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The Impact of Abortion Shield Laws on Abortion Access in the United States

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While writing this thesis, I have not witnessed any wrongdoing, nor have I personally violated any conditions of the Skidmore College Honor Code.

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Abstract

Dobbs v. Jackson Women's Health Organization (2022) ruled that abortion access is no longer constitutionally protected resulting in each state deciding who has access to an abortion. This thesis examines if laws that restrict abortion access are effective because one can travel from a state that bans abortion to a state that allows abortion to obtain an abortion procedure. Specifically, this paper investigates the relationship between the increase in travel cost to an abortion clinic located in state with enhanced legal protections—known as abortion shield laws—and U.S. Census variables. Using Gary Becker's legal analysis model, an abortion seeker will always travel to a state with shield law protections since the probability of prosecution is 0%. This accounts for an abortion seekers' willingness to pay the increased cost, but this does not consider an abortion seekers' ability to pay. This thesis uses geographic information systems (GIS) to study the relationship between an increase in travel cost and access to a resource (e.g., ability to pay). This paper concludes laws that restrict abortion access are effective because they create excessive, undue barriers for women who are already economically disenfranchised due to a lack of insurance, education, income, and transportation.

Introduction

Many peer-reviewed publications study the effect of the United States Supreme Court's decision to overturn Jane Roe, et al. v. Henry Wade, District Attorney of Dallas County (1973) in the landmark case Dobbs v. Jackson Women's Health Organization (2022). This opinion shifts the onus of abortion regulation from the federal government to the state governments. My paper specifically examines the difference in travel cost to the nearest abortion clinic and to a clinic with enhanced legal protections—specifically examining census variables that indicate those with inadequate access to resources. My research question is if one can travel to a state that offers abortion procedures with the protection of abortion shield laws, are laws that restrict abortion access effective? No other papers have examined this relationship. This is important because my thesis calculates the increase in travel cost that will protect abortion seekers from civil and criminal penalties from one's home state and relates that data to U.S. Census variables which correspond to low resource access. This thesis studies if policies and laws enacted by states that ban abortion are effective at limiting abortion procedures.

The existing literature is grouped into four categories. The first category is simply driving distance. These papers study the driving distance from a county to the nearest clinic before and after the reversal of Roe v. Wade. I am not using cross sectional data for the abortion clinics before and after the policy change. The second category is legal analysis of abortion laws. These papers examine the legality of abortion laws which is just one aspect of my thesis. There are studies that examine the socioeconomics of abortion patients via exit interviews from those leaving abortion clinics—I examine U.S. Census variables instead. Lastly, there are studies which examine the Euclidean distance, but I use the travel distance on roads (which is longer) so I was able to multiply that by the IRS tax write off rate to calculate travel cost.

The purpose of this paper is to examine if laws that restrict abortion access are effective at deterring a woman from receiving an abortion procedure. For example, if a woman in Texas can cross the border into New Mexico to obtain an abortion, then a Texas' abortion ban is ineffective so long as the woman can afford to travel. This is where abortion shield laws—enhanced legal protections—are effective. Shield laws legally compel abortion clinics not to disclose information to courts in states where abortion is banned thus limiting enforcement mechanisms for states that ban abortion.

The contribution of this work is to examine the increase in travel cost to drive to a state with shield law protections. My thesis compares the increase in travel cost for one to travel to a clinic located in a state with enhanced legal protections because these protections reduce the probability of prosecution to 0% in my theoretical hypothesis. For my empirical hypothesis, I compare the increase in travel cost to U.S. Census variables that examine low resource access: WOCBP (women of childbearing potential) without health insurance, WOCBP without a bachelor's degree, households below the poverty line, and households without access to a vehicle.

Overall, my results are in line with the literature, but the distribution across counties had not previously been studied. The distribution is shown on the maps within this thesis. I also examined population from the U.S. Census but there was no trend across counties—except for visually showing major cities. The starkest contrast is that a typical woman in Texas has access to education but not health insurance. In summary, I concluded that laws that restrict abortion access are effective because they create excessive, undue barriers for women who are already economically disenfranchised due to a lack of insurance, education, income, and transportation.

This thesis is organized into the following sections: literature review, conceptual framework, data, methods, results and discussion, limitations and future research, and conclusion.

Literature Review

Shield Laws

For my study, enhanced legal protections are defined as abortion shield laws statutes which protect abortion seekers, abortion providers, and those who aid in the process (e.g., an individual providing a homestay to an abortion seeker). The broad category is interstate shield laws which are used to protect those seeking a procedure that is not allowed in one's home state. State governments use interstate shield laws for the purposes of protecting controversial medical procedures such as gender affirming surgery. There are seven states with interstate abortion shield laws—California, Connecticut, Delaware, Illinois, Massachusetts, New Jersey, and New York (Cohen et al. (2023)). The nine provisions of interstate shield laws are as follows:

1. "Prohibiting Nonfugitive Extradition
2. Interstate Witness Protection
3. Prohibiting Expenditure of State Resources on Another State's Investigation
4. Limiting Adverse Professional Licensing Consequences
5. Medical Malpractice Protections
6. Prohibiting Disclosure of Patients' Confidential Information
7. Out-of-State Judgments
8. Clawback Lawsuits
9. Caring For Patients Across State Lines"

Massachusetts is the only state to offer the protection of all nine provisions of the interstate shield laws (A-Table 1) (Cohen et al. (2023)). This renders Massachusetts to be the most protective state, which is significant because within abortion shield law states, some states might be preferred. For example, if one is planning to return to one's home state, then a state that prohibits nonfugitive extradition might not be applicable to the abortion seeker.

Prohibiting nonfugitive extradition means that states are legally compelled not to bring an individual back to the abortion seeker's home state to stand trial if the home state wishes to prosecute the abortion seeker/helper/provider with a crime (Cohen et al. (2023)). The U.S.

Constitution requires that anyone who commits a crime in a state and travels to another state that other state must send the person back. With this shield law, if a Texan gets an abortion in Massachusetts, then Massachusetts will not extradite the women back to Texas because an individual cannot violate a Texas law banning abortion if the person obtains an abortion outside of Texas—despite Texas' wishes (i.e., the crime was not committed in Texas). State governments cannot regulate what one does outside of its borders. This is similar to marijuana regulation in terms of if one travels to Colorado to smoke weed, it is not applicable if one's home state bans the consumption of weed.

Interstate witness protection means that an individual who travels to a state with abortion shield laws and any person in the state with abortion shield laws who witnesses the procedure is legally compelled not to testify against an anti-abortion lawsuit in a state that bans abortion Cohen et al. (2023)). This could be the doctor who performed procedure, the person who drove the abortion seeker, or the person who organized the whole endeavor. Anyone who interacts with the abortion seeker is a potential witness in a case.

Prohibiting expenditure of state resources on another state's investigation mean if a resident of a state that bans abortion travels to an abortion shield law protected state to engage in an abortion, the shield law state cannot spend government dollars to aid the prosecution of the state in which abortion is outlawed (Cohen et al. (2023)). This is important because this restricts information flow and ability of perfect enforcement, which is an assumption in the model. This may be applicable in the eyes of an abortion seeker, as one might travel across the highway of a state without these protections to get to the abortion shield law protection. This protection is only semi-effective at limiting the probability of being prosecuted, another aspect to the model.

Limiting adverse professional licensing consequences means that a doctor will not lose his license for performing an abortion. For example, if a doctor has medical licenses across multiple states and if an abortion seeker's home state is made aware that a doctor is performing care, then that home state might revoke a doctor's license if the doctor is licensed in two states (Cohen et al. (2023)). The other state in which the doctor performs the abortion, for this law, cannot revoke one's license solely based because he performed an abortion procedure. It is customary that if a medical license is revoked, it be reciprocated across state lines. Medical malpractice is a huge concern. This means if a doctor performs an abortion which is illegal in a certain state, the doctor who performed the procedure does not fall under medical malpractice, or

any ethical violations within the protected state, even though it might be considered medical malpractice in the banned state. From an abortion seekers' perspective, the abortion performer's license is irrelevant.

Prohibiting disclosure of patient confidential information relates to HIPAA in that even if a protected state is subpoenaed, the protected state is legally compelled not to provide information to the other state (Cohen et al. (2023)). These laws block the typical subpoena process for criminal and civil proceedings. This is highly effective, as an abortion seeker will be less likely be able to be prosecuted without medical evidence.

Out of state judgments refers to the idea in the U.S. Constitution that states can only regulate the activities that occur within their borders, and a state court has no jurisdiction across its boarders (Cohen et al. (2023)). The government cannot deprive anybody of life, liberty, or property, without due process of law, and this does not fall under due process of law. This is especially appliable in tort law—compensation for harm—specific to wrongful death. These laws instruct protected courts to not enforce an out of state judgement based on abortion health care. This does not directly protect abortion seekers, rather this protection safeguards the abortion providers' willingness to provide abortions to out of state abortions seekers. These laws protection abortion access for out of state abortion seekers.

Claw back lawsuits mean that if a civil lawsuit is brought about between a state that bans abortions and a women who received an abortion in a shield law state, then the abortion seeker can sue the government of the other state for interfering with the abortion seekers' right to abortion in the protected state equal to the fine imposed by the state that outlaws abortion (Cohen et al. (2023)). This is a highly effective protection because it means that there is no threshold for which a civil penalty could reach that would deter an abortion seeker, which relates directly to this research's cost benefit analysis equation.

Lastly, caring for patients across state lines relates to telehealth in that a doctor who provides services via the phone to an individual in a state in which abortion is banned, will not get in legal trouble with the protected state. If the doctor were to travel to a state in which abortion is banned, the doctor might get in trouble with that state (Cohen et al. (2023)). This protection is not applicable, as this thesis studies the travel cost to drive from one state to another.

Overall, not all the nine abortion shield law provisions are effective at changing the behavior of the abortion seekers—some aid abortion seekers while other aid abortion providers. For example, an Idaho (full abortion ban) resident must drive across Nevada (no shield law protections) to get to California (shield law protections). Although California prohibits expenditure of state resources on helping Idaho prosecute, Nevada has no such protections and may use highways cameras to track Idaho license plates. From the view of influencing an abortion seeker, the most effective protections are ones in which the potentially incriminating information in only located in the shield law state and directly affects the abortion seekers.

