 x the FPL	2-3.9 x the FPL	> 4 x the FPL
treat*post	0.473*	0.389*	0.188	-1.048***
	(0.243)	(0.211)	(0.259)	(0.362)
post	-0.376*	-0.0740	0.436*	0.0222
	(0.199)	(0.130)	(0.218)	(0.271)
% Population that is black	-0.0441	-0.0968	-0.372***	0.520*
	(0.203)	(0.124)	(0.134)	(0.301)
% Population that is white	-0.242	-0.0453	-0.0487	0.350
	(0.161)	(0.0755)	(0.152)	(0.272)
% Population that is Hispanic	0.224	0.237*	-0.121	-0.321
	(0.244)	(0.136)	(0.217)	(0.355)
Inflation adj. monthly SNAP	0.0190**	0.00875	-0.0185	-0.00874
	(0.00912)	(0.00575)	(0.0124)	(0.0136)
% Births with unmarried mothers	0.0131*	0.0284***	-0.0160*	-0.0259*
	(0.00733)	(0.00650)	(0.00907)	(0.0153)
TANF expenditures	0.00170	0.000988	0.00135	-0.00406
	(0.00116)	(0.000623)	(0.00219)	(0.00248)
Medicaid expenditures	0.000442**	0.000351**	-0.000420*	-0.000374
	(0.000202)	(0.000144)	(0.000219)	(0.000331)
Education spending	-0.000102*	-0.000104***	-8.02e-05	0.000286**
	(5.62e-05)	(3.24e-05)	(9.83e-05)	(0.000116)
Other expenditures	-0.000390	0.000543*	0.000349	-0.000560
	(0.000269)	(0.000274)	(0.000423)	(0.000501)
% Population that is female	-0.248	-0.0560	0.495*	-0.167
	(0.242)	(0.170)	(0.284)	(0.354)
% Population under 18 years old	0.122	0.120	-0.133	-0.108
	(0.171)	(0.126)	(0.176)	(0.271)
% Population aged 19 to 25	-0.638**	-0.223	-0.0400	0.913**
	(0.245)	(0.155)	(0.275)	(0.408)
% Population aged 26 to 34	-1.160***	-0.698***	-0.146	2.012***
	(0.228)	(0.156)	(0.225)	(0.377)
% Population aged 35 to 54	-0.973***	-0.481***	0.263	1.201***
	(0.158)	(0.126)	(0.257)	(0.317)
% Population aged 55 to 64	-0.538**	-0.0137	0.00468	0.558
	(0.227)	(0.165)	(0.330)	(0.476)
Medicaid threshold for pregnancy	0.00146	0.00284**	-0.00261	-0.00179
	(0.00194)	(0.00139)	(0.00203)	(0.00308)
2009	6.502***	5.058***	0.0298	-11.62***
	(1.116)	(0.712)	(1.249)	(2.023)
2010	6.573***	5.139***	-0.0389	-11.74***
	(1.008)	(0.651)	(1.099)	(1.844)
2011	6.733***	5.004***	-0.207	-11.57***
	(0.946)	(0.586)	(1.018)	(1.732)
2012	6.436***	4.957***	-0.150	-11.29***
	(0.909)	(0.549)	(0.966)	(1.656)
2013	6.101***	4.528***	0.00763	-10.67***
	(0.790)	(0.498)	(0.898)	(1.490)
2014	5.564***	4.092***	-0.0237	-9.674***
	(0.781)	(0.458)	(0.820)	(1.384)
2015	4.437***	3.316***	-0.0782	-7.697***
	(0.672)	(0.427)	(0.720)	(1.307)
2016	3.469***	2.608***	-0.147	-5.955***
	(0.639)	(0.374)	(0.654)	(1.207)
2017	2.629***	2.462***	0.0620	-5.162***
	(0.582)	(0.360)	(0.576)	(1.077)
2018	2.130***	2.249***	-0.110	-4.280***
	(0.524)	(0.321)	(0.513)	(0.951)
2019	1.109**	1.331***	-0.200	-2.254**
	(0.470)	(0.343)	(0.457)	(0.899)
Constant	84.18***	36.73**	16.05	-40.01
	(30.42)	(17.28)	(21.54)	(46.68)
Observations	644	644	644	644
R-squared	0.769	0.815	0.327	0.879
Number of states	50	50	50	50

