

The Environment of Reproductive Rights Doesn't Skip a Beat: How Do State's Social
Composition Impact State Policymakers' Passage of Fetal Heartbeat Laws?

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ABSTRACT

Reproductive rights have been historically regulated by federal or state laws, various state legislation exists that prohibit women from abortion access. Fetal heartbeat laws (FHLs) have increasingly gained passage in states since the first fetal heartbeat law was passed in (2013). The objective of this study is to determine how do states' social composition impacts state policymakers' to create passage of fetal heartbeat laws, using a survival analysis composed of the state's social composition collected from all 50 states in the U.S. from 2010 – 2021. This study offers background on the environment of reproductive rights, the impact of fetal heartbeat laws, and state-level variation of abortion policy. Michael Spence's Signaling Theory and Pierre Bourdieu's concept of symbolic capital are used to explain how state policymakers' create passage of FHLs. The state's social composition contains the state-level sociodemographic factors of race/ethnicity, the population share that identifies as female and of the reproductive age between (15 – 44), the population share is religiously affiliated Catholic or Evangelical Protestant, state government partisan control (e.g., Governor, House, Senate).

A fetal heartbeat timeline was constructed from (2010 – 2021), and links to the law were sought out to help assess the effect of fetal heartbeat laws. Primary and secondary sources contributed to the data collection. A survival analysis (time–event) of all 50 states from (2010 – 2021) with the “event” occurring as the passage of fetal heartbeat laws was implemented. The Cox proportional hazard ratio will demonstrate the risk of fetal heartbeat laws passed by hazard risk of state's social composition factors.

The survival analysis found state governments that were controlled by Republican trifectas were a hazard risk of passing fetal heartbeat laws. State's that were composed of mixed control (divided control) were more likely to pass abortion legislation when controlled by state legislative chambers (House of Representatives, Senate) that were Republican-controlled.

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CHAPTER I

INTRODUCTION

Comprehensive reproductive health care includes the right to obtain an abortion, consequences for women's health may arise through state abortion restrictions such as health disparities for various vulnerable women populations (e.g., low-income, minorities, pregnant minors) (Culwell et al, 2010, Gordon et al, 2022). Access to full reproductive health care prevents death and illness (morbidity and mortality), all women of reproductive age are allowed the opportunity to make decisions without constrain, and aids women's social advancement (Espey & Landy, 2019). Guttmacher Institute and the Centers for Disease Control and Prevention (CDC) found the abortion rates in the U.S. have historically been on a long-term decline, the decline is due to contributing factors such as decreases in births and pregnancies and abortion restrictions that may have reduced abortion access in various states (Nash, 2019). The CDC found the reported total overall number, rate, and ratio of legally induced abortions decreased during 2011- 2020 (Kortsmitt et al 2022).

However, current research on abortion rates has shown a slight increase recently from 2017-2020) abortion rates increased as high as 8% during this span (Jones & Philbin, 2022). The slight increase in abortion rates from 2017 – 2020 prior to the Supreme Court's decision to overturn *Roe V. Wade* may demonstrate the need for access to abortion to maintain reproductive care (Nash & Lufkin, 2022). State policymakers' have historically sought to regulate abortion so long as an unduly burden is not created through legislative acts, states abortion restrictions have been prevalent throughout the decade as state policymakers' have attempted or enacted passage of restrictive abortion

policies restricting and challenging access to an abortion (e.g., Fetal Heartbeat Laws, Trap Laws, Abortion Coverage, Waiting Periods) (Boonstra & Nash, 2014).

Various state abortion restrictions exist that contribute to the disparities across states. For example, fetal heartbeat laws are restrictive abortion policies that have increasingly garnered support for constructing arguments for fetal rights against women's rights (Evans & Narasimhan 2020, Haining et al 2022, Nash & Lufkin, 2022). Research shows that state-restrictive abortion policies are reflected by characteristics such as racial/ethnicity and gender/age demographics, the population share that is religiously affiliated, and the population share that identifies with certain political partisanship. These state characteristics of the population impact the passage of restrictive abortion policies such as fetal heartbeat laws (Medoff, 2016, Greene Foster 2021). The objective of this research project is to understand how a state's social composition impacts state policymakers' passage of fetal heartbeat laws (FHLs).

In this research, I seek to determine the impact on the state's risk of passage of fetal heartbeat laws. I use a survival analysis (time to event analysis) to identify the factors that contributed to the passage of fetal heartbeat laws during (2010 – 2021). Using data from various primary and secondary data sources for data collection such as *Guttmacher Institute State Legislative Tracker*, *Ballotpedia*, *American Community Survey Census*, and *the American Religion Data Archive National Congregation Membership Survey (2010)* as well as other sources that will be discussed in the methods section. The data collection was of all 50 states in the U.S. social composition factors from (2010 – 2021).

The state's social composition consists of state-level racial/ethnicity demographics, the population share that identifies as females and at risk of pregnancy between the age of (15 – 44), the population share that is Catholic or Evangelical Protestant affiliated, and the State government partisan control. The data collection was conducted soon after the *Dobbs v. Jackson Women's Health Organization* decision overturned the constitutional right to an abortion established in *Roe v. Wade* of June (2022) (Kaufman et al 2022). The data collection does not include the year (2022) due to the unavailability of data available during the data collection period of this study. This study aims to answer how states' social composition impacts state policymakers' passage of fetal heartbeat laws.

CHAPTER II

LITERATURE REVIEW & THEREORETICAL FRAMEWORK

Background

The purpose of this chapter is to provide supporting literature that helps to provide background knowledge of how abortion and the environment of reproductive rights has been shaped by legislative acts by state policymakers' and is highly regulated and highly conflicted. This increase in regulation and conflict has led to abortion rates having declined, in large part, because of the legal limitations. These legal restrictions include fetal heartbeat laws that have an impact on the state – level population where present. In closing, the state – level variation of abortion policy will be assessed to provider readers with information on how this type of polices are made. Transitioning into a theoretical explanation to aid in answering this study's research question: How do states social composition impact state policymakers' passage of fetal heartbeat laws?

The issue of abortion is divisive and polarizing issue in the United States, a surge of anti-abortions laws, commonly referred to as '*Fetal Heartbeat Laws*, have been enacted in over 13 states (Haining et al 2022). These state laws are structured to establish fetal rights or personhood by detecting signs of “embryonic electrical activity” that may develop into “fetal cardiac activity” (e.g., heartbeat) (Evans & Narasimhan, 2020, Nobles et al, 2022:1). Fetal heartbeat laws prohibit abortion as early as six weeks of pregnancy limiting the opportunity to receive an abortion (Strand, 2021). Various state laws centered on abortion restrictions exist, and an increasing number of state laws have implemented more restrictive abortion policies enacted in (2011-2013) than during the (1990s) (Boonstra and Nash 2014).

State-level variation of abortion policy exists as state policymakers' will differ depending on various composition factors, the historical landscape of reproductive rights has witnessed to state – level variation that exists from state policymakers' (Davis, 2022). The existing variation of state abortion policies represents the divided conflict among state policymakers' abortion is an issue of a right to sexual and reproductive health or the right to protect an unborn fetus (Evans & Narasimhan, 2020).

The Environment of Reproductive Rights

Sexual and reproductive health and rights have been heavily debated, leading to conflict surrounding abortion (Evans & Narasimhan 2020). Reproductive rights are defined as a woman's right to make decisions regarding childbearing without coercion and to have control of reproductive freedom (Berkman 2011). Reproductive rights contain elements of human rights, the right to privacy, and the right to health (Buser 2022). Reproductive rights have been affected by various protections and regulations from state laws and legislation that enhance or restrict women's access to reproductive care (Kennedy 2023). Abortion is essential to reproductive rights, Kulcycki (2022) found that one in four American women will have an abortion in their reproductive age.

The landscape of reproductive rights has been subject to federal and state legal limitations since the early nineteenth century, the first U.S. law regulating abortion was in (1803) abortion by prohibiting upon detection of fetal movement or "quickening" (Kennedy 2023, Sekalesfar 2009, Berkman 2011). Abortion while essential to women's health became highly regulated and highly conflicted (Darney & Reid, 2020). "Early abortion laws functioned as malpractice laws designed to protect women but became more restrictive by the (1850s) (Lahey 2014;941).

Reproductive rights have been shaped by laws and legislative acts by state policymakers' within the U.S. since the 1800s, protections and regulations focused on abortion and contraception have enhanced or restricted women's access to reproductive care (Berkman, 2011). In (1803) the '*Quickenning Act*' was the first of many state statutes or case laws that would continue to shape the environment of reproductive rights. The environment of reproductive rights would be furthered by public advocacy from interest groups that support reproductive rights (Lamm et al 1969).

In (1858), the *American Medical Association* successfully advocated for a campaign against abortion at all stages of pregnancy, all 50 states in the U.S. passed laws criminalizing abortion by (1890) (Beisel & Kay 2004). Many of these laws remained in effect until the Supreme Court's (1973) *Roe v. Wade* decision (Besiel & Kay 2004). The history of reproductive rights has been shaped by various events and policymaking decisions for the landscape of future generations.

This section of the paper will focus on providing the context of events and state laws that shaped the environment of reproductive rights. There are four key events that explain how reproductive rights have since evolved, these events include the *Comstock Act*, the constitutional protection for abortion established in *Roe v. Wade*, the continued increase of anti-abortion laws, and the eventual overturn of the constitutional protection for abortion established in *Roe v. Wade*. One of the most significant events that influenced reproductive rights and state policymaking is the *Comstock Act* in (1873), the U.S. Congress created passage of Comstock laws that prohibited the mailing, transportation, or delivery of "obscene" materials such as contraceptive tools and

information regarding contraceptives (Berkman 2011, Bone 2010, Garner & Mendez, 2016).

The *Comstock Act* was passed in response to and influence of the drafter Anthony Comstock who advocated for the distribution of contraceptives through the U.S. mail service to be outlawed (Garner 2015). The importance of the *Comstock Act* is the U.S. Congress got involved in a decision that impacted many individuals within the United States by establishing control of contraception distribution through the federal postal service (Garner 2015). The federal Comstock Act's impact was profound as secondary purposes were achieved as by (1920), 45 states had enacted or amended Comstock laws (Bailey 2010).

State legislation since the Comstock laws mimic the behavior of creating legislation that may be adapted by other states, known as “copycat laws” (Evans & Narasimhan, 2020). This is important because this is the start of state policymakers’ drafting bills from modeled legislation to attempt passage in their state.