The Economics of Abortion

Although theoretically possible, not every individual in the US has access to an abortion (Coast et al. (2021)). This is due to a variety of factors, such as socioeconomic status, access to a vehicle, access to take a day off from work, proximity to the nearest abortion clinic, and access to the resources to obtain the procedure. One of the most important indicators of being able to obtain an abortion is one's socioeconomic status. This socioeconomic status is a good indicator for the other sub variables such as access to health insurance. One with a higher socioeconomic status is likely to have better health insurance, although there are exceptions. There are some large retail chains that pay a non-competitive wage but provide copious benefits for individuals. Insurance coverage for abortion varies widely across the United States. Some insurance companies provide coverage in states that allow abortion, even if subscribers reside in a state that does not allow abortion. Although I am calculating travel cost, it is important to understand that there are fully encompassing marginal, economic costs to obtain an abortion. For example, taking time off work is not a direct cost that one pays, rather the opportunity cost is that one makes less money (i.e., smaller paycheck) than if that individual had gone to work. This does not consider paid time off, but it is still an opportunity cost, and an individual is choosing to use work provided pay time off to obtain an abortion. This paper identifies the benefits of abortion as the advantages or profits gained from receiving abortion care. Although the marginal abortion benefits are relevant to the legal analysis model in terms of a rational person seeking or not seeking care, I am calculating travel cost—not marginal cost. Theoretically, if $MC < MB$, then an individual will seek an abortion procedure, and if $MC > MB$, then an individual will not seek an

abortion procedure. This thesis does not identify a dollar value for marginal benefit since this is the theoretical aspect of the model.

There are nuisances among prices of abortion procedures such as location, gestational age, and method of abortion (Lattof et al. (2020)). These nuances and prices lead to a variety of issues across the country, such as abortion access and availability. Just because the closest abortion clinic is X number of miles away does not mean that that is the "best" abortion clinic or even the most efficient abortion clinic. Efficiency should always be maximized—a basic concept in economics. It is important for abortion facilities to be mindful of cost. For example, some patients can afford to pay out of pocket or their insurance covers an abortion care service. Goods and services are allocated to those who are willing and able to pay. If an abortion clinic can improve its efficiency, then it might be able to offer more services to those who are lower on the socio-economic ladder. One critique of government regulation, especially supervised regulation is that it is costly to enforce. With ever-changing laws in society, it is time consuming, and thus economically cost prohibitive for some abortion clinics to keep up with the changing laws and remain in business. Expensive legal fees and confusing constitutional structures that have yet to be interpreted by the court system leads to abortion clinics operating in ambiguous legal realm. This relates to my paper in terms of access to get the abortion after one travels to the abortion clinic. I am studying travel cost, but one of my U.S. Census variables examines households that are below the poverty line.

Abortion Insurance

There are two dominant insurance types in United States—Health Maintenance Organization (HMO) and Preferred Provider Organization (PPO) (Lee & Lee (2020)). The most crucial difference between these two insurance plans for most consumers is price. With HMO plans, a consumer is required to consume the healthcare services within the insurance providers' network. This means that HMO plans have lower premiums, as HMO plans contract directly with the doctors, hospitals, and clinics that administer the care. The one notable exception is emergency care is always provided, even if out of network (i.e., there is no "network" for emergency care). For example, if one has an HMO insurance plan on Blue Cross, Blue Shield of Massachusetts (BCBS), health insurance will only cover procedures and routine primary care physician (PCP) visits within New England (the coverage area), and if one wishes to get elective

surgery in Saratoga Springs, NY, BSBS would not pay (i.e., one would need to pay 100% out of pocket). PPO plans cover a patron no matter which service one uses nor where one obtains that service. In the name PPO, there is "Preferred Provider." This means that there is a network of providers, similar to HMO, that from which the insurance company would like you to obtain medical services (i.e., the insurance company "prefers"). But one can obtain use out of network insurance usually with a deductible. This highlights the gaps in which a female is covered for an abortion procedure. If a female with an HMO plan travels outside of the network area for an abortion procedure, the insurance plan will not cover the procedure unless it is an emergency. This is effective in terms of the willingness to pay for an abortion procedure if insurance is unable to cover the procedure. This affects an abortion seeker in that an abortion seeker may choose to travel to a state in which the travel cost is higher due to abortion coverage. In my research, I am examining the difference in travel cost between the nearest clinic and the nearest clinic in a state with shield law protections, but the nearest shield law clinic might not have the insurance coverage for the specific person. This would raise the travel cost for the individual, but I only have U.S. Census data at the county level, so I am unable to calculate marginal cost.

Insurance coverage is not standardized across the country (Guttmacher Institute (2023)). This means that to which state one travels to obtain an abortion determines which abortion care, if any is covered by insurance. Of the eight states that require all insurance providers to cover abortion in the state, only four states also have the protection of interstate shield laws—New York, California, Illinois, and Massachusetts. One important note is that states can only require actions of businesses that conduct business within the state. For example, if a small, regional, New England insurance provider does not write insurance contracts for those who reside in New York and a person insured by the regional insurance agency travels to New York to obtain an abortion, that regional insurance provider is not able to be regulated by New York State law (i.e., does not have to cover an abortion procedure). That being said, the regional insurance provider may have a contractual obligation to the insured person to provide care outside of the region, if the insured person subscribes to a PPO insurance plan or if the abortion is necessary and falls under emergency coverage for an HMO plan. Otherwise, an insurance provider may simply deny paying for an abortion. Another important note is that insurance providers may not violate state law. If abortion is banned in a certain state, that insurance provider may not pay for an illegal procedure. States can regulate what insurance agencies (that write contracts in that state) can

cover in with the state's borders. Texas and Louisiana block all insurance coverage relating to abortion, even if an abortion occurs to save the life of a mother. The closest thing that the United States has to a public healthcare system is Barack Obama's Affordable Care Act. This creates health exchanges at the state level for those who do not have access to an employer-sponsored insurance plan or individuals who are self-employed. Lastly, state governments are the purchasers of insurance plans for public employees. This means that state governments have a lot of leeway when negotiating with healthcare insurance providers, as state governments that are not interested in providing abortion access, may choose to subscribe to a plan in which public employees are not covered for abortion. This paper is incorrect in finding that some states require coverage of all private insurance plans, as states are only able to regulate insurance companies for which that company writes insurance contracts in the regulating state. The table on the website is misleading (A-Table 2).

Accounting Costs of Abortion

A cost as defined by economics is the dollar value of the good or service that one must give up so that one may consume anther good or service whereas an accounting price is the price of a good or service, irrespective of the opportunity cost. This paper does not encompass any additional marginal costs of obtaining an abortion such as lost wages, childcare services for other children, etc.

The majority of abortion seekers in America are low income as defined by living below the poverty line, and the vast majority do not have insurance that covers abortion (Jones et al. (2013)). Those who seek abortion are two times more likely to be insured with Medicaid—a state-sponsored health care system designed to ensure those below the poverty line have access to health care—than private insurance. Just because one has healthcare, does not mean that one's insurance contract covers abortion. Sixty-one percent of abortion seekers have insurance. This could be from a variety of reasons such as state laws, desires of the insurance purchaser, insurance plan coverage area, and plan type purchased by the individual. In addition, some women do not know if her insurance covers abortion procedures, so she may choose to pay out of pocket for the procedure. Sixty-nine percent of women paid out of pocket for their abortion procedure, and of that about half (52%) of women had difficulty paying for the procedure. The man involved in the pregnancy covered some amount of the cost of abortion for those who paid

out of pocket. In fact, 60% of women used the money otherwise spent on rent, utilities, and food, to afford the abortion procedure. This a concerning statistic as one who neglects other expenses in the home decreases the quality of life for others with whom she lives. From an economics perspective, it is easy to say that the cost of abortion is always less than the benefit. In this project, the marginal benefit of obtaining an abortion procedure would be the cost not incurred by raising a child. This could be anything from the cost of education to the cost to rent out a home with one additional bedroom to the cost of clothes—there is an extensive list of costs associated with raising a child. An abortion procedure that may cost thousands of dollars will always be cheaper than raising a child which typically costs hundreds of thousands of dollars. In economics it is important to seek to understand the cost of pain and suffering of associated with an abortion procedure as well as the mental cost of giving a child up for abortion. It is easy to sit in an economics classroom and talk about ideas, but as a male, I cannot say what it feels like to obtain an abortion because I am unable to obtain that procedure. One could argue about the validity of a cost benefit analysis model that encourages placing a child up for adoption, but there is still a cost associated with placing a baby for adoption in terms of maternal separation from the baby. This leads into negative externalities caused by law makers, as banning abortion in a state increases the cost to travel to a surrounding state. The person who bares the increased cost is not the law maker, rather the abortion seeker. In 1976, the U.S. Government enacted the Hyde Amendment in which federal money earmarked for Medicare cannot be used to pay for an abortion procedure with three notable exceptions—rape, incest, and protection of the mother's life. Federal money is the key word, as seventeen states use state funding to pay for abortion services for women who are covered under Medicare but unable to access federal funds for an abortion. One barrier is the requirement to pay up front for an abortion coupled the low reimbursement rate and slow bureaucratic method to process the reimbursement. In 2008, 20% of abortions were funded with state dollars for those who were insured by Medicare. One way to defer the cost of an abortion is to use money from an abortion fund, which is a non-governmental organization (NGO) that used donated money to defray some or all the cost of obtaining an abortion. These programs are specifically targeted at low-income women with the goal of increasing abortion access. For example, second trimester abortions cost two to three times as much as a first trimester abortion. This is applicable to my research in that I am seeking to understand the effect of Jones et al. (2013) findings have on abortion access in a post-Roe world.

Jones et al. (2013) was published when abortion before viability was constitutionally protected, and the findings are seminal to my research.