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.4 Full Results for Probit First Stage Regression in 2SLS Model

	$\widehat{totalban}$
% Republican legislators	0.177**
	(0.0884)
% Population that is black	0.0118
	(0.113)
% Population that is white	-0.0687
	(0.225)
% Population that is Hispanic	-0.0173
	(0.171)
Inflation adj. monthly SNAP	0.00249
	(0.0159)
% Births with unmarried mothers	0.0464
	(0.160)
TANF expenditures	0.00303
	(0.00202)
Medicaid expenditures	0.000587
	(0.000704)
Education spending	0.000426***
	(0.000123)
Other expenditures	-0.00370
	(0.00234)
% Population that is female	0.373
	(0.570)
% Population under 18 years old	-0.708*
	(0.409)
% Population aged 19 to 25	-1.254
	(0.772)
% Population aged 26 to 34	0.304
	(0.461)
% Population aged 35 to 54	-0.661*
	(0.341)
% Population aged 55 to 64	-2.544
	(0)
Medicaid threshold for pregnancy	0.0120*
	(0.00681)
Constant	37.41
	(34.49)
Observations	631
Number of states	49

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table A.5 Full Second Stage: Effect of *Dobbs* on Poverty

	Overall Poverty	Female Poverty	Child Poverty
Total ban	-0.113	-0.601	0.858
	(1.379)	(1.609)	(2.747)
% Population that is black	0.169***	0.166***	0.298***
	(0.0462)	(0.0390)	(0.0729)
% Population that is white	0.0167	0.0376*	0.0143
	(0.0331)	(0.0207)	(0.0514)
% Population that is Hispanic	0.134***	0.111***	0.203***
	(0.0451)	(0.0345)	(0.0731)
Inflation adj. monthly SNAP	0.0139	0.0119	0.0282
	(0.0161)	(0.0163)	(0.0310)
% Births with unmarried mothers	0.0228**	0.0327**	0.0345**
	(0.00927)	(0.0148)	(0.0139)
TANF expenditures	0.00163	0.00193*	0.00147
	(0.00114)	(0.00108)	(0.00193)
Medicaid expenditures	0.000620***	0.000790***	0.000763***
	(0.000217)	(0.000249)	(0.000270)
Education spending	-9.16e-05*	-8.60e-05	-0.000222***
	(5.17e-05)	(6.51e-05)	(7.86e-05)
Other expenditures	-0.000506	0.000123	-0.00120**
	(0.000324)	(0.000319)	(0.000517)
% Population that is female	-0.106	-0.0982	-0.115
	(0.243)	(0.265)	(0.411)
% Population under 18 years old	0.224	0.195	0.355
	(0.148)	(0.166)	(0.242)
% Population aged 19 to 25	-0.535**	-0.397	-0.721**
	(0.247)	(0.281)	(0.343)
% Population aged 26 to 34	-0.922***	-0.989***	-1.035***
	(0.208)	(0.226)	(0.296)
% Population aged 35 to 54	-0.810***	-0.826***	-0.780***
	(0.135)	(0.154)	(0.202)
% Population aged 55 to 64	-0.244	-0.282	0.169
	(0.228)	(0.271)	(0.353)
Medicaid threshold for pregnancy	-0.000397	0.000716	-0.00353
	(0.00226)	(0.00256)	(0.00362)
2009	4.124***	3.429***	6.762***
	(1.146)	(1.217)	(2.159)
2010	4.495***	3.964***	7.245***
	(0.914)	(0.962)	(1.678)
2011	4.755***	4.437***	7.537***
	(0.897)	(0.956)	(1.650)
2012	4.614***	4.350***	7.469***
	(0.852)	(0.936)	(1.552)
2013	4.388***	4.270***	6.993***
	(0.807)	(0.859)	(1.531)
2014	3.978***	3.869***	6.525***
	(0.823)	(0.900)	(1.537)
2015	2.958***	2.923***	5.209***
	(0.756)	(0.821)	(1.490)
2016	2.089***	2.010***	3.756***
	(0.721)	(0.765)	(1.421)
2017	1.432**	1.476*	2.640*
	(0.711)	(0.758)	(1.387)
2018	1.055	1.063	2.261
	(0.705)	(0.739)	(1.415)
2019	0.186	0.173	0.916
	(0.648)	(0.687)	(1.279)
Constant	44.77**	44.59*	39.75
	(21.71)	(23.16)	(34.82)
Observations	631	631	631
R-Squared	0.754	0.654	0.752
Number of states	49	49	49