The early (1900s) have been cited as the start of reproductive rights as in (1914), the term “birth control” was first used about Comstock laws preventing discourse and distribution of birth control, the phrase led to the existence of a birth control movement (Badore 2012). The early reproductive rights movement has been contributed by activists such as Margaret Sanger who was responsible for opening the first birth control clinic in the U.S. in (1916) (Yasunari 2000). Sanger’s impactful contributions were the start of reproductive health studies and research to further women’s reproductive health (Yasunari 2000).

Reproductive rights during this time were met with challenges from the ‘*Comstock Act*’ as the Comstock laws shut down Sanger’s birth control clinic for using obscene words such as “birth control” (Bailey 2010). The reproductive rights movement would be unwavering as portions of the ‘*Comstock Act*’ would be struck down in the case of *United States v. One Package* (Bailey 2013). By (1936), the ‘*Comstock Act*’ would be amended to establish the legal right for doctors and other healthcare professionals to distribute information and contraceptives (Wardell 1980). Reproductive rights continued to advance during the late (1900s) as the (1960s) and (1970s) contributed to altering the environment of reproductive rights with the introduction of the birth control pill (Lackie & Fairchild 2016). Contraceptive use by pills was created in large part due to the start of the reproductive rights movement in (1914) termed “birth control” (Lackie & Fairchild 2016). The birth control pill is significant for being FDA-approved as the first oral contraceptive in the U.S. (Lackie & Fairchild 2016, Tanne, 2009).

During this time reproductive rights are being furthered by the introduction of birth control methods IUDs (Intrauterine Devices), although questions concerning the safety of these methods for birth control arise (Watkins 2021). Regardless of the questions and results, the birth control pill and IUDs are the first female-controlled birth control methods that lead to advances in women’s sexual and reproductive health.

The added context of how the (1900s) shaped reproductive rights explains how support for abortion access from interest groups, contraceptive devices, and increased access from state policies contributed to the start of the reproductive rights movement (Badore 2012).

The surge of contraceptive use and support led to state policymakers' legalizing abortion and reproductive rights in the U.S. by revising legislation to allow the sale of contraceptives for married women in the *Griswold v. Connecticut* decision (Bailey, 2010). The changing environment of reproductive rights coincided with other states relaxing abortion restrictions leading to increased access to reproductive care (Bailey 2010, Sklar & Berkov 1974).

Colorado is credited as the first state to “loosen” abortion restrictions in (1967), decriminalizing abortion and establishing protections in the statute that protect women from physical and mental health in cases of rape, incest, and birth defects (Lamm et al 1969, Kennedy 2023). The trend of supporting reproductive policies continued in (1970) as four states legalized the right to abortion Hawaii, Alaska, New York, and Washington (Cates et al, 2003, Kennedy 2023). Followed by, “15 states adopting similar less restrictive legislation and, 200,000 women in the United States obtaining legal abortions” (Sklar & Berkov 1974: 909). The United States' environment of reproductive rights evolved from the (1920s) through the (1970s) because of state policies and interest group advocacy (e.g., Jane Collective) contributing to gaining greater access to contraception and abortion for women's sexual and reproductive health rights (Gozdecka 2020, Luna & Luker 2013).

Public health began to develop from the increased support for reproductive rights federal funding was approved for family planning centers established in the passage of *Title X* (Joffe & Parker 2012, Paluzzi 2006). Prior case laws established contraceptive use for married women (e.g., *Griswold v. Connecticut*) the evolving landscape of reproductive rights led to the decision in *Eisenstadt v. Baird* for contraceptive protections

for those who choose to remain unmarried (Sophia, 2016). The development and advancement of sexual and reproductive health rights during this time cumulated in the passage of the landmark (1973) decision of *Roe v. Wade* is vital for establishing the constitutional right to an abortion in the U.S. (Brown 2013).

Roe v. Wade was passed because of the growing support for reproductive rights before the decision few states recognized legal abortion leading to women having to travel to obtain an abortion (Joyce et al 2013).

The importance is protections were created for the right to obtain contraceptives and abortions without interference from the state, the Fourteenth Amendment protection clause is cited for the right to privacy (Smith 1983).

The decision in *Roe v. Wade* constrained the state's decision-making through constitutional protection. However, state policymakers' maintained a stake by establishing a compelling interest in "protecting women's health and in the protection of the potential life of the fetus," (Foo & Lin 2019; 26). State policymakers' were able to maintain regulation of abortion based on providing a compelling state interest, since the decision state policymakers' continued to enact over 1000 laws in hopes of an appeal succeeding in a reversal of the decision and limiting the effectiveness (Foo & Lin 2019, Glantz 1984, Perreira et al 2020). The availability of and required steps to obtain abortion care vary greatly by the state due to the *Roe v. Wade* decision.

The differences in state regulation of abortion have contributed to state abortion rates in the United States being substantially varied due to the availability of abortion services (Gober 1997, Kimport & Littlejohn 2022).

The *Roe v. Wade* decision continued to serve as a precedent impacting various Supreme Court Cases to follow (e.g., *Missouri V. Danforth*) (Claus 1987).

Abortion provisions continued to be struck down in the late (1900s) as state policymakers' continued to challenge the legality of *Roe*, and reproductive rights continued to be shaped by case law decisions as the *Planned Parenthood v. Casey* established the *Undue Burden Test* (New 2011, Paulk 2013). The turn of the twenty-first century (e.g., the 2000s) was responsible for increases in state policymakers' restricting abortion and the eventual decision that overturned *Roe v. Wade* (Kennedy 2023).

Throughout the history of reproductive rights many Supreme Court decisions regarding abortion impact reproductive rights in some form or matter by restricting or enhancing access to abortion rights. There are specific cases that may be more impactful than others: the *Comstock Act*, *Roe v. Wade*, and *Planned Parenthood v. Casey* are the cases that have been significant to reproductive rights by establishing precedent and shaping the environment around these outcomes. Federal and state policymakers' still maintained their attempt to shape the environment of reproductive rights by establishing various laws and legislative acts such as *mandatory waiting periods*, *parental consent laws*, *partial-birth abortion*, *the Affordable Care Act*, and other statutes during this time (Law 2006, Gee 2007, Sonfield & Pollack, 2013, Wright et al 2015, Ziegler 2016). The increase in legal limitations lead to abortion rates declining (Hamilton et al, 2006).

Abortion policy began to shift as state policymakers's attempted to pass increasingly more restrictive legislation than the last, one such restriction has been the passage of fetal heartbeat laws in (2013) by North Dakota that operated as a first-trimester ban (Bostrom 2017).

Fetal heartbeat legislation increasingly grew during this time and evolved through various attempts from state policymakers' to enact fetal heartbeat bills of their own (Evans & Narasimhan, 2020). The *Texas Heartbeat Act* is one of the most significant laws that passed as the restrictions impact women's access to obtaining an abortion and allow the right of any private citizen to sue a person who supports an abortion once a fetal heartbeat is detected (Wasserman & Rhodes 2022). The *Texas Heartbeat Act* is one of the last significant statutes established during the presence of *Roe v. Wade*. The increasing attempts by state legislators to create laws or legislative acts eventually succeeded in their long-term goal of state legislators overturning *Roe v. Wade* (Foo & Lin 2019).

The decision established in *Dobbs v. Jackson Women's Health Organization* overturned 50 years of precedent established in *Roe v. Wade and Planned Parenthood v. Casey* (Kaufman et al 2022). Reproductive rights may now be regulated by the state without interference from the federal government, giving state policymakers' greater jurisdictional authority within their respective state to regulate abortion policy (Mayer et al 2023). The overturning of *Roe v. Wade* may contribute to increased attempts by state policymakers' to create a passage of anti-abortion legislation (e.g., FHLs) or ban abortions entirely (Byron et al 2022, Haining et al 2022). The environment of reproductive rights has been historically regulated by federal and state statutes leading to various impacts from legislative acts, state – State-level variation of abortion policy has contributed to legislation such as fetal heartbeat laws emerging.

Impact of Fetal Heartbeat Laws

The purpose of this section is to provide insight into what are fetal heartbeat laws and their impact on the population in states fetal heartbeat laws are present. Fetal heartbeat laws are restrictive measures that ban abortion as early as six weeks, the law prohibits abortion at the earliest sign of a detectable heartbeat (Foo & Lin 2019).

Abortion is prohibited at six – weeks at the earliest gestational stage, and the procedure has faced challenges leading to temporary bans placed on the law (Evans & Narasimhan 2020, Haining, 2022). Fetal heartbeat laws impact various populations of women, and healthcare professionals and are designed to establish “personhood” (Bostrom 2017, Gordon et al 2022, Foo & Lin 2019). These impacts of FHLs will be discussed in greater detail in this section of the chapter.

Fetal heartbeat laws are laws that target fetal development markers. FHLs are aimed to increase: 1) the difficulty in obtaining access to an abortion upon detection of fetal embryonic activity (e.g., Heartbeat) (as soon as six weeks prohibited) (Haining et al,2022), 2) persuasion of women to reconsider their decision as a heartbeat “signifies” the start of a life (Sizemore,2019) and 3) control of women’s sexual and reproductive rights within their respective state (Evans, & Narasimhan, 2020). Abortion polices have disproportionately affected the state–level population of Black, Hispanic, and women of low socioeconomic status the greatest as these groups of women receive abortions at a greater rate (Davido 2010, Foster et al, 2022, Medoff, 2014, Haining, 2022). Access to obtaining an abortion is difficult given the legal challenges faced, the difficulty in obtaining an abortion is greater for those with disadvantaged circumstances in the United States (Acharya et al, 2016).

A study conducted by Gordon, et al (2022) focused on the undue burdens created by the *Texas Heartbeat Act* for vulnerable women of the population. These groups of women in the population were identified as those with decreased freedom of movement, minors, and women with mental and cognitive disorders (Gordon et al, 2022, Roth & Lee, 2023). The study by Gordon, et al (2022) found that fetal heartbeat laws offered vastly more limitations in receiving access to an abortion for women given these types of challenges.

The impact of fetal heartbeat law assessed by Gordon, et al (2022) on vulnerable women of the population found those with fewer resources, support, and challenges are subject to vulnerabilities due to the already established restrictive abortion policies and fetal heartbeat laws (Evans & Narasimhan 2023). Fetal heartbeat laws were found to be a restrictive act for women with decreased freedom of movement by limiting the opportunities available (Gordon et al 2022). Women of decreased freedom of movement may not have the time off from work, childcare, or transportation costs to obtain an abortion not within the state or current residence, the average trip to obtain abortion services has increased by nearly 30 miles for a round trip (Cohen et al 2021, Gordon et al 2022)

Pregnant minors are a vulnerable group of the state-level population that is faced with several legal limitations. State-laws such as mandatory waiting periods and parental consent laws create greater difficulties for pregnant adolescents to overcome for abortion access (Colman & Coles et al 2010, Joyce, 2009, Lindo & Torres, 2021, Gordon et al, 2022).