In summary, the U.S. Supreme Court did not directly increase the cost to get an abortion, rather the Dobbs case turned the duty of abortion regulation to each of the states. The supreme court knew that this would cause abortion bans at the state level, as many states already had trigger laws—statues that ban abortion but were rendered moot by the landmark Roe v. Wade case. Dobbs v. Jackson Women's Health Organization did not change the demand for abortion services, rather the outcome was an increase in cost to travel to obtain an abortion which unduly affects those who are already socially disadvantaged.

Supreme Court Cases

Decided in 1973, Jane Roe, et al. v. Henry Wade, District Attorney of Dallas County (1973) affirmed that all Americans have a constitutional right to an abortion. The supreme court ruled that a law restricting abortion access would "violate the Due Process Clause of the Fourteenth Amendment, which protects against state action the right to privacy, including a woman's qualified right to terminate her pregnancy." The due process clause of the 14th amendment was one of the three civil rights amendments. For context, the 13th amendment abolished slavery, the 14th amendment enshrined equal rights (i.e., birthright citizenship), and the 15th amendment barred voting discrimination based on race. The Supreme Court has used the due process clause of the 14th amendment to incorporate the bill of rights into the states. For example, the first amendment begins with "Congress shall make no law…," but states are also unable to make laws abridging the five freedoms of the first amendment—freedom of the press, religion, assembly, speech, and redress (i.e., protest). The supreme court ruled in Roe v. Wade that the U.S. Constitution has an implied right to privacy as because the 14th amendment does not allow state governments to deprive an American of liberty. In summary, the government is not allowed to deprive a women of liberty without due process of law and since there is no due process of law (i.e., legal proceedings) before an abortion, and the government restricting a women to have an abortion is taking away a women's liberty (i.e., right to privacy) without due process of law. The U.S. Constitution's separation of state and federal power allows me to conduct my research and make for an interesting research project. In the U.S., each state acts in some respects as its own country in terms of what it governs. Some areas, such as in Texas, have

enacted laws which criminalize those who drive to an abortion clinic via roads over which the government body has jurisdiction (Kitchener (2023)).

Almost 50 years later, Dobbs v. Jackson Women's Health Organization (2022) overturned Roe v. Wade. This does not mean that abortion is illegal across the United States. Rather, this case ruled that abortion regulation is up to the states and is not protected by the U.S. Constitution. There may, however, be state constitutions or statues that protect abortion. The supreme argues that since there is no right to privacy written within the constitution, there is no implied right to privacy and, in conjunction with the 10th amendment, if the federal government does not have the enumerated power to regulate, it is the state legislatures that have the option to regulate. The stark dichotomy between these two cases is the basis for my research. If Dobbs had not overturned Roe v. Wade, I would be researching a different topic for my senior thesis.

The two ways that that the justices scrutinize the U.S. Constitution are strict and loose (Ginsburg (2016)). A strict interpretation means that one understands the constitution at face value in what the framers intended at the constitutional convention while a loose interpretation, by contrast, means that a justice reads between the lines and interprets the constitution as a living document. Ruth Bater Ginsberg, a supreme court justice, was a loose constructionist which means that she believed the constitution protected abortion. The outcome in the Dobbs case showcases that the majority of justices subscribed to a strict interpretation.

Mapping Abortion Access

Just under a quarter of women in the U.S. (23.6%) do not have access to an abortion clinic within an hour and half drive from one's residence (Alterio et al. (2023)). The authors study the driving time from a clinic and count the number of reproductive aged women in that area using U.S. Census county-level data. This study is different from my research, as it focuses on travel time as opposed to distance and this calculated with the starting being the abortion clinics. I am researching the distance between a county and a clinic—with the distance emanating from the counties in a state in which abortion in banded.

Kelly et al. (2022) examined abortion access before and after the Dobbs decision using Euclidean distance and highlights the differences before and after the ban. I am not looking at cross sectional data—I am studying the current travel costs from an abortion center to the nearest

clinic and to the nearest clinic in a state with abortion shield laws. The paper's main finding is that there will be an increased travel distance to the nearest abortion clinic with abortion bans.

Conceptual Framework

I am using Gary Becker's (1968) legal cost benefit analysis model. Becker is known for theorizing that any economic analysis can be performed using a cost benefit analysis equation. In his analysis model, Becker examines the optimal level of deterrence as the state's punishment laws. I am using Becker's model for my research to determine if laws that ban abortion are effective. In my model, marginal benefit (MB) is the subjective gain from receiving an abortion (e.g., opportunity cost of not having a child). It is important to note that the marginal cost in this legal analysis model is difference from the marginal travel cost to obtain an abortion. It is impossible for me to calculate MC and MB, as I only have access to county level data for the U.S. Census. I am using GIS to calculate travel cost, which is a component of marginal cost. My equation for MC is: MC = punishment * probability of being prosecuted, whereas punishment is the home state's punishment for receiving an out of state abortion and probability of being prosecuted is the probability of being prosecuted for an out of state abortion by one's home state. If MC > MB, an individual will not seek an abortion procedure, and if MB > MC, an individual will travel to another state for an abortion procedure. Going back to my main question, a "reasonable" distance is when MC is less than MB. Theoretical hypothesis: the likelihood of being prosecuted when receiving an abortion in a state that has enacted abortion shield laws is 0, so any the punishment of a law restricting abortion access is ineffective at limiting abortions because if probability of being prosecuted = 0, then MC = 0, irrespective of punishment. This is theoretical component of Becker's model, I am studying empirical hypothesis: since one can travel to another state to obtain an abortion, any law restricting abortion access is ineffective at limiting abortions, so long as the travel distance to the nearest clinic is a "reasonable" distance from one's home. This framework allows me to use GIS to calculate the difference in distance between the nearest clinic and the nearest clinic in a state with abortion shield law protections.

Data

I am using two geographic information systems (GIS) software—ArcGIS from Esri Inc. (2023) and QGIS from the QGIS Development Team (2023) —as my data analysis program.

Although common to use Stata in economics research projects, GIS allows a visual approach to data modeling specifically in the form of maps (i.e., “geo” = maps and “graphic” = visual). Stata, a statistical software, expresses the effect of an independent variable on the dependent variable as a slope coefficient. In my project, the independent variable is the travel cost (which is fixed), and the relationship (e.g., slope) between the travel cost and U.S. Census variable is shown as a color scale in which the darker the color, the higher the correlation, and vice versa.

I am examining five variables collected in the 2020 U.S. Census (2023). Population was collected on the 2020 decennial census and the rest of the variables were collected on 2020 American Community Survey accessed by me in the fall of 2023 (U.S. Census (2023)) (Note: I will refer to each variable studied as a census variable although it may technically be referred to as a survey variable). Since I am studying travel cost (i.e., not examining the difference before and after Jackson v. Women’s Health Organization), data from the most recent census is the most applicable data for my research project. As established by Article I, Section 2, of the U.S. Constitution, a census is to be collected every decade by the U.S. Government which influences the number of representatives per state in the house. The difference between a census and a survey is a survey collects from a representative random sample and a census collects data from the entire population. Though collected at the individual household level, census data is released at county level, as not to reveal sensitive information.

The first variable that I am examining is total population of each county as of April 1, 2020 (“Census Day”). This is important as it showcases the most populated parts of the U.S. as in relation to rural areas in which highway access and driving distances may be longer. County lines are rarely altered, as counties encompass those who live within the original boundaries created when America was built, irrespective of cities. Contrary to counties, congressional districts need to have an equal population and are adjusted based on the results of the census.

My second variable is the percent of women of childbearing potential (WOCBP) without health insurance. This is percent of women aged 19 to 44 who lack health insurance. This is important as it showcases the disparity of those who may be able to travel to obtain an abortion procedure but are unable to have the abortion procedure covered by their insurance and may have to pay out of pocket. This does not take affordability into account. Simply due to the fact that a WOCBP possess insurance coverage does not mean that her insurance covers abortion procedures.

My third variable is percent of WOCBP without a bachelor's degree. For this variable WOCBP are defined as women aged 18 to 44. This is important because those who have access to a college education are more likely to be affluent and more likely to have or have had access to free contraceptive services such as those offered by Skidmore College. Being able to not work for multiple years is a privilege only enjoyed by those with financial means.

My fourth variable is percent of households without access to a vehicle. This is paramount to my research, as I am calculating travel cost for distance on roads, and without access to a vehicle, one is unable to drive to an abortion clinic—unless someone outside of the household provides transportation else. Also, simply because a household has access to a vehicle, does not mean that the abortion seeker has access to that car—either at all or if the car owner will allow the car to be used to obtain an abortion. A parent, for example, might be pro-choice, but unwilling for his daughter to use a car to travel out of state for an abortion due the laws of the home state or municipality (e.g., civil or criminal penalties).

My fifth variable is the percent of households that are below the poverty line. This is the bridge between my empirical and theorical hypothesis in that just because theoretically MC < MB, a poor household might not be able to afford an abortion. This showcases the households that already possess an excessive economic burden, so providing for an additional child might be unattainable. This may create a poverty cycle in which a family cannot afford another child but also cannot afford an abortion procedure.

Methods

A brief overview of GIS

GIS stands for geographic information systems software which allows analysis and visualization of data in map format. There are two types of map data—raster (e.g., satellite images) and vector (coordinates on the map)—the shapefiles are all vector data. In addition, I added excel files as a data layer, but excel files do not directly appear on the maps since excel files do not have coordinates; the data in the excel file are linked to vector data to visualize correlations. Each vector has an associated attribute table (i.e., GIS's version of an Excel file) which can be joined (i.e., linked) with other attribute tables. The data from the attribute is used to create the assorted colors on the maps.