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.6 Full Second Stage: Effect of *Dobbs* on All Income Groups

	Below the FPL	1-1.9 x the FPL	2-3.9 x the FPL	> 4 x the FPL
Total ban	-0.113	0.698	4.179*	-4.685*
	(1.379)	(1.021)	(2.159)	(2.424)
% Population that is black	0.169***	0.0656	-0.0833**	-0.0437
	(0.0462)	(0.0593)	(0.0359)	(0.172)
% Population that is white	0.0167	0.0360	0.0412	0.0161
	(0.0331)	(0.0383)	(0.0271)	(0.120)
% Population that is Hispanic	0.134***	0.168***	-0.0241	-0.263*
	(0.0451)	(0.0565)	(0.0356)	(0.155)
Inflation adj. monthly SNAP	0.0139	0.0103	0.00962	-0.0347
	(0.0161)	(0.0111)	(0.0217)	(0.0259)
% Births with unmarried mothers	0.0228**	0.0274***	-0.0286**	-0.0191
	(0.00927)	(0.00680)	(0.0141)	(0.0142)
TANF expenditures	0.00163	0.000732	0.000781	-0.00298
	(0.00114)	(0.000706)	(0.00143)	(0.00271)
Medicaid expenditures	0.000620***	0.000366**	-0.000477**	-0.000512
	(0.000217)	(0.000148)	(0.000235)	(0.000331)
Education spending	-9.16e-05*	-0.000115***	-0.000114	0.000301**
	(5.17e-05)	(3.05e-05)	(7.76e-05)	(0.000118)
Other expenditures	-0.000506	0.000591***	0.000566	-0.000738
	(0.000324)	(0.000228)	(0.000491)	(0.000586)
% Population that is female	-0.106	-0.0136	0.339	-0.221
	(0.243)	(0.189)	(0.337)	(0.456)
% Population under 18 years old	0.224	0.189	0.0114	-0.230
	(0.148)	(0.122)	(0.161)	(0.269)
% Population aged 19 to 25	-0.535**	-0.192	-0.0697	0.930**
	(0.247)	(0.164)	(0.252)	(0.457)
% Population aged 26 to 34	-0.922***	-0.622***	-0.305	1.810***
	(0.208)	(0.163)	(0.202)	(0.416)
% Population aged 35 to 54	-0.810***	-0.443***	-0.0251	1.108***
	(0.135)	(0.123)	(0.184)	(0.306)
% Population aged 55 to 64	-0.244	0.0955	-0.117	0.0996
	(0.228)	(0.168)	(0.372)	(0.536)
Medicaid threshold for pregnancy	-0.000397	0.00111	-0.00906***	0.00495
	(0.00226)	(0.00164)	(0.00252)	(0.00374)
2009	4.124***	4.244***	1.117	-10.55***
	(1.146)	(0.982)	(1.367)	(1.879)
2010	4.495***	4.387***	0.710	-10.46***
	(0.914)	(0.801)	(1.092)	(1.544)
2011	4.755***	4.295***	0.573	-10.41***
	(0.897)	(0.751)	(1.032)	(1.439)
2012	4.614***	4.291***	0.573	-10.26***
	(0.852)	(0.707)	(1.005)	(1.375)
2013	4.388***	3.928***	0.749	-9.812***
	(0.807)	(0.674)	(0.949)	(1.251)
2014	3.978***	3.567***	0.849	-9.068***
	(0.823)	(0.686)	(0.995)	(1.256)
2015	2.958***	2.843***	0.792	-7.189***
	(0.756)	(0.619)	(0.912)	(1.165)
2016	2.089***	2.172***	0.716	-5.543***
	(0.721)	(0.589)	(0.895)	(1.103)
2017	1.432**	2.101***	0.899	-4.897***
	(0.711)	(0.550)	(0.926)	(1.045)
2018	1.055	1.940***	0.841	-4.237***
	(0.705)	(0.529)	(0.943)	(1.038)
2019	0.186	1.085**	0.625	-2.272**
	(0.648)	(0.495)	(0.869)	(0.969)
Constant	44.77**	23.60	21.27	4.100
	(21.71)	(16.82)	(17.29)	(40.64)
Observations	631	631	631	631
R-squared	0.754	0.809	0.176	0.846
Number of states	49	49	49	49