In states with fetal heartbeat laws present and other anti-abortion laws pregnant adolescents are subject to vulnerability due to the sensitive nature of the issue (Gordon et al , 2022). Pregnant adolescents may not want to reveal their pregnancy status to their parents or guardians for fear of potential backlash such as rejection or disapproval (Sanger 2004). The continuous state legal limitations are creating greater challenges to abortion access for adolescent women at risk of pregnancy.
creating greater challenges for adolescent women of reproductive age.

Women with major mental disorders or cognitive disabilities are more likely to be sexually abused or raped than those without mental disorders and cognitive disabilities (Gordon et al 2022). Unintended pregnancies are likely to increase due to these risks, challenges exist for those without a proper support system to help overcome these obstacles (Gordon et al 2022).

The decision-making of individuals with major mental disorders or cognitive disabilities due to these laws and challenges may be constrained, and fetal heartbeat legislation present may create an undue burden in achieving reproductive care (Gordon et al 2022). Starting with the impact of FHLs on various groups of women it's evident that fetal heartbeat laws are restrictive towards abortion because of their limited window of opportunity to obtain an abortion (Shaw 2022). Fetal heartbeat laws have received criticism for their restrictive time – limit to receive an abortion and exercise access to reproductive services (Evans & Narasimhan 2023, Gordon et al 2022). Women who have irregular menstrual cycles are limited in opportunities to receive an abortion due to fetal heartbeat laws (Nobles et al 2022).

“Regular” menstrual cycles are considered to be 28 – days in length, irregularity may exist past the acceptable threshold to receive an abortion (Nobles et al 2022). Fetal heartbeat laws fail to take into consideration irregularity that may exist for some women, irregularity exists higher for young women of color (e.g., Hispanic women) (Nobles et al 2022). Detection of a fetal heartbeat by six weeks is extremely close to a woman’s last menstrual period, many women may not know of their pregnancy until past the point of fetal cardiac activity detection (Sizemore 2019, Shaw 2022).

Healthcare professionals (HCPs) are often targeted when fetal heartbeat legislation is drafted as various fetal heartbeat laws have civil and criminal sanctions that hold HCPs liable for failure to adhere to the state’s legislative act (Bostrom 2017, Haining 2022). Health care professionals (HCPs) have been impacted by the passage of fetal heartbeat legislation. North Dakota’s passage of H.B 1456 (House Bill) in (2013) held HCPs liable for failure or violation of the heartbeat testing requirement and prohibited physicians from performing an abortion when a heartbeat had been detected was subject to possible criminal or disciplinary penalties (Bostrom 2017).

Heartbeat bills are drafted without a positive conscience clause as health care professionals (HCPs) are without the opportunity to provide an abortion for reasons of conscience (Bostrom 2017, Haining 2022).

Fritz (2021:46) explains how the law impacts HCPs. The law provides exemptions for HCPs who, as a matter of conscience, refuse to provide abortions where it is legal, it should also provide exemptions for HCPs who, as a matter of conscience, feel obligated to provide abortions where it is illegal.

Fetal heartbeat laws impact reproductive rights more significantly than previous legislative acts by building up meaning and establishing fetal rights (Evans & Narasimhan 2020).

Fetal heartbeat laws have been drafted with the intent to invoke an emotional response as the embryonic electrical activity is described as a heartbeat (Gordon et al 2022, Doan et al 2022). The personification of fetal heartbeat laws is the recognition of the presence of a heartbeat as a significant milestone in fetal development.

A study conducted by Doan et al, (2022) found that the fetal heartbeat law was cited for emotional responses through a content analysis conducted on Twitter in response to the passage of Georgia's *LIFE Act*. This study by Doan et al (2022) demonstrates how fetal heartbeat laws tug at the emotional constraints of state policymakers' and voters to help influence attitudes toward the issue. The emotional element demonstrated in fetal heartbeat laws by Doan et al, (2022) shows how the nature of FHLs helps the passage of these laws and evokes emotional responses. Fetal heartbeat law's impact is effective because individuals associate the meaning of a heartbeat with "personhood" and will contribute to the support of establishing legal protections for unborn fetuses (Evans & Narasimhan 2020, Foo & Lin 2019).

State – Level Variation of Abortion Policy

State-level variation of abortion policy is contributed by numerous factors that will be discussed; four key factors influence state's variation. These four key factors include morality politics, influence of religious membership, geographic location (e.g., political environment), and partisanship.

The influence of attitudes and gender or other social factors (e.g., demography) contribute to the variation of state-level abortion policy because of the intersectionality of attitudes, gender, and partisanship may have on the outcome. The first factor to recognize concerning variation of state-level abortion policy is that the issue is considered a morality political issue (Roh & Haider, 2003).

Abortion is an issue that has spurred debate concerns over safety and whether the act is morally correct (Evans & Narasimhan 2020) (Ryan 2014, Roh & Haider, 2003). State policymakers' will vary on morality politics as morality is not universal, individuals may have differences in "first principles" that impact their stance on the issue (Kreitzer 2015, Mucciaroni et al 2019, Weisberg, 2005). Abortion is a morality political issue that is influenced by those who choose to "frame" around morality (Mucciaroni et al 2019). The ability to frame abortion as an issue of pro-life or pro-choice, right to health or the right to life, and reproductive and sexual rights as an issue of private rights or public concerns influence public attitudes and opinions (Dickens 2008, Evans, & Narasimhan 2020, Luna & Luker 2013, Mucciaroni et al 2019). Morality politics may be a potential explanation for state-level variation of abortion policy because the various moral values each state holds [dependent on their religious composition; public opinion] will impact if state policymakers' seek to support or invalidate proposed policies (Ryan 2014).

The essential component of morality politics is the issue of conflicts with attitudes. Attitudes are valued as expressive as moral values have been found to have the greatest impact on attitudes toward abortion (Weisberg 2005). The state-level variation in attitudes towards abortion as a morality political issue differs because state policymakers'

and voters have conflicting views that will either support abortion as a right for social equality or oppose it as a threat to social cohesion (Beckman 2017).

Religion provides social cohesion and purpose for individuals (Chang 2005, Launay 2022). Religion provides individuals and groups with a motive by providing meaning for social conflict (abortion conflict) (Chang 2005).

Abortion attitudes vary within states' social composition as research has found personal religious affiliation influences approval and disapproval rates (Adamczyk & Validmarsdottir 2018). State-level religious affiliation is a determinant of abortion policy because the public opinion of conservative religious groups such as Evangelical Protestants has greater values in pro-life attitudes rather than pro-choice attitudes (O'Connor & Berkman 1995). The morality issue of abortion appears to be impacted by religious arguments and religious actors because of the significant proportion of the population demonstrating higher levels of opposition to these policies (Scheitle & Hahn 2011). The Roman Catholic church set the standard of the "moment of conception", a stance on reproductive rights of the belief human life begins at 14 days that impacts moral status (Gillon 2001:6).

Religion has historically influenced attitudes toward abortion and the politics of morality as social movements in the early seventies such as the '*Prolife*' movement and the '*New Right*' worked together to reshape the state abortion policy (Durham 1994). The separation of church and state within U.S. politics has been impacted by religious groups (interest groups) as the political environment allows moral beliefs to be furthered (Morgan & Meier 1980).

Religion has been explained as a factor of morality politics, religion has created deeply embedded moral values that are one of the greatest predictors and influences of voting behavior (Lockerbie 2013, Mooney & Schuldt 2008). Religion based on population composition varies depending on the socio-factor characteristics of the respective state population composition (Hackett 2019, Lockerbie 2013, Morgan & Meier 1980). Demography is a major influence in constructing religious composition (Hackett 2019). Religion impacts state abortion policy because the citizens and state legislators have moral beliefs and values shaping their voting behavior and attitudes toward abortion (Bhalotra 2021, Kreitzer 2015, Lockerbie 2013).

Reproductive rights may include protections such as the prevention of pregnancy, assistance with pregnancy, or termination of a pregnancy, these protections conflict with the beliefs of religious institutions such as Catholics and Evangelical protestants (Gozdecka 2020). State policymakers differ due to the various attitudes and beliefs from influences internally and externally such as the state's location, that may shape attitudes and beliefs towards issues such as abortion (Elliot & Mistry 2020).

Geographic location has been found to impact state variation in policy, policy is impacted by geographic location as the policy will vary across states and regions within the United States (Callaghan 2014). The state – level variation in access to services is greater in urban areas than in rural areas as state policymakers' operate as organizations with a stake in their jurisdiction to create a passage of policies that will aid in political control over territory and population (Skocpol & Amenta 1986).

The variation of restrictive abortion policy has contributed to disparities in adverse birth outcomes as research has been found within three out of four Census Regions contributing to the disparities of reproductive rights (Redd et al 2021).

State policymakers' differ in policy implications because of the state "policy environment", "based on the number of restrictions states were characterized as hostile to abortion, supportive, or 'middle-ground'" (Maddow et al 2021: 1152). Passing counteractive legislation in restricted states that are characterized as one of these titles may find greater difficulty in achieving passage of the desired legislation (Maddow et al 2021). The variation of abortion policies is impacted by state-level partisanship composition, depending on the strength of the state's political representation of government and legislative branches state policymakers' will impact the environment of reproductive rights (Kreitzer 2015).

Partisanship is the support of a political party, and its policies usually include opposing the opposition and has been described as an "irresistible force of deep embedded political perspective inherited through socialization and reinforced through social identity networks" (Killian & Wilcox 2008; 561). Partisanship is impactful because of the representation among the public (voters) and state legislators (political actors) (Kreitzer 2015, Rolfes-Haase & Swers 2022). The influence of party identification is the greatest as individuals' attitudes toward abortion are a predictor of their vote choice (Jelen & Wilcox. 2003). Partisanship has been found to interact with the socio-factors of the population composition as morals, religion, and other socio-factors affect partisanship's level of support.

The variation of state-abortion policy consists of interacting roles of the socio-factor variables (i.e., religion, gender, partisanship) that impact attitudes in turn, shaping voting behavior which helps restrictive or supportive measures of abortion policy to persist (Weisberg 2005, Lockerbie 2013, Kreitzer 2015). States policymakers' differ in the variation of a policy due to state governmental control; research has demonstrated abortion policies are more likely to be impacted by the gender and partisanship of state legislators (Kreitzer 2015).