How I obtained the initial data

I used two different GIS platforms—QGIS and ArcGIS. To collected data for the abortion clinic addresses, I manually copied and pasted data from Abortion Finder (2023) into an Excel file for all the states that allow abortion. I manually collected this data because there are no public abortion clinic datasets. One must sign a non-disclosure agreement to access the data, which is disadvantageous for a publishable senior thesis. I cleaned these data into different columns for address, city, state, and zip code using the "=OFFSET" command in Excel, then I converted the file from Excel to a comma-separated values (CSV) file and imported the record into ArcGIS. I then used the geocode feature in ArcGIS to create a shapefile of the abortion clinics. I then exported the shapefile from ArcGIS and imported the file into QGIS (the platform where I am conducting the majority of my analysis). In QGIS, I upload a map of the U.S. states from Dominique Evans-Bye (2015) and U.S. counties from Esri Data and Maps (2013) each as separate layer. I then downloaded each U.S. Census (2023) data variable and imported the CSV file into QGIS. I then created a join field in the attribute table of the Census data and the county shape file in the form of "[city], [state]". This allowed me to access the Census data on the county shapefile so I can visually represent my data. I repeated this for each variable.

To create the Euclidean center map layer, I used the "centroids" tool to create a map layer that acted as the center of each county from which I based my travel cost at the county level. I then imported the abortion clinic shapefile and Euclidean center shapefile into ArcGIS so I was able to use the closest facility tool to create isochromes to calculate the milage on road from the Euclidean center of a county to the nearest clinic and to the nearest clinic with shield law protections (I filtered the abortion clinic shapefile by states that have shield law protections and recalculated the milage to the nearest clinic in a state with shield law protections). I multiplied both mileages by the Internal Revenue Service (n.d.) tax write off rate of $0.67/mile. Then, I multiplied that value by two to calculate the round-trip marginal travel cost for each county. I subtracted the travel cost to travel to the closest abortion clinic from the travel cost to the closest abortion clinic in a state with shield law protections. I used a bivariate color scheme in ArcGIS to showcase each variable.

How to interpret the maps

I created three maps to visually compare travel costs for each type of clinic (Figure 1). For the top map, I used data from the isochrome attribute table to show the travel cost to the closest abortion clinic. For the middle map, I showed the travel cost to the closest abortion clinic located in a state with shield law protections. For the bottom map, I used raster calculator to create a new field showing the difference in travel cost. I used a legend which shows no travel cost difference (only applicable to the travel cost difference map), low, low-to-moderate, moderate-to-high, and high travel cost. Because this figure examines three datasets, each map is a different quartile. There are no numbers on these maps, as the goal of this figure is to visually showcase the travel costs across the counties that ban abortion and each of the quartile ranges are different. For my research, a full abortion ban is defined as does not allow abortion after conception. This is because the goal of this figure is to visually showcase the travel costs across the counties that ban abortion. I am using a mapping software to show trends and the individual numbers are not important for this particular figure. The categories low, low-to-moderate, moderate-to-high, and high travel cost are defined as the 25^{th}, 50^{th}, 75^{th}, and 100^{th} percentiles, respectively. In addition, a county with no travel cost difference is defined as county in which the closest abortion clinic is the same as the closest abortion clinic in a shield law state. For example, the darkest shade of red is the highest 25% (i.e., most expensive) travel cost as calculated out of all the travel costs across the various counties. The second darkest is the second highest travel cost—between top 50% and top 25 (or between Q2 and Q3 in mathematical terms)—and so forth for all the quartiles.

Figure 2 is a zoomed in version of the bottom map of Figure 1, the difference between this map and Figure 1 is that this map shows the quartile ranges. The goal of this figure is to examine where in the United States there is the highest increase in cost to the nearest abortion clinic located in a shield law state. This map is important as the data map are shown in conjunction with the following maps to showcase high travel cost and high incidence of the census variable. This is the only figure which shows the ranges for the travel cost difference. This is the same color scheme in which the darkest color is the top 25% most expensive travel cost. Please note the for the remainder of this paper, “travel cost” means the travel cost difference in USD because is this independent variable that I am examining (i.e., my research paper studies the correlations between the travel cost and a census variable).

Figures 3-7 show the relationship between the travel cost and the five census variables with each map showing a different variable relationship. All maps are in the same format starting with the name of the U.S. Census variable in the top right corner. The states that allow abortion are represented in a cream color, and the states with enhanced legal protections are shown in green. The states that ban abortion are shown divided into counties, as the census data is by county. The data are represented by 16 colors in a blue-pink-purple color scheme, as shown in the legend in the bottom left of the figure. This again uses quartiles. The value of the quartiles for the travel cost difference is shown in Figure 2, and the quartile values and distribution to the particular census variable are shown in the histogram on the right side of the figure. For example, a county shaded with the color gray will means the travel is the bottom 25% and the incidence of the census variables is also in the bottom 25%. On the opposite effect, the darkest purple is the highest 25% for both travel cost and census variable. I deem the darkest purple to be the "affected area" as they possess a high economic burden and high travel cost. The other fourteen colors in the array are a mix of quartile ranges for each variable. The travel cost is shown in pink on the left side of the square and the U.S. Census variable is shown on the bottom side of the square in blue, which the color combing in the middle of the square. This bivariate color scheme allows one to examine a county on the map, then locate the correspond color on the legend to get the range of travel cost and the census variable. For example, in Figure 3, the northeastern most county in Indiana is Steuben County, which is the color one square above the bottom left of the legend array (a light pink). This means the range of travel cost (from Figure 2) is $60-262 and the range of households below the poverty line is 0 to 12%.

A-Figure 1 is the distribution of the abortion clinics across the county shown as orange squares. The red counties are located in states with a full abortion ban (i.e., states that do allow abortion after conception). The cream-colored circles inside those red counties are the Euclidean centers of each of the counties. The yellow travel routes across the county show the distance to the nearest abortion clinic, and the purple travel routes across the county show the distance to the nearest abortion clinic in a state with shield law protections. The yellow lines are the layer above the purple travel routes, so if there is only one yellow travel route from the center of the county, that the closest clinic is the same as the closest clinic in a shield law state. Some of the routes from different counties overlap because there is only one highway in between. This is the only figure that shows Alaska and Hawaii because those states allow abortion without shield laws and

are irreverent to my research. I displayed Alaska and Hawaii to provide perspective on the abortion clinics across all 50 states.

A-Figure 2 offers a different perspective in terms of state values. I exported the travel cost attribute table and used Excel to calculate the averages per state of each type of travel cost. I also calculated the standard deviations for each state average. I then subtracted the average clinic travel cost from the average shield law clinic travel cost to calculate the average travel cost increase, then I joined this Excel file with a U.S. States shapefile to represent this visually and added labels to the states in which abortion is banned. The darker the shade of red, the higher the travel cost difference. The travel cost difference is written on each state.

Results and Discussion

There are 3,143 counties in the United States. Technically, only forty-eight states have counties because Louisiana refers to counties "parishes" and Alaska refers to counties as "boroughs" or "census areas" (U.S. Census (2023)). For my research, I will group "parishes" and "boroughs" into the definition of counties. There are 1259 counties in states that ban abortion, and there are 745 abortion clinics nationwide. There is a large concentration of clinics in the Northeast, especially in major cities, such as Boston, MA; New York, NY; and Washington, DC (A-Figure 1). Looking on the west coast, there is a large congregation of clinics in Portland, OR; Los Angeles, CA; and San Francisco, CA. In Alaska and Hawaii abortion clinics are sparce from each other. Since I am only measuring travel cost from a county that bans abortion, I am not examining Alaska nor Hawaii. I can only speculate the travel cost for individuals who live in those states, but that is outside of my research question. It is interesting to observe that Florida has a high consortium of abortion clinics across the state. Florida, although a swing state, strikes me as more conservative in terms of abortion politics. When examining the borders all the states that ban abortion, there are some pockets where the distance to the nearest clinic is substantial. I will examine this relationship in other figures. The yellow and purple lines are the isochromes. When examining the distance to the nearest abortion clinic in a state that offers shield law protections, I notice the high concentration of clinics in Chicago. While this map is visually intense, I enjoy examining the travel cost isochromes. Many counties share same abortion clinic as their closest facility. The total number of closest abortion clinics is 46, consisting of 6% of all abortion clinics. On a smaller scale, the closest shield law clinics numbered 17 which is 2% of all

clinics and 4% of all shield law clinics. In addition, many of the travel routes lie on the same highway systems. I think it is interesting how, for example, parts of Tennessee and Mississippi both go to Georgia for their closest abortion clinic. I assumed that the majority of routes to the closest shield law facility would be to Illinois, but my results differ. Parts of West Virginia, go to Delaware, New Jersey, and western New York. Idaho travels to California for its closest shield law abortion clinic. In addition, Idaho travels to the most states for its nearest abortion clinic at five states while only traveling to California to the nearest abortion clinic in a state with shield law protections. Another interesting relationship is that eastern Tennessee travels all the way to Delaware to seek a shield law clinic since Delaware is closer than Illinois.

A-Figure 2 is an average county increase in travel cost value as displayed by the different states. North Dakota at $746 travel cost is the highest increase in travel cost to a shield law state due to this state being the farthest distance to closest shield law state. I was surprised at the distribution of travel cost increases around Illinois. I would expect the states closer to Illinois to have a lower value. I would expect Missouri to have a lower value then Arkansas. The average travel price in Missouri is $62 higher than Arkansas. Also, Arkansas is not located next to Illinois, but possess the lowest average travel cost increase, even less than the states that boarder Illinois. Texas has the highest travel cost at $453 out of the solid block of states that ban abortion.

Figure 1 is slightly different is that there are no numbers for me to analysis. The goal of this figure is to show where there is high and low prevalence for travel cost. There are no numbers present on either of these three maps. It is interesting however to examine the top map which is the closest abortion clinic and have surprisingly along the Mississippi especially the southern Mississippi the travel cost to the nearest clinic is high. I expected to see white-shaded counties along the entire solid eleven states that bad abortion. This discrepancy is due to the location of the abortion clinics in relation to the counties located on the edge of the states. Not surprisingly states which only share one border with another state that bans abortion is lighter in color than those states that only border states then also have a full abortion ban.