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table A.7 Second Stage: Without Cross-Section Options Command

	Overall Poverty	Female Poverty	Child Poverty
Estimated Total Ban	2.269***	2.529***	2.964**
	(0.836)	(0.863)	(1.334)
Observations	631	631	631
R-squared	0.704	0.666	0.737
Number of states	49	49	49

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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ACADEMIC VITA

Maren Hapeman

Education

The Pennsylvania State University, **Schreyer Honors College** — Graduating Spring 2024
Bachelor of Science in Economics, *College of the Liberal Arts*
Minor in Political Science, *College of the Liberal Arts*

Work Experience

Berkeley Research Group — Washington D.C.
Incoming Associate for the Economics and Damages Team — *Starting August 2024*

Earth's Treasury, Inc. — West Chester, PA
Products Intern — *Summer 2022 and 2023*

- Introduced new tracking system in Excel by compiling two years of raw data into main dashboard to monitor sales by category and transaction type to aid in future inventory, investment, and pricing decisions
- Completed website rephotographing project to improve over 500 individual product listings
- Participated in marketing calls with analytics representative to learn the economics of company advertising
- Assisted with inventory maintenance and organization of thousands of products

Bates White Research Experiences for Undergraduates Program — University Park, PA
Undergraduate Research Assistant — *Spring 2022*

- Selected recipient of grant to research international trade and geospatial economics with Dr. Fernando Parro
- Designed advanced query searches in the World Bank WITS database to gather tariff information
- Organized 10,000+ data observations into concise summary file to be prepared for technical analysis in Stata

Leadership Experience

Treasurer and Finance Leadership Team — University Park, PA
Days For Girls International, Penn State Chapter — *Fall 2022 to Present*

- Serve on executive board to oversee transactions, donations, and event planning throughout the academic year
- Facilitate weekly meetings for Finance Team to foster collaboration and teamwork
- Designed a contract for leadership members to utilize throughout the semester to motivate performance
- Lead two Giving Tuesday campaigns, generating over $8,000 in donations and corporate matches
- Communicate our club's mission by advocating for menstrual health and equity around the world

Grading Assistant — University Park, PA
Intermediate Macroeconomics & Philosophy of Right and Wrong — *2021 and 2022*

- Graded homework assignments and exams of over 300 students throughout the semesters
- Formulated a standardized point system with grading colleagues to ensure consistency

Awards and Acknowledgements

Rosenberg Undergraduate Scholarship (Fall 2023)
2nd Place J&J Case Competition (Fall 2023)
Undergraduate Economics Award (Spring 2023)
The Evan Pugh Scholar Award (Fall 2022)
The President Sparks Award (Spring 2022)
The President Walker Award (Fall 2021)
Most Distinguished Scholar Award (Spring 2020)

Relevant Coursework

- ***Honors Thesis*** – Self-led research project utilizing differences-in-differences model and a two stage least squares regression analysis to examine the effects of *Dobbs v. Jackson* on poverty across the United States

Skills Summary

Stata, Microsoft Office, Google Workspace, Canva, Lightroom, Helicon Focus, and Monday