States with fewer Democratic women in the state legislature, Republican control of the legislative chambers, and a "pro-life" or conservative governor are less likely to have unrestrictive abortion policies (Kreitzer 2015). State legislative restrictions exhibit variation concerning abortion policy (Salehin & Pillai, 2023). The theory of political representation may explain why state policymakers' differ in a variation of abortion policy as political representation theorizes passage of abortion policy is dependent on control of the government; representation is shaped by the gender and partisanship of state legislators (Kreitzer, 2015).

Abortion policies is an issue that's politically saturated that holds benefits for states' policymakers'(Orentlicher 2011). The partisanship of the state government in control will impact state abortion policy because of party control over the agenda and party discipline (Kreitzer 2015). Gender is impactful on state abortion policy as women's legislative leadership and identifying as a "pro-woman" with conservative behavior is more likely to affect abortion policy (Reingold et al 2021).

State legislators observing these socio-factor characteristics are more likely than men with similar and opposing socio-factor characteristics (i.e. Democratic party, male, liberal females) to oppose “pro-life “policies (Rolfes-Haase & Swers 2022).

Individual representation of state legislators is impacted by the intersectionality of their identified gender and religion as shaping abortion policy (Kreitzer, 2015, Reingold et al 2021, Rolfes-Haase & Swers 2022). Abortion is a highly salient political issue that warrants priority for many state legislative actors; women’s gendered life experiences will shape and inform how the political issue of abortion is considered (Rolfes-Haase & Swers 2022).

The history of the environment of reproductive rights was discussed to demonstrate how reproductive rights have changed over time through the passage of federal and state laws, advocacy from interest groups, and contraceptive and reproductive advances. The environment of reproductive rights remained high leading to the evolvment of anti-abortion legislation. FHLs are created and impact various members of the population. The impact of fetal heartbeat laws was explained to demonstrate how state policymakers’ continued to enact various legislative measures to prohibit access to abortion. State-level variation of abortion policy was explained to provide insight into why state-level variation occurs in abortion policy. This section of the paper will focus on the theoretical framework that explains the state passage of fetal heartbeat laws.

Abortion has been a longstanding debated issue in the United States. As seen in the previous literature above state policymakers’ have strategically used legal measures to further increase the restrictions on women’s access to an abortion. State policymakers’ have implemented many different type of anti-abortion laws (e.g., Trap Laws, Waiting

Periods, Partial – Birth) that have provided difficulties for various women in abortion–restrictive states (Law, 2006, Gee, 2007, Sonfield & Pollack, 2013, Wright et al, 2015, Ziegler, 2016). State policymakers’ have predominantly in the South created continued passage of various anti-abortion measures. As established above, select states have different anti-abortion laws from FHLs, research may aid in researching the differences. State policymakers’ will continue to differ in state passage of anti-abortion legislation, this chapter focuses on how signaling theory and symbolic capital are involved in an iterative process. Signaling theory and symbolic capital are used in this study to explain the state passage of fetal heartbeat laws. I argue that because these laws (e.g., FHLs) are differentiated, we need the specific theoretical framework of signaling theory and symbolic capital.

This chapter begins with a discussion of Michael Spence’s signaling theory. I begin with the application of this theoretical concept to explain how signals are used strategically by political actors in particular to convey their political beliefs to voters (in–group status). Signaling theory suggests that actors signal their stance on abortion, signaling the state policymakers’ position on abortion rights that align with certain constituents, or ideological/ political values influencing the desire for voters to participate. By aligning with specific ideological or political values, state policymakers’ gain symbolic capital. Pierre Bourdieu’s concept of symbolic capital is included to better explain how state policymakers’ utilize symbolic capital to create passage of FHLs.

Symbolic capital suggests that state policymakers’ passage of fetal heartbeat laws because of the symbolic capital accumulated and possessed enhances state policymakers’ position and support over issues such as FHLs.

The following section provides an in–depth review of the interaction between the state policymakers’ and its constituents, their relationship, implications, and effects on state passage of fetal heartbeat laws. These two theories: 1) Michael Spence’s signaling theory and 2) Pierre Bourdieu and symbolic capital are needed to understand how symbolic capital both is activated and increases to create in–group cohesion.

Signaling Theory

Signals serve as an important component that shapes laws about women’s reproductive health, signaling can shape the policies and laws surrounding issues such as abortion. These signals, in the form of legislative actions (e.g., FHLs) influence access to reproductive healthcare and impact individuals’ reproductive rights. FHLs are seen as signals in the context of signaling theory first coined by an economist named Michael Spence that has since been adopted in numerous fields including analytical sociology (Densley, 2012, Karasek & Bryant, 2012).

Fetal heartbeat laws passed in states serve as a method of communication for state policymakers’ to communicate their stance on abortion and appeal to specific political or social groups.

Spence (1978:357) explains signals by making a distinction between indices and signals,

“Observable, unalterable attributes as indices, reserving the term signals for those observable characteristics attached to the individual that is subject to manipulation”.

Indices are unalterable attributes such as age (e.g., race) and signals are alterable forms of attributes that may be perceived as non-distinguishable and subject to manipulation by the user (Karasek & Bryant, 2012).

Signaling theory is used in a theoretical concept by Spence (1978) to explain job market signaling by applying the signaling of education as an indicator or sign of value in the labor market to an employer (Connelly et al, 2011) The precise mechanism here is that obtaining a degree demonstrates certain desirable traits, such as discipline, perseverance, and the ability to learn. Employers use education as a screening tool to identify potential candidates who possess these qualities, Spence (1978) uses the concept of signaling theory to help with distinguishing job market candidates by educational attributes (Job Market Signaling Model) (Spence, 2002). Spence is using the job market signaling model to explain that there are attributes that are alterable called signals and impact the value in return. The concept of signaling theory in this analysis discussion on state policymakers' passage of fetal heartbeat laws. State policymakers' seeking passage of fetal heartbeat laws, or any laws related to reproductive rights are dependent on support from in-group audience members such as other political actors and voters.

This study slightly differs rather than focusing on economics and how education serves as a signal to enhance one's desirability within that job market, the model by Spence can be used to explain this study's research question. The precise mechanism in this study is state policymakers' signal their position on reproductive rights when attempting passage of anti-abortion type of bills such as fetal heartbeat laws to enhance their desirability among anti-abortion constituents. The argument is made using Spence's job market signaling model: state policymakers' are the sender (applicant) seeking to distinguish themselves from other candidates to voters (employers). The idea is positioning support for FHLs with their stance on issues on abortion will lead to

enhanced desirability. The value in return is the support from voters and other political actors necessary to help pass these laws.

State policymakers' are hoping to distinguish themselves with their positions to enhance their desirability to voters to aid in the passage of these types of laws. State policymakers' are elected with the thought of this individual as the right person for the job that is going to take the desired actions. Signals only help convey the message or position, legitimacy is necessary to enhance the effectiveness and credibility of these signals. State policymakers' with legitimacy are sending credible signals with supporting actions versus state policymakers' that only speak of potential actions.

Michael Spence (2002) explains signaling equilibria as a stable state in which individuals successfully communicate their private information to others through signals. In equilibria the signals sent by individuals are understood and correctly interpreted by the recipients, leading to efficient communication and coordination (reducing information asymmetry). Lofgren et al, (2002:202) explain Spence's signaling equilibria as "[In this equilibrium] high productivity individuals opt for the minimum education to distinguish themselves from those with low productivity". This explanation of signaling equilibria by Lofgren et al, (2002) demonstrates how Spence's focus was used to aid in distinguishing candidacy to see more favorable or legitimate. State policymakers' follow similar suit by conveying signals (e.g., in this case, the passage of anti-abortion laws) to inform constituents and other political actors (receivers) of their positions. State policymakers' that have sent signals of positioning on FHLs could increase support by appealing to or incentivizing certain state constituents and other political actors.

Incentives for policymakers' to pass fetal heartbeat laws can include political support from constituents who hold anti-abortion views, pressure from advocacy groups that prioritize pro-life policies, and the desire to signal their stance on abortion to gain support for their cause and maintain political standing. Incentives can influence state policymakers' to take action and pass such laws.

Stephen A. Ross (1977) examines how incentives impact decision-making, the incentive signaling structure demonstrates how incentives shape agents' behavior and choices. In signaling theory, incentives play a role in motivating state policymakers' to send credible signals that accurately represent their qualities or intentions. By passing FHLs, policymakers' can align their incentives with the desired outcome of signaling their commitment to pro-life values.

The message of commitment to anti-abortion rights can help shape public perception and potentially influence future elections, state policymakers' can increase the likelihood that their "signals" (i.e., FHLs) will be interpreted correctly and effectively convey the intended message. FHLs are perceived as a strategic signal by policymakers' to convey their stance on protecting fetal life and appealing to certain voter demographics. These signals help understand how agents in institutions navigate and negotiate their social fields. Spence's signaling theory focuses on the ability of agents to employ communicative methods to other receiving parties to identify a caveat of the signaler.

The ability to provide a signal at any time during an interaction gives agents with an advantage compared to agents who fail to provide a signal. Signals are more powerful at certain times as strategic interaction allows senders to send credible signals more effectively (BilegeBird & Smith, 2005).

State policymakers' that can establish trust and reduce uncertainty in their interactions will aid in gaining voters (constituents) and support from other political actors for the passage of FHLs or other anti-abortion legislation. Signaling theory has been extended by Gambetta & Székely, (2014) to consider the differences between "signs" and "signals". Bakken S, (2021:54) examined a study using signaling theory and trust by Gambetta et al, (2014:282), signals and signs are differentiated as "[Signals] are observable features intentionally displayed to build trust, whereas signs are the raw materials of signals and could be perceived as inducing trust, without being presented on purpose."

Gambetta & Székely, (2014) extends signaling theory by focusing on the element of trustworthiness. The trusters and trustees are subject to the risk of exposure due to the information asymmetry involved in the interaction. The trust game involved between parties is reduced by using signs and signals. State policymakers' propose laws each year that need support to gain traction, trust is an influencing factor that will help passage of state laws.

Honesty during an interaction gains prestige in the form of trust, costly signaling demonstrates that "mutual benefits [are] to be gained from truthful communication" (Bird et al, 2005:223). State policymakers' passage of fetal heartbeat laws provides a signal that is inducing trust from state constituents or other political actors. State policymakers' that propose the passage of fetal heartbeat laws could be perceived as a "signal" to build trust. The "signs" that could be perceived as inducing trust may be political affiliation. Republican parties (GOP) have identified using the color red and an elephant icon that may be perceived as signs of trust.

The assumption is made that the Republican party is in favor of FHLs, the assumption is not known for sure these signs are used to help develop trust. Signaling theory focuses on how the signal that comes from proposing laws and campaigning will influence attitudes in favor of those voting for them. Signaling theory contains elements of information asymmetry as when individuals do not have complete information about their position, agents will focus on cues to gather available information (Gregory et al, 2013).