The middle map in Figure 1 is exactly what I expected. The counties that are closer to a green state (i.e., a state that allows abortion with the protection of interstate shield laws), are lighter in color. In states such as Indiana, my data show that the travel clause to the closest clinic is low in relation to the travel cross costs across all clinics. I think it is interesting how the

abortion shield law states are congregating in the Northeast with California but the wildcard here is Illinois. This is one of the reasons why I wanted to research this topic because it showcases the importance of having a shield law state on abortion access. This is exactly my research question, especially in terms of does the fact that Illinois is a shield laws state change the dynamic and change if laws that ban abortions are effective in the surrounding states. I would argue that Illinois is indirectly weakening the criminalization of abortion in surrounding states by offering a relatively close safe haven for residents who live in the block of states that ban abortion (defined as all the states that ban abortion except for Idaho and the Dakotas). The bottom travel cost difference map in Figure 1 is shown in detail in Figure 2.

In Figure 2, the travel cost difference map, the bottom most map in this figure provides interesting context for the counties in which there is no difference in travel cost because of Illinois. I did not expect the area for which there is no difference to travel cost to extend so far south the Mississippi River into about halfway through Louisiana. It is interesting to visually see that not all the state's counties in which there is zero difference in travel cost are connected. This is due to the placement of the roadways across U.S. as well as where the Euclidean center of the counties is located. As we move farther away from Illinois, the colors get darker because this is a red color scale with the darker the color, the higher the value of the variable. Another interesting note is I expected southwestern Idaho to have a lower difference in travel cost due to this proximity to CA, but Idaho also experiences abortion clinic that are that other states. I think this travel cost difference quintiles are interesting. Kelly et al. (2022) found there will be an increased travel distance to the nearest abortion clinic with abortion bans. Although I am not examining before and after the abortion bans went into effect, there is a higher travel cost if the travel distance is higher. It is interesting how it is never more than $1,000 increase to drive to a state that offers abortion clinics and shield law protections. If one engages in a simple cost benefit analysis spending an extra $1000 to travel "cost" to a state that offer shield law protections offers a greater benefit in terms of lost wages, legal expenses, etc. "benefit" from not being charged. This, however, amount of money might be substantial to households that are below the poverty line. This is the crux of my research in terms of examining the practicality behind a traveling to a state with shield law protections. Not being prosecuted for an abortion is a privilege only available to those with more resources. It is interesting visually to explore the dynamics of the dance of prices in the travel cost difference. Especially since most of western Texas is in the most

expensive category for increase in travel cost. Some towns in Texas are trying to crackdown on those who use the roads Texas to travel for an out of state abortion by creating the possibility for a civil lawsuit against those who live in and/or travel through a town to travel out of state (Kitchener (2023)). Since 50% of the country is within a $262 travel cost increase, is this an affordable number for many? No.

Figure 3 displays households below the poverty line. This variable is epically important, as this show that to being able to obtain an abortion procedure for those who are already economically disadvantaged may encourage one to turn to an unregulated, unsafe abortion procedure within a state that bans abortion or not have the abortion procedure at all. This may force a woman to raise a child which might exacerbate the excessive burden of family costs on a household already below the poverty line. Another option is the mother would have to place the child up for adoption, which may cause immeasurable pain and suffering. My results echo Jones et al. (2013) in that about half (54%) of those who obtain an abortion are below the poverty line and paying for a procedure causes an economic burden.

Figure 4 shows household without access to a vehicle. It is surprising that the high incidence of these counties is along the Mississippi River; this is especially interesting because counties along the Mississippi River in states such as Missouri, Arkansas, Mississippi, Tennessee, Kentucky are where the travel cost difference is zero. This means that although it may not cost one more to travel to a state with expanded legal protections, one may not have access to a vehicle. Without access to a vehicle, one may be unable to obtain an abortion procedure simply due to being unable to get to the clinic. These counties along the Mississippi River are more rural as defined by the population distribution map, there is likely little access to public transportation.

Figure 5 showcases the places in this county where there is low education level for those who are affected by this policy. Western Kentucky, southern/southwestern Texas, and parts of Mississippi and Alabama are particularly prevalent in low education access. The Dakotas has high affected area with high travel cost difference and high rates without a bachelor's degree. Low rates of education in Texas correlate with low insurance rates in those same counties showing those who are not able to attend higher education also have low rates of insurance and may not be able to afford an abortion procedure. Education also relates to income in that those with a college degree earn more, on average, than those without a college diploma. This house

does not match exactly with poverty line, but poverty line is difference from showing the increased educational attainment leads to increased wages. Jones et al. (2013) found 16% of adults in the United States graduated from college. This is a staggering statistic because my data show that those without access to education is not evenly distributed across the county.

Figure 6 is the percent of those uninsured by county. Texas and Oklahoma have the highest incidence of uninsured WOCBP. The states to the east of Texas have low incidences of unemployment. Even states with high travel cost differences such as the Dakotas, have low incidence of the census variable. Guttmacher Institute (2023) found that Texas and Oklahoma block abortion coverage on their health care exchanges (A-Table 3) only with the exception of life for both and severe health for Texas. Jones et al. (2013) found about a third (36%) of those who obtain an abortion are uninsurance and must pay for the abortion out of pocket.

Figure 7 shows the population distribution across counties. The only trend in this map is that the major cities are located in the highly populated counties. Out of the five variables, this is the only variable in which there is no congregation of high and low incidence counties. This map looks similar to the travel cost difference map while also displaying the major cities across the United State. Since counties were created around the founding of the United States, the borders do not change based on population trends. I am examining population as a function of travel cost whereas most studies that use maps create a criterion, then calculate how many people fit into that criterion. Alterio et al. (2023) and Kelly et al. (2022) calculated change in driving distance simply to the nearest clinic before and after Roe v. Wade with the former paper research driving time and the latter driving distance. Both studied concluded that ban would increase the travel burden for most Americans.

Limitations and Future Research

Limitations

Some limitations to my data are the difference in age definitions of WOCBP for the census variables without health insurance and without a bachelor's degree. This is due to a lack of data. The census department only releases di-identified data, and the age groupings are different for reach variable. Another limitation is the two of variables are grouped by households and two are grouped WOCBP. This, again, is due to a lack of data. Another limitation is that the

U.S. Census is out of date the day after it is collected, as the U.S. population is constantly shifting. This is the most recent data for my research.

Suggestions for further research

Further research could conduct the same analysis in the travel cost from all the counties in states that allow abortion. This could provide interesting perspective especially for Alaska and Hawaii where driving back to the lower 48 states is not possible. One could expand the definition of shield law protections such as the impact of the different provision of interstate shield laws such as Massachusetts being the most effective. Another angle is expanding the definition of states that allow abortion as some state allow abortion up to six weeks while others allow abortion up to 12 weeks.

Conclusion

The implications the U.S. Supreme Court overturning constitutionally protected abortion access results in increased costs to access legal abortions, especially for those who are already financially disadvantaged. This may lead some women to seek unregulated, unsafe abortions or are unable to receive an abortion procedure at all. Those with low income and low access to abortions possess an excessive social burden to those who have limited access to economic resources, vehicles, health care, and education. In conclusion, the Dobbs case creates an excessive, undue barriers for those who are already struggling to make ends meet.

List of Figures

Figure 1

Travel costs for each clinic and the difference in travel cost

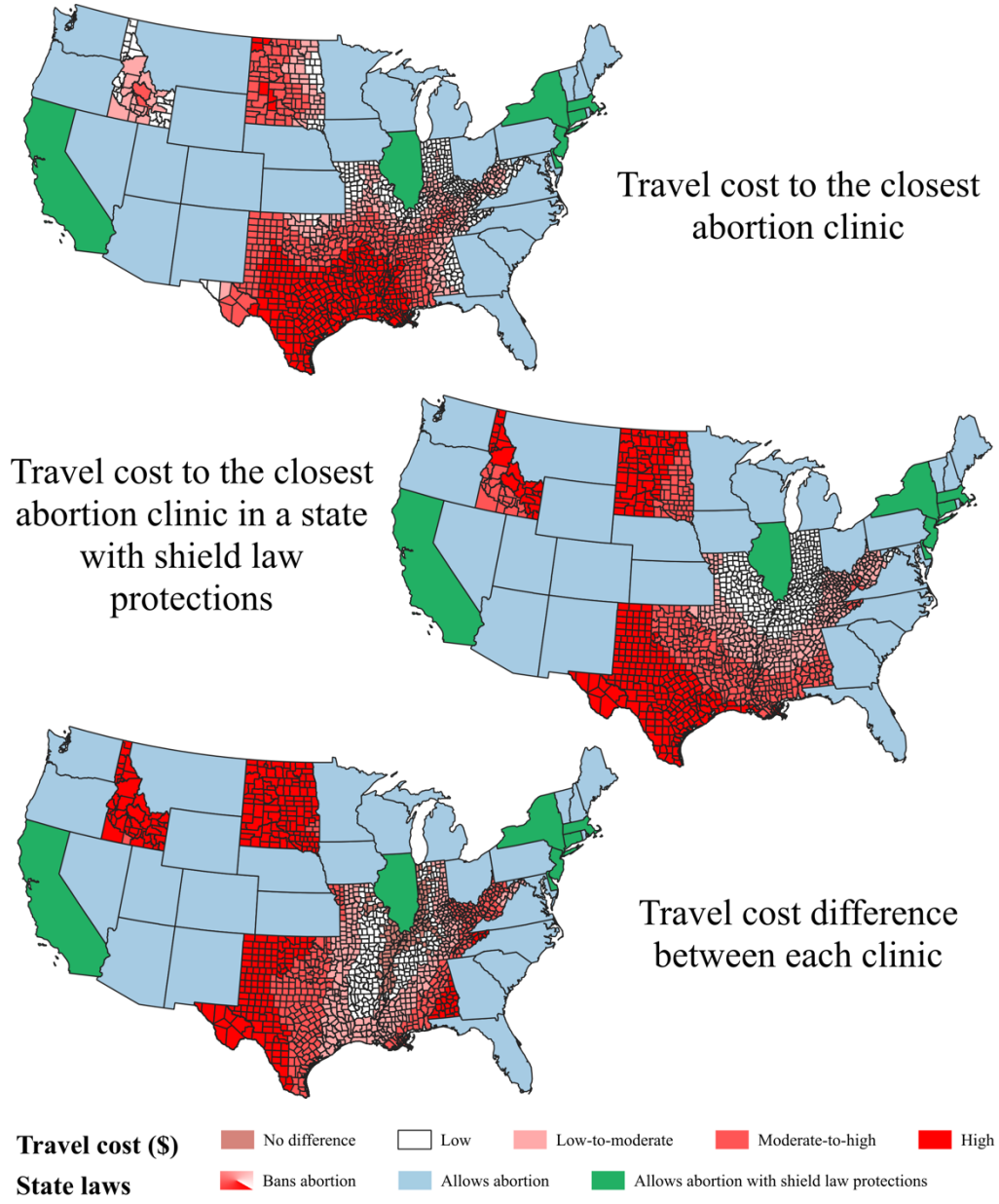


Figure 2

Difference in travel cost between the closest abortion clinic and the closest abortion clinic located in a state with shield law protections