When information is insufficient voters will not have favorable attitudes towards state policymakers' or the organization, to aid in recruitment the study provided by Gregory et al, (2013) found organization websites provided cues to reduce information asymmetry and aid in recruitment. State policymakers that provide more information in the form of signals or cues will demonstrate that there is trustworthiness to gain (Gambetta & Székely, 2014).

Friske et al, (2023:376) claims the signaling theory consists of five phases: “the signaler, the signal, the receiver, receiver feedback, and the signaling environment”. Signaling theory is an exchange between two parties, in the social interaction the “signaller” communicates a signal of worth to the “receiver” (Rodrigues & Rebelo, 2023).

The signaler (sender) decides how to communicate the “signal” (information) to the other party (receiver) (Connelly et al, 2011). The “signaller” is the sender of information to a receiving party, in this study state policymakers' are the signaler. The “signal” may be any action or behavior that conveys information to others, the message is sent without explicitly stating the message. Fetal heartbeat laws considering passage by state policymakers' are identified as the signal.

Receivers interpret the signal and depending on the response of the receivers could send feedback to gain more efficient signaling from the signalers (Friske et al, 2023). The receiver(s) are state-level voters and political actors. The receiver feedback is in the form of votes or actions that demonstrate support or nonsupport. The signaling environment impacts the “transmission and interpretation of signals and feedback” (Friske et al, 2023:376, Connelly et al, 2011). The signaling environment influences how signals are perceived and interpreted by receivers, the environment sets the context for effective communication. The signaling environment is the state the sender or receivers are in. The environment of the state (geographic location) impacts the social and cultural beliefs. The essential component(s) of signaling theory is explained to inform of the process involved in communicating signals.

An empirical test of signaling theory was conducted by Yasar et al, (2020) the study focused on the impact of presential signaling and the influence on financial markets due to the informal power possessed. The study by Yassar et al, (2020) accomplishes this by using two separate data sources of public papers (Public Papers of the President of the USA) between (1981) and (1999) of Presidents (Reagan, Bush, and Clinton) of the United States papers, speeches, and public remarks. This empirical test conducted by Yasar et al, (2020) may be used to help explain how state policymakers’ create passage of fetal heartbeat laws.

In the study by Yasar et al, (2020) Presidential signals are designated as good (positive), bad (negative), or neutral, signaling theory is tested empirically by evaluating the presidential signals sent and then the response from the receiver. Yassar et al, (2020) claim the reputation of the sender, will allow the ability to exploit or manipulate the

signal, the power of the signal is hinged (dependent) on the sender's credibility. In this study, the reputation of state policymakers' may help their ability to control the impact of the signal (e.,g FHLs). The state policymaker's credibility decides how FHLs are received (support or nonsupport). Legitimacy was discussed earlier on how this is necessary for signals to be impactful. Sending signals are only messages without the perceived reputation or credibility. Yasar et al (2020) found that receivers react stronger to negative signals and positive signals from a credible insider signaler to help reduce information asymmetry. The passage of fetal heartbeat laws may be perceived as a negative signal to those who support abortion rights. FHLs may be perceived as a positive signal from those who don't support abortion. When the signal is from a credible insider signaler (e.,g, State policymaker) who is considered trustworthy and knowledgeable within a particular group or organization (e.,g, Republican affiliation) the signal will be received positively. Yasar et al (2020) study helped explain the impact a positive or negative signal has on the receiver (e.g., in this study voters).

Signaling theory is extended by Bird et al, (2005) using the symbolic representations of self as a signal of communicative information is similar to the concept of symbolic capital by Bourdieu. I will explain more below, but briefly, symbolic capital is the social value and influence that individuals or groups possess based on their cultural, political, or religious affiliations.

The concept encompasses the symbolic resources that can be used to shape perceptions, gain support, and advance one's interests through the recognition and validation of self. Bird et al, (2005:222)

[Signaling theory] provides a way to articulate idealist notions of the intangible social benefits that might be gained through symbolic representations of self with more materialist notions of individuals as self-interested but socially embedded decision-makers.

Signaling theory contains elements of symbolic value due to the inherent merit or service, the interaction between signaler and receiver is relational and communicative thus, symbolic representation has influence (Bird et al, 2005). Symbolic capital is set in motion when signaling a particular stance on reproductive rights such as support for fetal heartbeat laws or non-support. State policymakers' convey a message about the state's position on the protection of fetal life and can be used to gain support from individuals or groups who prioritize these values. The passage of a fetal heartbeat law can enhance the symbolic capital of state policymakers.

Symbolic Capital

Women's reproductive health is governed by state policymakers' that choose to protect or regulate women's access to sexual and reproductive health services. State policymakers' impact decisions regarding access to reproductive health and rights by utilizing symbolic capital. Fetal heartbeat laws are succeeding in passage when state policymakers' leverage their use of symbolic capital. The concept of symbolic capital in this discussion is focused on how state policymakers' employ symbolic capital to shape the perception and discourse surrounding reproductive rights and healthcare.

Symbolic capital is defined as being commonly associated with the possession of honor, status, and legitimacy (Pret et al, 2016). Pierre Bourdieu & Wacquant, (2013:397) explain symbolic capital as "any difference that is recognized, accepted as legitimate,

functions by that very fact as symbolic capital providing a profit of distinction”. This definition focuses on providing distinctions or recognition as the main difference among capital, symbolic capital encompasses the “symbolic” value of economic, cultural, or social capital (Lebaron, 2014). Symbolic capital is recognized by an agent or organization’s reputation, authority, and prestige (Terjesen & Elam, 2009). Symbolic capital is relational and communicative because it involves the exchange and recognition of symbolic resources in the sense that it is built and maintained through interactions and connections with others.

Symbolic capital is communicative because it relies on the transmission and interpretation of symbolic representations, such as cultural values, beliefs, and affiliations, to convey meaning and establish social hierarchies. The perceived value of capital will influence agents and organization’s social status, notoriety, and power dynamics within their respective social fields (Xiaohong 2019). Pierre Bourdieu’s concept of symbolic capital focuses on the ability of agents to employ symbolic capital from the value and influence that symbols, cultural resources, and beliefs hold in the process of shaping social hierarchies and power dynamics (Doherty, N., & Dickmann, 2009).

Symbolic capital is a compelling form of capital that may generate belief, and trust, and legitimize political action (Harvey et al, 2011). The value of symbolic capital is beyond accolades and praise, the value lies within one’s intrinsic value of the state’s political actor’s legitimacy (Fuller and Tian, 2006). The influence of symbolic capital is dependent on the perceived value others attribute to it (Locock et al, 2017) (Pret et al, 2016).

Symbolic capital is “based on perceptions and appreciations; the beliefs that are shared by social agents” (Doherty & Dickmann, 2009:303). This reinforces how symbolic capital is relational and communicative of the interaction.

Doherty & Dickmann (2009:303) claim Bourdieu’s meaning of symbolic capital is to “ensure the reproduction of power dynamics and facilitate the coordination of socioeconomic life”. State policymakers’ can replicate symbolic capital by securing the trust and faith of their voting base and other political actors (Dulfer et al, 2023). State policymakers’ legitimacy is aided by appealing to voters and their shared beliefs and values. State policymakers’ that attempt to pass FHLs will succeed in accumulating symbolic capital by appealing to those who identify with anti-abortion values. Symbolic capital can shape public opinion, policy decisions, and access to essential services, impacting the overall reproductive health landscape for women. State policymakers’ with symbolic capital have legitimized themselves to make decisions that impact women’s access to reproductive health and rights. State policymakers’ are maintaining compliance by their perceived value of authority (i.e., anti-abortion laws passed, FHLs).

This iterative and increasing process can be explained by the political action of state policymakers with political and symbolic capital. The signal of passage of an FHL increases compliance from in-group status (voters). Compliance may resemble “obedience or submission”, symbolic capital allows agents to influence others by altering their perception (Doherty & Dickmann, 2009). Symbolic capital is compared by Bourdieu to Max Weber’s idea of charisma, the reputable reputation, credibility, and status within a particular social field allows agents in institutions to exert influence

(Bourdieu & Wacquant, 2013). Voters are influenced by state policymakers' who propose legislation that aligns with their moral, religious, or political values.

This in return, follows the receiver's feedback in the form of voting. The environment where this signal was received (i.e., the passage of FHL) will contribute to the symbolic capital increase. Voting for support of these FHLs activates and increases symbolic capital. Political actors and specific voters increase symbolic capital from their cause and continue this iterative and increasing process.

Understanding symbolic capital allows the study of social, cultural, and political hierarchies to view how the legitimatization of agents in institutions is formed (Özbilgin et al, 2005). The capital involved is mostly symbolic as the audience will have their intrinsic value of the state's legitimacy (Fuller and Tian, 2006). Symbolic capital explains why certain political actors perform certain political actions, the purpose is to stabilize and maintain symbolic capital (Doherty & Dickmann 2009). Bourdieu's concept of symbolic capital provides us with an explanation for how power dynamics can be shaped by the influence of social and cultural resources Bourdieu & Wacquant, 2013, Harrits 2011).

There is support in the literature indicating that Bourdieu's concept of symbolic capital explains how power is maintained through this iterative and increasing process (Bourdieu & Wacquant, 2013). Within a cooperative or competitive social field, the accumulation of symbolic capital allows agents in institutions to maintain dominance within their respective social fields (Pret et al, 2016). Agents and institutions that possess symbolic capital and have gained a prestigious value of worth may impact relationships and structures due to the amount of symbolic power accrued (Doherty & Dickmann,

2009). Bourdieu claims legitimate power is symbolic power, that has been reinforced by “authority” (i.e., FHLs) (Pellandini-Simányi, 2014).

Bourdieu defines symbolic power as “defined in and through the given relationship between those who exercise power and those who submit to it” (Harrits 2011;240). Harrits, (2011) explains how political practices and power are seen as a form of symbolic capital and symbolic violence. Symbolic violence will arise when an agent or institution possesses symbolic capital and those who are “misrecognized” are subject to the tyranny of the majority (Loyal & Quilley, 2017). Symbolic capital goes beyond materialistic and non – non-materialistic goods, symbolic capital is not the economic (e.g., social, or cultural) capital possessed but rather the recognition or “recognized distinctions” (Bourdieu & Wacquant, 2013). Recognition may create an imbalance of power for those who are marginalized or a product of “misrecognition” (Bourdieu & Wacquant, 2013). Symbolic capital has been used in various studies as researchers have focused on the impact of perceived reputation and legitimacy (Bourdieu & Wacquant, 2013). Symbolic capital plays a crucial role in shaping power dynamics and success (Doherty, N., & Dickmann, 2009). Symbolic capital can be leveraged to help pass fetal heartbeat laws by strategically appealing to cultural values, religious beliefs, and emotional symbols associated with the sanctity of life and the protection of unborn children.

By framing the law in a way that resonates with these cherished symbols and values, state policymakers’ may gain garner support and create a sense of moral obligation for passage of FHLs from policymakers’, religious institutions, and anti-abortion constituents ultimately increasing the likelihood of passing such legislation.

The community (i.e., policymakers', religious institutions, and anti-abortion constituents that are in favor of these types of proposed laws will shape the power dynamics by voting, campaigning, and negotiating in favor of passage.

Symbolic capital is the use of symbolism to shape public perception and influence the decision-making process. State passage of anti-abortion laws (i.e., fetal heartbeat laws) is argued to be more likely to succeed in the passage when state policymakers' leverage symbolic capital by employing powerful imagery, language, and narratives that evoke strong emotional responses. By associating the heartbeat of a fetus with the idea of life and personhood, state policymakers' create a symbolic connection that resonates with agents who prioritize protecting the rights of the unborn. This symbolism can sway public opinion and influence decision-makers to support the passage of FHLs and shape the environment of reproductive rights.

Implications

The theoretical application of Michael Spence's (1978) signaling theory and Pierre Bourdieu's discussion of symbolic capital allows for an analysis of political actions on anti-abortion legislation, i.e., FHLs passed by state policymakers'. Signaling theory explains the state passage of fetal heartbeat laws by looking at certain signals (e.g., FHLs) state policymakers' send a signal as a way to convey a particular stance or message on the issue. By sending these types of signals, state policymakers' can demonstrate their stance on abortion issues and gain political support. Signaling can be a strategic move to maintain their political standing and appeal to the voter base.

Symbolic capital helps to explain the state passage of fetal heartbeat laws by highlighting how certain individuals or groups leverage their social status, influence, or symbolic resources to shape public opinion and policy decisions. Symbolic capital is similar to using their reputation or prestige to gain support for their cause.. Signaling theory and symbolic capital work together in an iterative process that can be used to explain how state policymakers' create passage of fetal heartbeat laws. This iterative process is an approach to help repeat the cycle to get closer to the desired outcome.

The iterative process that creates passage of fetal heartbeat laws begins as an interaction between state policymakers' and voters. In this interaction state policymakers' are the signaler with symbolic capital possessed to send a signal of their position on various issues such as abortion. State policymakers' (signaler) send the signal (FHLs) to the voters (receivers) in hopes of effectively communicating their position to their state – level partisan constituents. At this point the signal has been sent to the receiver (e.g., voters and political actors), this is when symbolic capital comes in as the concept explains how state policymakers' actions are legitimized. A signal on its own may not carry much weight on it's own, but when it is supported by symbolic capital, it gains legitimacy and credibility. Symbolic capital adds value and enhances the effectiveness of the signal. The symbolic capital involved is similar to social capital because it is relational and communicative. This means that the interaction between state policymakers' and their specific audience is necessary for the success of the communicative message. The symbolic capital involved is the state policymaker's reputation or credibility that has been documented previously. The state policymaker has built rapport or trust with voters in favor of this specific issue.

The signal (e.g., FHL) sent to the receivers (e.g., specific voters and political actors) increases in-group status with those who are supporters of the cause or affiliated with any political, religious, or moral belief that supports FHLs. The voters (receivers) of this signal (FHL) are to provide receiver feedback in the form of votes that demonstrates their support or nonsupport. Finally, the state (signal environment) where this signal is received and communicated by voters and state policymakers' influences the receptiveness of the signal.

Signaling theory and symbolic capital help explain the state passage of fetal heartbeat laws by examining how certain signals, such as religious or moral beliefs, are used to gain support and influence decision-making processes. Fetal heartbeat laws may be seen as "signals" of political or ideological stances. Fetal heartbeat laws act as signals within the drafting of the legislation. Abortion will continue to be a longstanding debated issue that has opposing viewpoints from different political and moral spectrums.

The passage of anti-abortion laws such as fetal heartbeat legislation will continue to have success and failure in various social fields (States). Signaling theory and Symbolic capital through a Bourdeisuan perspective suggests that as state policymakers' pass or fail FHLs, success for state passage will depend on the state policymaker's symbolic capital possessed and how the signal of abortion rights or anti-abortion rights is received by state voters and other political actors. This is done through state policymakers providing trustworthy signals or cues related to their stance on the issue and possessing legitimate symbolic capital that is perceived as prestige or reputable. Investigating how states' social composition impacts state policymakers' to create passage of fetal heartbeat laws will be the focus of this study.

CHAPTER III

METHODOLOGY

Data

I combined data from four main data sources to explore the relationship between the State's social composition and state policymakers' passage of fetal heartbeat laws: The Guttmacher Institute State Legislative Tracker, The American Community Survey Data (ACS), The Association of Religion Data Archives National Religious Congregations and Membership Study (2010). (ARDA), and Ballotpedia. Secondary data sources such as the National Conference of State Legislatures (NCSL), National Governors Association (NGA), U.S. Bureau of Labor Statistics, and Legiscan were used to support the four main data sources. Data was collected from all these sites of all fifty states in the U.S. for the time of study (2010 – 2021).

Guttmacher Institute State Legislative Tracker (2023) is an online database that focuses on research and policy organization of sexual and reproductive health and rights. Guttmacher's database tracks state abortion laws every year. The database captures information on anti-abortion legislation such as fetal heartbeat laws (FHLs) in all 50 states in the U.S.. Passage of FHL was validated using websites, journal articles, and social network websites. Guttmacher Institute State Legislative Tracker (2023) allows users to navigate the site by year, the sexual and reproductive health issue in question (abortion contraception, pregnancy), and specific areas of the law (i.e., abortion bans, fetal tissue, provider-specific restrictions) ACS is collected by the United States Census Bureau.

ACS is comprised of data every year through comprehensive surveys of millions of U.S. households. ACS data contains datasets of tables, maps, and advanced searches of the state, year, demographic and housing, age, and sex composition estimates.

Data on religious composition came from the Association of Religion Data Archives National Religious Congregation and Membership Study (2010). The ARDA is a database that is comprised of accessible religious data and statistics. The ARDA is comprised of available surveys, polls, and other data from various sources that have been submitted by researchers.

ARDA was collected from available data sources including the i.e., General Social Survey, Pew Research Center, Association of Statisticians of American Religious Bodies (ASARB), and other available sources. The ARDA captures data on religious congregations and membership by way of a decennial census (10 years). Data at the time of preparation, was unavailable for (2020) due to the difficulties surrounding Covid -19. The Association of Religion Data Archives National Religious Congregation and Membership Study (2010) allows users to search for state–level percentages of religious traditions for the reporting year.

State–level partisan control was captured by Ballotpedia. Ballotpedia is a comprehensive online accessible nonprofit and nonpartisan data source. Ballotpedia is comprised of available data related to U.S. public policy, ballot and election information, and other related American political data. Ballotpedia operates by following source–selection guidelines to ensure factual content and will use primary sources when available.

Ballotpedia contains tables of information for state government trifectas that contain partisan control of the state-level Governorship, House of Representatives, and Senate, from (1992 – 2023).

The four primary sources for data collection may have limitations because of the use of available sources. The four primary sources of data were validated by secondary sources. The secondary data sources include the National Conference of State Legislatures (NCSL), the National Governors Association (NGA), the U.S. Bureau of Labor Statistics, and Legiscan.

NCSL and NGA are sources that operate similarly as the sources allow the search of former and current state governors and legislative branches (House of Representatives, senate) by state term in office and party affiliation. NCSL and NGA are both nonpartisan public associations that represent their respective titles (Governors, State legislators). The U.S. Bureau of Labor Statistics (BLS) is a federal agency of the United States Department of Labor. The BLS collects data by surveys on the U.S. economy and labor market at businesses and households. BLS publishes reports of state-level quarterly census of employment and wages that identify states by FIPS codes (Federal Information Processing Standards). FIP codes are a set of numbers that are used to identify geographic locations such as states.

Legiscan provides nonpartisan legislative tracking data services for all 50 states in the U.S. and Congress. Legiscan is accessible to the public and government agencies. Legiscan monitors the state and reports state legislative bills. Legiscan provided the use of a full bill text legislative search engine to collect drafts of FHLs.

Despite the limitations of the dataset collected, the database can be easily replicated because of the open–source material. The accuracy of the data collected has been verified with supporting secondary sources.

Measures

The resulting database captures a wide variety of state characteristics, to account for the risk of FHL passage time–varying state-level racial/ethnicity demographics, state–level sex composition that identified as a female of the reproductive age (15–44), state–level religious composition, state–level partisan control to determine the risk of fetal heartbeat laws present during the time of study (2010 – 2021). Datasets were identified by FIPS codes for the respective state.

State–level racial/ethnicity demographics and members of the state population that identified as female of the reproductive age (15 – 44) were retrieved from the American Community Survey (ACS). State–level racial/ethnicity composition for each year (2010 – 2021) was found using ACS data on demographic and housing estimates, the data revealed tables of state–level racial/ethnicity one–year estimates for each racial category collected.

The five minimum categories of race recognized by the Office of Management and Budget (OMB) were “White”, “Black” or “African American”, “American Indian” or “Alaska Native”, “Asian”, and “Native Hawaiian” or “Other Pacific Islander”. “Some other race” is recognized as the sixth and is included to account for those who identify by some other race than the five minimum categories recognized by the OMB (Census.Gov). Percentages of “American Indian” or “Alaska Native” were combined as well as percentages of “Asian”, “Native Hawaiian”, and “Pacific Islander” combined due to the

limited number of individuals identifying as these races in each state. Hispanic is not recognized as one of the five minimum categories of race by the OMB due to Hispanic recognized as an ethnicity. Hispanic is included in the dataset from ACS data due to the large number of women identifying as Hispanic disproportionately receiving abortions (Medoff, 2014).

The dataset collection groups together “American Indian” or “Alaska Native”, “Asian”, “Native Hawaiian”, “Other Pacific Islander” and “Some Other Race” into the variable “Other” because of the limited state-level percentages found. The collection of state-level racial/ethnicity demographics was included to account for factors that influence policy decisions related to women’s reproductive health. Using tables from the ACS of surveys on U.S. demographic and housing estimates in a one-year estimate contributed to the race/ethnic population composition of states at risk of FHL passage.