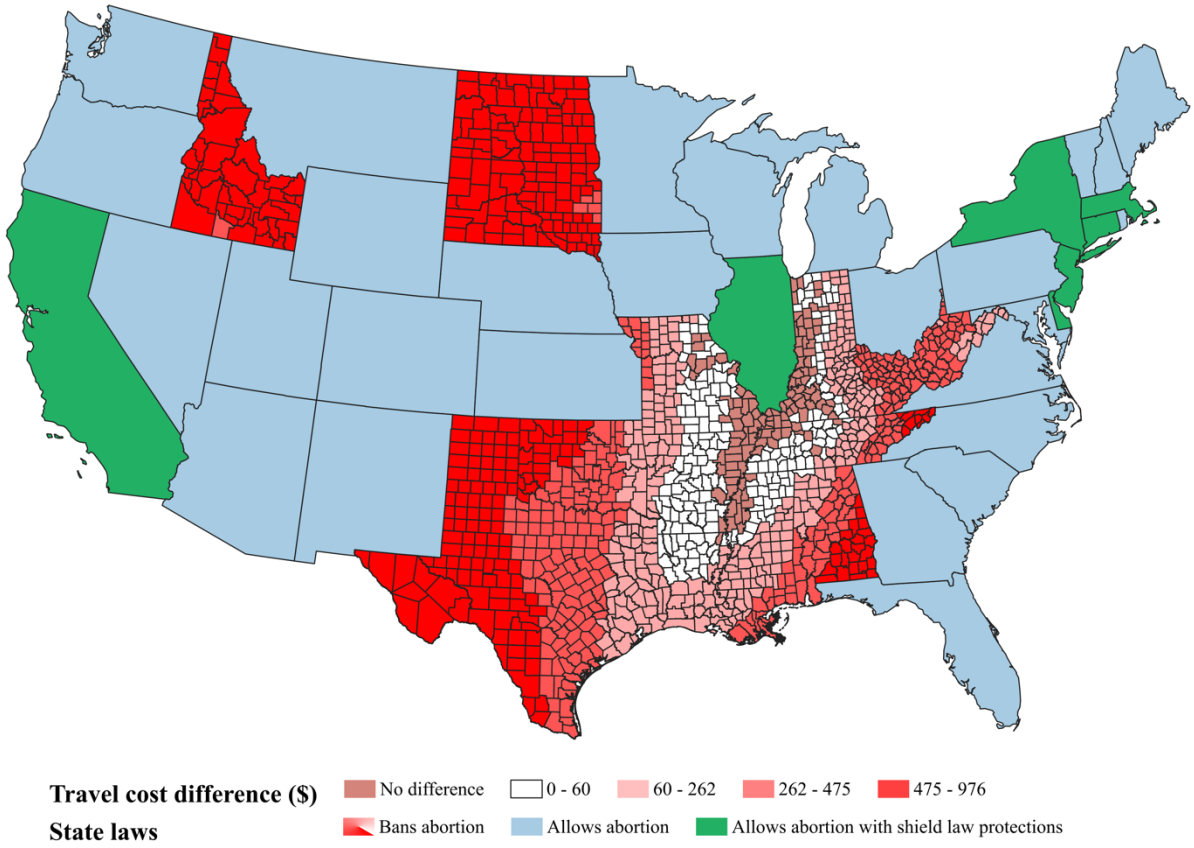


Figure 3

Percent of households that are below the poverty line distribution across counties

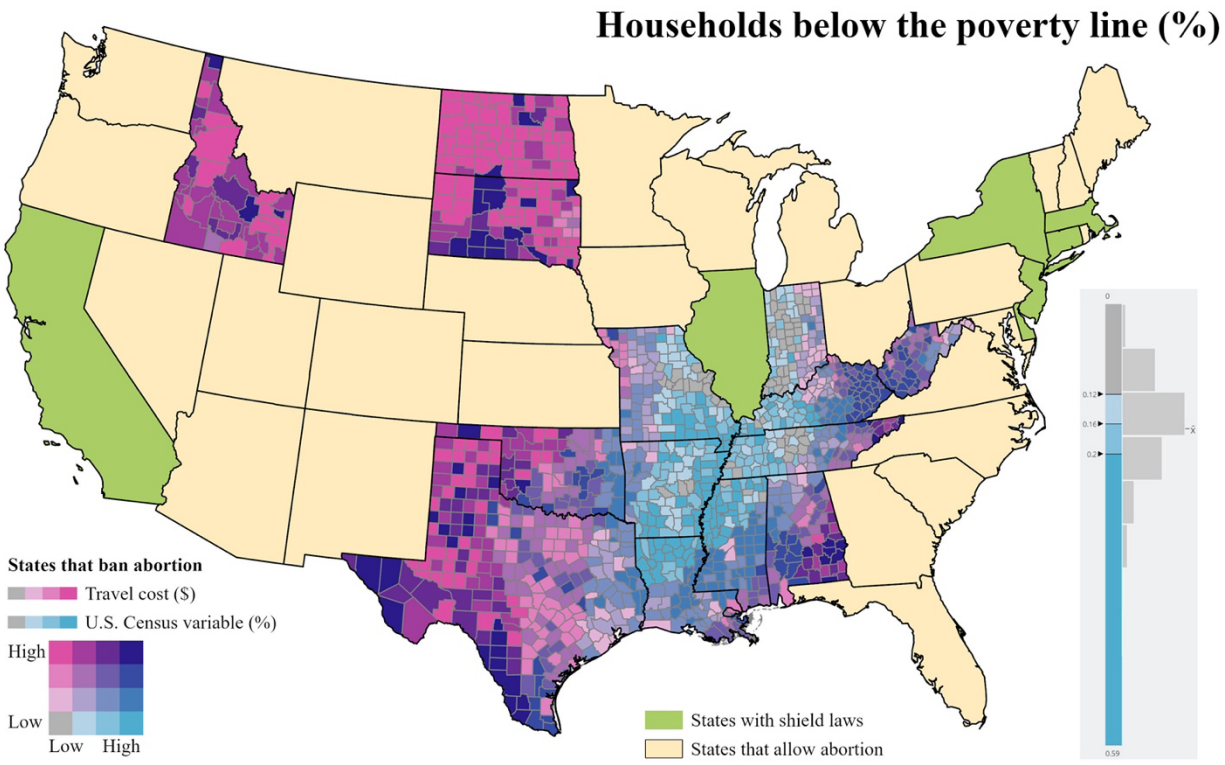


Figure 4

Percent of households without access to a vehicle distribution across counties

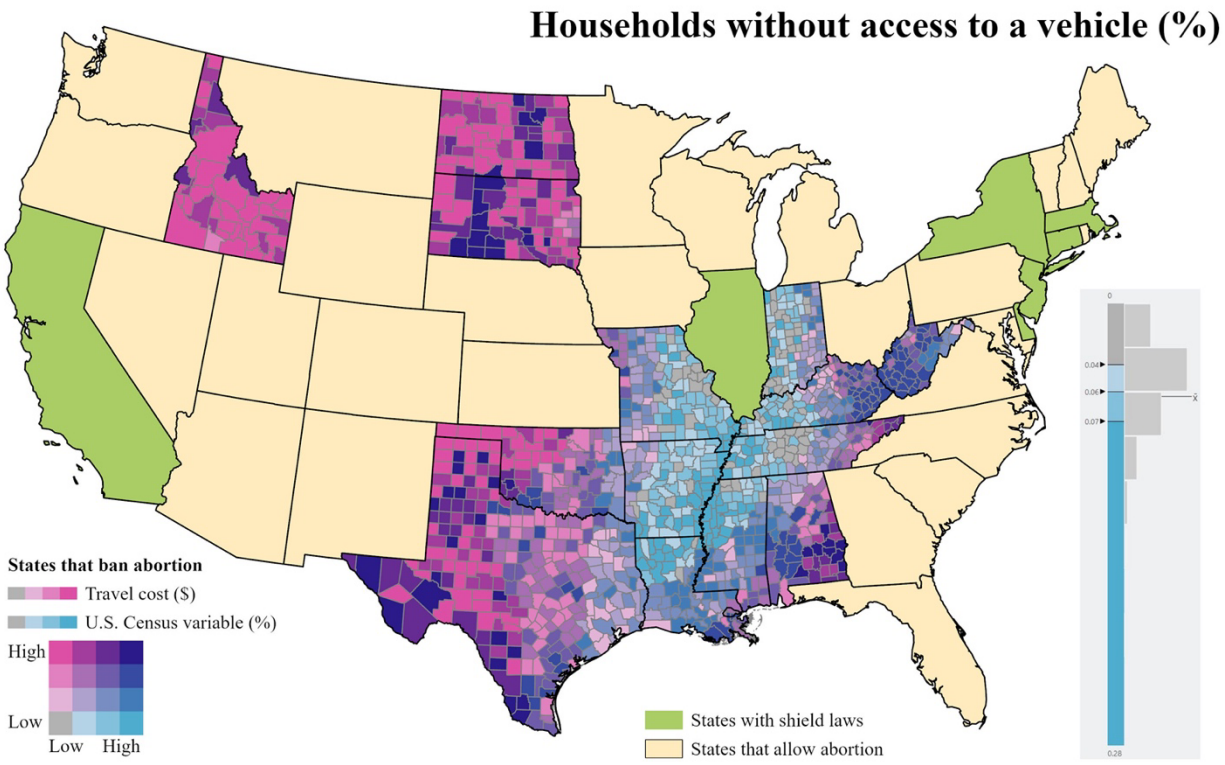


Figure 5

Percent of women of childbearing potential (WOCBP) without a bachelor's degree distribution across counties