The state-level population of sex composition of the population share that identified as females at risk of pregnancy (15-44) was approximately calculated for the time of study by data from the ACS. (2010 – 2021). ACS survey data contains statistical estimates of state-level age/sex composition, the data revealed tables of state-level age/sex composition one-year estimates for the population of females at risk of pregnancy (15-44). Various age group definitions exist for “reproductive age” The consistency for reproductive age is (15-44) identified using the definition from the CDC’s Division of Reproductive Health (CDC 2014). The percentage of reproductive age of women as (15-44) was included to account for a wider scope such as teen pregnancies and be within the range regarded consciously as the age of women’s reproductive health.

Racial disparities in abortion access exist for females at risk of pregnancy in various states (Beckman, 2017). Inequalities in abortion access for members of the state-level population across racial/ethnic, age, and sex composition impact the risk of passage for FHLs. The impact of state-level racial/ethnic categories and females of the population at risk of pregnancy is included because of the potential for impact on attitudes towards abortion (Wilcox, 1990).

Voting behavior for members of the state composed of various racial/ethnic and age/sex composition will impact abortion attitudes depending on racial and socioeconomic differences between supporters of either Republican or Democratic political parties (Abramowitz, 1995).

The comprehensive state-level partisan data available from Ballotpedia, NGA, and NCSL was used to determine state-level government (partisan) control. State-level control was determined by a “trifecta”, trifectas are when a state governorship, state senate, and a state house are controlled by one primary party (Ballotpedia). Democratic trifectas, Republican trifectas, and mixed control for all 50 states during the time of the study were sought out.

There are a total of 99 legislative chambers in the states including Nebraska, as Nebraska is unicameral and the only state with a single-house system (National Conference of State Legislatures 2023). State-level partisan control was gathered to determine how political partisanship impacts state risk of FHL passage. Abortion and state-level party politics have been found to impact anti-abortion policymaking (i.e., FHLs) (Reingold et al, 2021). State-level access to abortion has varied from state laws since the (1980s) (Wilson, 2021). The Republican and Democratic parties have

historically had different positions of support on the abortion issue (Medoff & Dennis, 2011).

Partisan political control for Republican state governments has increasingly and historically contributed to the support of anti-abortion laws (Medoff, et al, 2011). Guttmacher Institute State Legislative Tracker (2023) and Legiscan contributed to constructing a fetal heartbeat law timeline. For each state – year, I measured states as “passing”, “not passing”, or “no longer at risk” (i.e., already passed). The use of available data from the Guttmacher Institute State Legislative Tracker (2023) and Legiscan allowed for the determination of the impact of states at risk of FHL passage. The link to the law was provided through the use of Legiscans’s available data on state legislative bills to determine the effect of FHLs passed.

The percentage of religious composition for those that identified as members of Catholic or Evangelical Protestant affiliation was collected from the American Religion Data Archive National Congregation and Membership Survey (2010) (ARDA). The decision to gather data for Catholics and Evangelical Protestants is because these religious traditions are significantly present in the United States, Catholics are a religious institution that is the largest of any other single religious institution in the United States (Calfano & Ponder 2023) (ARDA).

Abortion is a highly salient issue in the United States for many individuals as positions on abortion will vary across religious traditions (Hoffmann & Johnson 2005). Catholics and Evangelical Protestants hold positions on abortion that are unfavorable as traditionally abortion has been a central issue for members of these religious affiliations (Welch et al, 1995, Hoffmann & Johnson, 2005).

The inclusion of Catholic and Evangelical Protestants is because of the impact of religious affiliation as a predictor of voting behavior on abortion legislation (Richardson & Fox, 1972). Evangelical Protestants have been found to impact elections by voting GOP (Republican) (Schwadel 2017). Individuals of the state who identified as members of the Roman Catholics are of large number in the United States and variation in voting for support for policies concerning abortion legislation (Calfano & Ponder, 2023). The decision-making of members of the population is influenced by factors related to the intersectionality of race-ethnicity, religion, and public policy preferences, the Catholic vote may still impact voting behavior toward anti-abortion legislation (Bartkowski et al, 2012, Calfano & Ponder, 2023, Marchetti & O’Connell, 2018). State-level data provided by ARDA of members of the population that identified as Catholic and Evangelical Protestant affiliation was collected to determine state risk passage of FHL for the time of study (2010 – 2021) for all 50 states. ARDA data contributed to the collection of state-level percentages of Catholics and Evangelical protestants by state and year. Guttmacher Institute State Legislative Tracker contributed to the development of the fetal heartbeat law timeline for the time of study (2010 – 2021).

Methods

In this study, I aim to identify the state passage of fetal heartbeat laws during the time of study from (2010 – 2021) and to understand how states are at risk of passage of FHLs. This will be achieved by executing survival analysis techniques 1) Kaplan – Meier estimator (Figure 1) and 2) Cox proportional hazard regression (Table 3).

The Kaplan- Meier estimator is a specific technique used in survival analysis to estimate the survival function, which represents the probability of survival over time. The Kaplan-Meier method used in this study graphs the survival function of states based on the time (2010-2021) to the occurrence of the “event” (passage of fetal heartbeat laws). The Kaplan – Meier estimator is useful in determining the probability of states enacting fetal heartbeat laws over time. Analyzing the time–to–event data may track the progression of law enactment and assess the survival probabilities of states without the law. The Kapan-Meier provides insight into the timing and patterns of law passage. State FHLs are identified as present during (2010 – 2021).

The Cox proportional hazard regression is a survival–time analysis technique used in survival analysis to assess the relationship between covariates. The covariates are the independent variables examined for the state risk passage of FHLs. Independent variables include state-level racial/ethnicity demographics, state–level sex composition that identified as a female of reproductive age (15-44), state–level religious composition of members of the population that identified as Catholic or Evangelical Protestant affiliation, state–level partisan control (Republican Trifecta, Democratic Trifecta, Divided Control), and the hazard rate (i.e., risk of FHL passage occurring at a given time).

CHAPTER IV

RESULTS

The measures in the study attempt to cover risk factors of state passage of FHLs. Multiple variables are found to be significant indicators of whether a state is at risk of passage of FHLs. The results will demonstrate the impact of state-level data collected from the population on the success rate of FHLs passed. The data analysis follows the procession of tables and figures. Descriptive statistics of the full sample, a model of FHLs passed by state-level partisan control, a Kaplan Meier curve of the passage of state FHLs from (2010 – 2021), a hazard model of risk factors of FHL passage, and a Cox proportional hazard regression that estimates the risk of passing FHL by government control (i.e., Republican trifecta, not Republican trifecta).

Table 1. Description of State-Year Analytic Sample

	Percent	Std. Dev.	Min	Max
Partisan control				
Share of Republican Trifecta	44.83	0.50	0	100
Race/Ethnicity				
White NH	76.15	13.07	22.2	95.4
Black NH	10.48	9.45	.3	38
Hispanic	11.59	10.23	1.1	50.1
Other (American Indian or Alaskan Native, Asian Pacific Islander, Native Hawaiian, and Other)	9.32	8.28	1	51.6
Religious Affiliation				
Share of Catholic and Evangelical Protestant affiliation	32.94	9.01	8.07	49.97
Age and Sex composition				
Share of female at risk of pregnancy between the age of 15-44	38.52	1.70	33.6	44.5
N = 50 States	N = 600 Observations			

Table 1 illustrates the state-year description of the 50 states in the U.S. and for the time of study (2010 – 2021). The sample is composed of the state’s social composition factors such as the percentage of state government-controlled Republican trifectas, population share of racial/ethnicity that is Non- Hispanic White, Non -Hispanic Black, Hispanic, Other (American Indian or Alaskan Native, Asian Pacific Islander & Native Hawaiian, Other, population share of those that identify as members of Catholic and Evangelical Protestant and population share of those that identified as female and at risk of pregnancy from (15 – 44). The purpose of this quantitative study is to determine the variable that impacts the state passage of FHLs. The description of the state–year analytic sample collected from the four independent and supporting secondary sources is described in Table 1.

Table 1 demonstrates the percentage, standard deviation, minimum, and maximum of the independent variables in question. The main variables of interest demonstrate the state–year sample of 44.83% of state–years had Republican partisanship completely in control of the state government. The implication of state–partisan control by Republican trifectas is that the sample collected republican trifectas are nearly in control half of the study compared to states that are a share of Democratic trifecta and mixed control.

The percentage of the population share that identified the state-level as members of Catholic or Evangelical Protestant found in the state–year description (2010) (Table 1) is 32.94%. The maximum percentage of the population share that identified as members of Catholic or Evangelical Protestant is 49.97% in Louisiana (2010). 26.49% of the

population share identified as members of Catholic affiliation, 23.48% of the population share identified as members of Evangelical Protestant contributed to the maximum in Louisiana (2010).

The minimum percentage population share identified as members of Catholic or Evangelical Protestant was 8.07% in Utah (2010). 5.79% of the population share identified as members of Catholic, 2.28% of the population share identified as members of Evangelical Protestant combined for the minimum value 8.07% of state – years.

The population share that identified as females that are at risk of pregnancy between 15 – 44 for the state – years is 38.52%. The maximum percentage population share for females at risk of pregnancy between 15 – 44 for the state – years is 44.5% in Utah (2021). The minimum percentage population share for females at risk of pregnancy between 15 -44 for the state – years is 33.6% in Maine (2018).

The percentage population share for state–level race/ethnicity for non–Hispanic White is 76.15%. The minimum percentage population share for state–level race/ethnicity for non–Hispanic white is 22.2% in Hawaii (2021). The maximum percentage population share for state–level race/ethnicity for non-Hispanic White is 95.4% in Vermont (2010). The percentage of population share for state–level race/ethnicity for non–Hispanic Black is 10.48%. The minimum percentage population share for state–level race/ethnicity for non–Hispanic Black is 0.3% found in Montana (2013). The maximum percentage population share for state–level race/ethnicity for non–Hispanic Black is 38% in Mississippi (2016 – 2019). The percentage of population share for state–level race/ethnicity for Hispanics is 11.59%. The minimum percentage population share for state–level race/ethnicity for Hispanic is 1.1% in West Virginia (2011).

The maximum percentage population share for state-level race/ethnicity for Hispanic is 50.1% in New Mexico (2021).

The percentage of population share for state-level race/ethnicity for Other (American Indian or Alaskan Native, Asian Pacific Islander, Native Hawaiian, and Other) is 9.32%. The %. The minimum percentage population share for state-level race/ethnicity for Other is 1% in West Virginia (2011, 2012, 2014). The maximum percentage population share for state-level race/ethnicity for Other is 51.6% in Hawaii (2019).