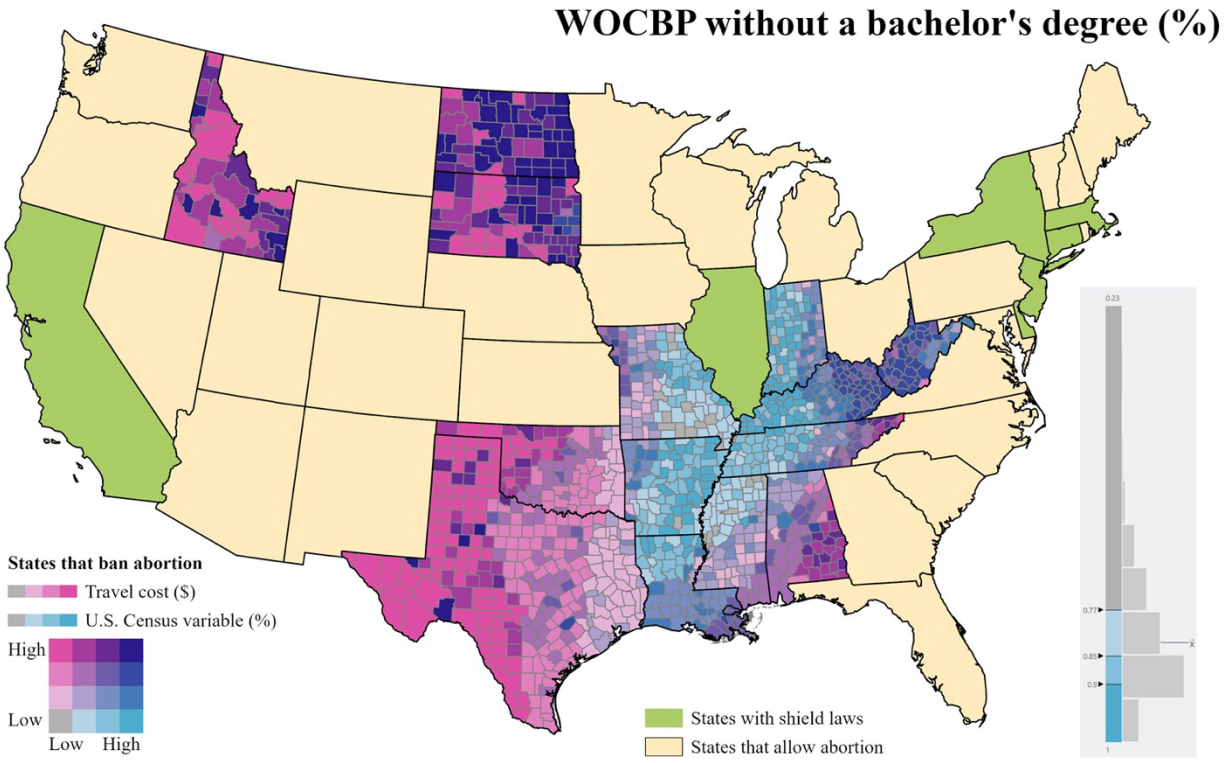


Figure 6

Percent of women of childbearing potential (WOCBP) without health insurance distribution across counties

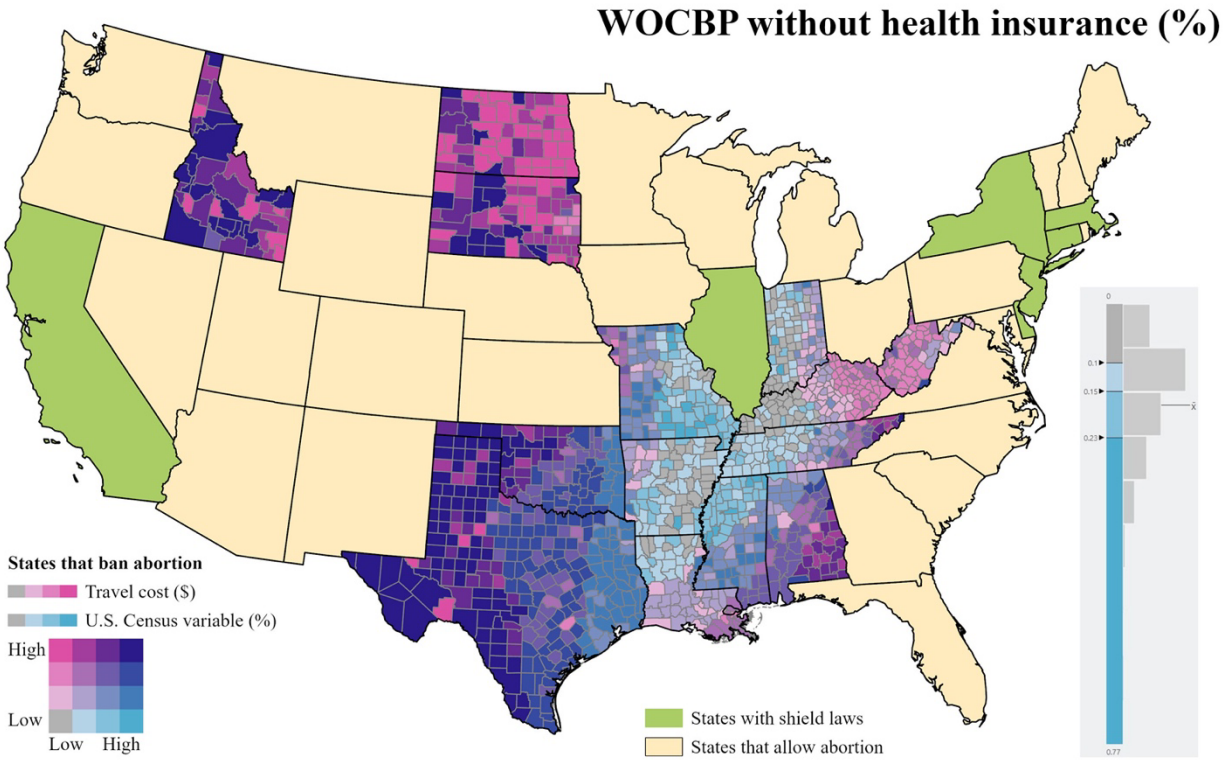
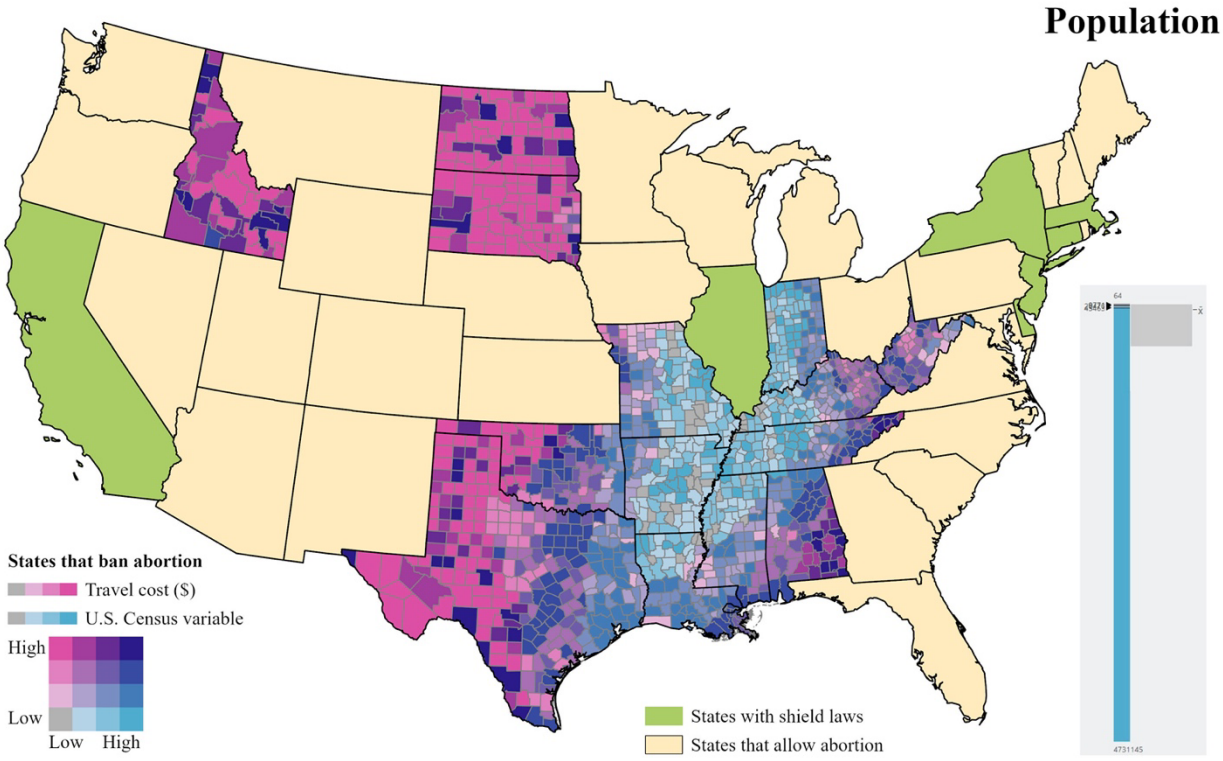


Figure 7

Population distribution across counties



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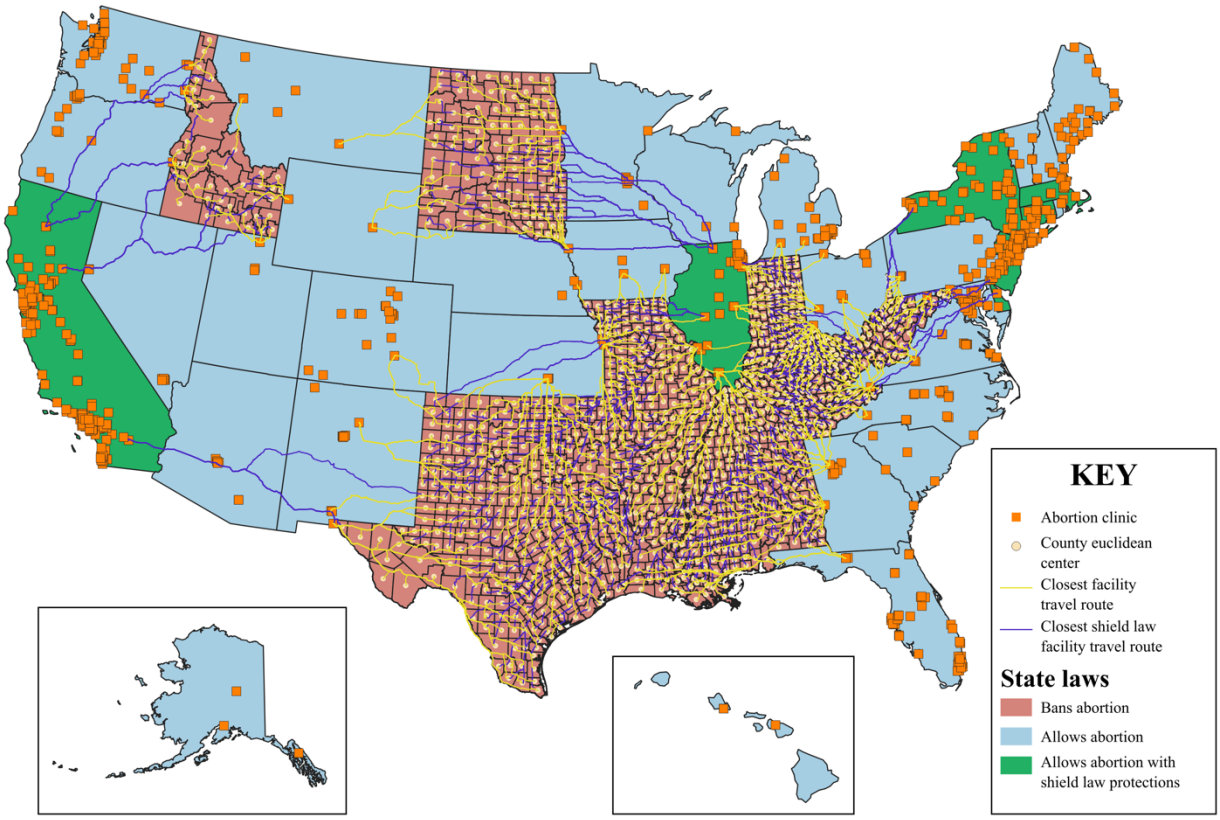
U.S. Const. art. I § 2.

Appendix

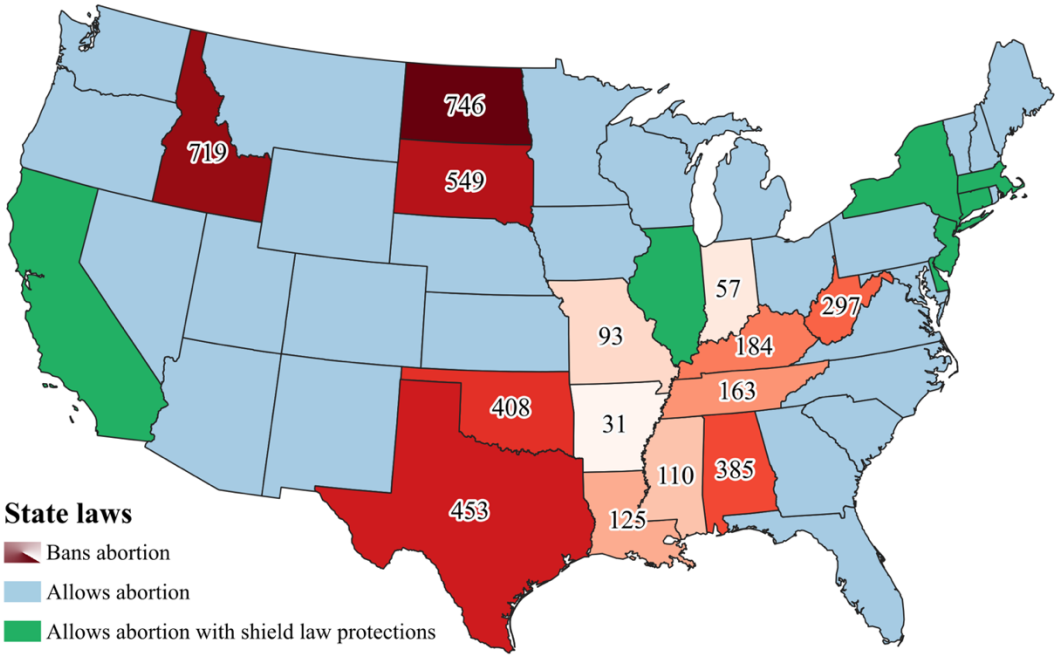
A-Figure 1

The distribution of abortion clinics and the center of counties in states that ban abortion across the U.S. overlayed with travel routes from an abortion banned county to the nearest abortion clinic and to the nearest clinic in a state that has abortion shield laws



A-Figure 2

Difference in travel cost by state



State	Average shield law clinic travel cost ± SD ($)	Average clinic travel cost ± SD ($)	Travel cost increase ($)
Alabama	575 ± 117	190 ± 78	385
Arkansas	440 ± 113	409 ± 105	31
Idaho	857 ± 108	138 ± 69	719
Indiana	179 ± 61	122 ± 41	57
Kentucky	340 ± 129	156 ± 57	184
Louisiana	752 ± 91	627 ± 72	125
Mississippi	523 ± 131	413 ± 68	110
Missouri	238 ± 104	145 ± 61	93
North Dakota	1024 ± 140	278 ± 121	746
Oklahoma	693 ± 124	285 ± 83	408
South Dakota	820 ± 157	271 ± 106	549
Tennessee	367 ± 131	204 ± 71	163
Texas	1045 ± 177	592 ± 181	453
West Virginia	432 ± 105	135 ± 56	297

A-Table 1

Shield laws by state

	Extradition	Witness Protection	State Resources	Licensing	Insurance	Confidentiality	Out-of-State Judgments	Claw-back Lawsuits	Telehealth Across State Lines
CA	–	X	X	X	–	X	X	X	–
CT	X	X	X	–	–	X	–	X	–
DE	X	X	–	X	X	X	–	X	–
IL	X	X	–	X	X	–	X	X	–
MA	X	X	X	X	X	X	X	X	X
NJ	X	–	X	X	–	X	–	–	–
NY	X	X	X	X	X	X	–	X	–

Note: This figure was developed by Cohen et al. (2023).

A-Table 2

Abortion Insurance Coverage by State

Insurance Coverage of Abortion				
State	Coverage required	Coverage banned or restricted to specified exceptions		
	All private insurance plans	All private insurance plans	Specific to health exchanges	Insurance policies for public employees
Alabama			Life, rape, incest	
Arizona			Life, severe health†	Life, severe health†
Arkansas			Life, rape, incest‡	
California	X*			
Colorado				No coverage
Florida			Life, rape, incest‡	
Georgia			Life, severe health†	Life
Idaho		Life‡	Life, rape, incest	Life‡
Illinois	X*			
Indiana		Life, rape, incest, severe health†‡	Life, rape, incest, severe health†	Life, rape, incest, severe health†‡
Kansas		Life‡	Life	Life
Kentucky		Life‡	Life‡,Ω	No coverage
Louisiana			No coverage	
Maine	X*			
Maryland	X*			
Massachusetts	X*			ξ
Michigan		Life‡	Life‡	Life‡
Mississippi			Life, rape, incest	Life, rape, incest, fetal impairment
Missouri		Life‡	Life	Life
Montana			▽	
Nebraska		Life‡	Life	Life‡
New York	X*			
North Carolina			Life, rape, incest	Life, rape, incest
North Dakota		Life‡	Life‡,Ω	Life
Ohio			Life, rape, incest	Life, rape, incest
Oregon	X*			
Oklahoma		Life‡	Life‡	Life‡
Pennsylvania			Life, rape, incest‡	Life, rape, incest
South Carolina			Life, rape, incest	Life, rape, incest, severe health†
South Dakota			Life, severe health†	
Tennessee			No coverage	
Texas		Life, severe health†	Life, severe health†	Life, severe health†
Utah		Life, rape, incest, severe health† and fetal impairment	Life, rape, incest, severe health† and fetal impairment	Life, rape, incest, severe health† and fetal impairment
Virginia				Life, rape, incest, fetal impairment
Washington	X*,β			
Wisconsin			Life, rape, incest, severe physical healthΦ	Life, rape, incest, severe physical healthΦ
TOTAL	8	11	25	21

* Cost-sharing is prohibited for abortion coverage.
† The health exception applies to a "substantial and irreversible impairment of a major bodily function."
‡ Abortion coverage beyond exceptions specified is available only through the purchase of a separate rider at additional cost.
Ω Although the law does not specifically refer to the ACA, the restriction applies to plans offered in the health care exchange.
β A plan must cover abortion if it covers prenatal care.
ξ State specifically prohibits coverage of postviability "partial-birth" abortions except in cases of life endangerment and "substantial risk of grave impairment of [the patient's] physical or mental health."
Φ Health exception applies when an abortion is necessary to "prevent grave, long-lasting physical health damage to the [patient]."

Note: This figure was developed by Guttmacher Institute (2023).