Table 2. Passage of FHL by State Government Partisan

FHLPASS	DEMOCRATIC TRIFECTA	MIXED CONTROL	REPUBLICAN TRIFECTA	TOTAL
No	136 (23.21%)	193 (32.94%)	257 (43.86%)	586
Yes	0	2 (14.29%)	12 (85.71%)	14
TOTAL	136	195	269	600

[Table 2] Describes the distribution of fetal heartbeat laws passed between (2010 – 2021) for all 50 states by government control. The total number of fetal heartbeat laws passed found in this study was fourteen (14). 12 (85.71%) fetal heartbeat laws passed were by states government controlled by Republican trifectas (43.86%). Two (2) (14.29%) fetal heartbeat laws passed were by mixed control state governments (32.94%) (i.e., divided government). Zero (0) fetal heartbeat laws were passed by state governments controlled by Democratic trifectas (23.21%) during the study period.

Figure 1. Passage of State FHL, 2010 - 2021

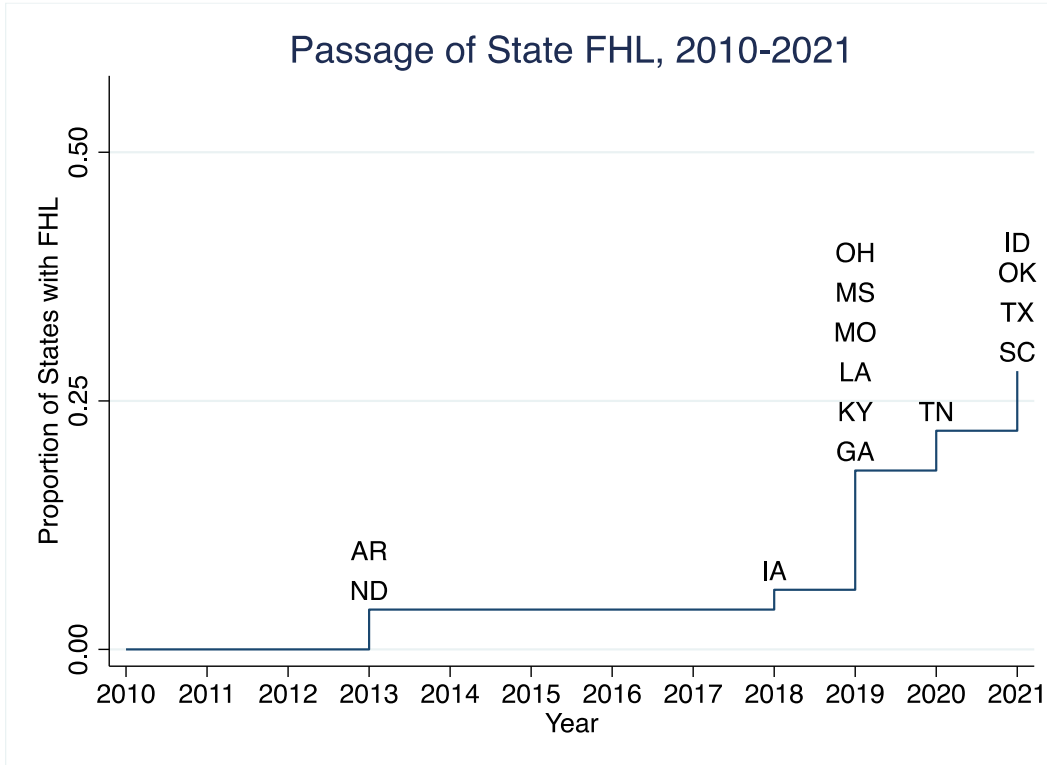


Figure 1 demonstrates a Kaplan – Meier curve following states at risk of passing fetal heartbeat laws between (2010 – 2021). The introduction of FHLs was first found in (2011) influenced by model legislation drafted by Faith2Action (Downing, 2023, Evans & Narasimhan, 2020). The first successful passage of an FHL by a state occurred in North Dakota (ND) (2013), followed by Arkansas (AR) in the same year. There was a small drought period of states that did not create passage of FHLs from (2014 – 2017). The time without passage of FHLs may be explained by legal challenges to these proposed bills that act to prohibit abortion upon detection in cases as early as six weeks (Haining et al, 2020, Fritz, 2021). Iowa (IA) in (2018) would be the start of FHLs continuing to pass by states for the remainder of the time of study. (2019) is an effective year for passage of FHLs for six (6) U.S. states (i.e., Georgia (GA), Kentucky (KY), Louisiana (LA), Missouri (MO), Mississippi (MS), and Ohio (OH).

Anti-abortion legislation was effective (i.e., FHLs passed) from states that may have been influenced by other states and implemented “copycat” laws (i.e., modeled legislation) of FHLs (Bueno et al, 2023). 2020 followed up with Tennessee (TN) continuing the trend of state policymakers’ successfully creating passage of an FHL. The last observed year of the study (2021) found four states that created passage of FHLs, these states were Texas (TX), South Carolina (SC), Oklahoma (OK), and Idaho (ID).

14 total failures (passage of FHLs) occurred throughout the time span. Once a state passes an FHL that state is no longer at risk of the “event” and leaves the study. The study ended in (2021), leaving 36 states remaining at future risk of passage of an FHL.

Table 3. Hazard Model for Risk of State FHL passage.

_t	Haz. ratio	Std. err.	P> z 	[95% conf. interval]	
Republican Trifecta	5.23	4.18	0.04	1.09	25.07
Reproductive Age of Woman (15-44)	1.50	0.37	0.11	0.92	2.43
Catholic & Evangelical Protestant	1.09	0.04	0.03	1.01	1.17
Non – Hispanic Black	0.99	0.03	0.74	0.92	1.06
Hispanic	0.96	0.05	0.40	0.87	1.06
Other (American Indian or Alaskan Native, Asian Pacific Islander & Native Hawaiian Other)	0.88	0.11	0.29	0.69	1.12

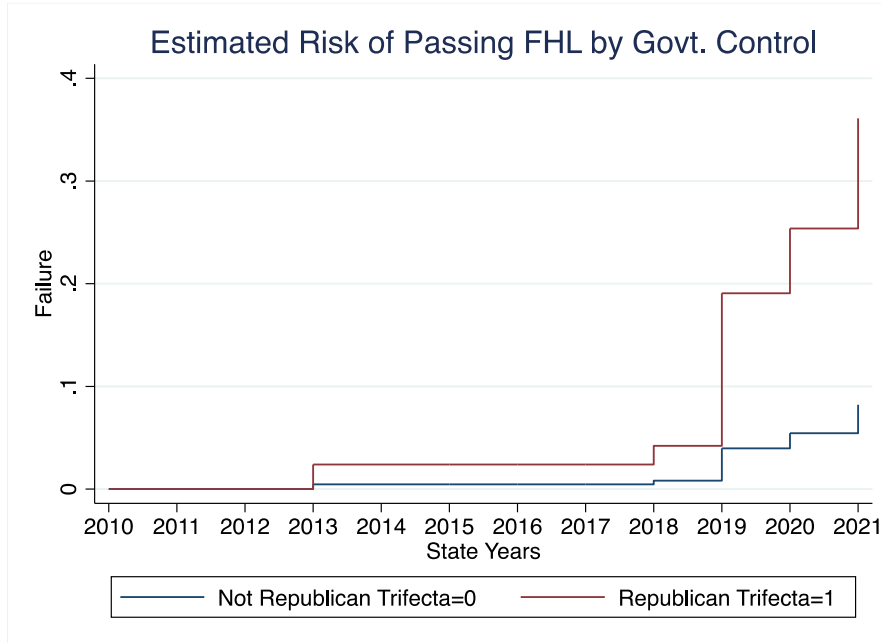
Table 3 is a Cox proportional hazard regression for survival data used in this study to assess the effect of various risk factors or exposures (covariates) on survival time between (2010 – 2021). The term “hazard” is defined as “the risk of an event occurring per unit of time, conditional on the subject having survived up to that time” (Thuijs et al 2018:3). The hazard ratio estimates the likelihood of passing a fetal heartbeat law passed during the time of the study. Boston University School of Public Health (2016) explains If the hazard ratio is less than 1, then the predictor is protective (i.e., less likely to pass an FHL) and if the hazard ratio is greater than 1, then the predictor is associated with increased risk (i.e., more likely to pass FHL).

Republican trifectas have a hazard ratio of 5.23, (the 95% confidence interval is 1.09, 25.07). This suggests the complete control of state government by Republican trifectas increases the risk of passing a fetal heartbeat law by 423% higher. The result is statistically significant since the p-value of Republican trifectas is $0.04 < 0.05$. The hazard ratio of Republican trifectas is the highest risk indicator of passing an FHL compared to the other variables in question.

The population share of females that are of reproductive age (15 – 44) have a hazard ratio of 1.50, (the 95% confidence interval is 0.92 and 2.43). This suggests the population share that identifies as female and at risk of pregnancy between 15-44 increases the risk of passing an FHL by 50% higher. The 50% increase in hazard ratio does not impact the hazard risk significantly as the value is not significantly significant ($p=0.11$). The population share of females that are of reproductive age (15 – 44) indicates a higher hazard risk of FHL passage than the state–level racial/ethnic demographics and the population share of members of Catholic or Evangelical Protestant.

The share of the population affiliated with Catholic or Evangelical Protestants has a hazard ratio of 1.09 (the 95% confidence interval is 1.01 and 1.17. This suggests the population share that is affiliated as Catholic or Evangelical Protestant increases the risk of passing an FHL by 9%. The 9% hazard ratio does not impact the hazard risk significantly; however, this hazard ratio is not significantly different from 0 ($p=0.03$). The state–level share of the population of Non-Hispanic Black, Hispanic, and Other (American Indian or Alaskan Native, Asian Pacific Islander & Native Hawaiian Other) hazard ratios are 0.99 (Non-Hispanic Black), 0.96 (Hispanic), and 0.88 (Other) are protective predictors (i.e., less likely to pass a fetal heartbeat law).

Figure 2. Estimated Risk of Passing FHL by Govt. Control



[Figure 2] Plots the estimated cumulative hazard functions, the figure is evaluated by two plots of identical states starting in (2010) through (2021) at risk of fetal heartbeat law passage when controlled by Republican trifectas. When a state government is controlled by a Republican trifecta the risk of FHL passage increases compared to state governments that are not controlled by Republican trifectas. Republican partisan control of a state’s legislative/executive branches has been a positive indicator of states passing anti-abortion laws and vice versa (i.e., Democratic trifectas are not an indicator of anti-abortion laws) (Medoff, & Dennis 2011). [Figure 2] Demonstrates the risk of fetal heartbeat laws passing increasing over time after the first passage of occurrence in (2013). State governments controlled by Republican trifectas significantly contributed to the increased passage of fetal heartbeat laws in (2019) and (2021). The hazard risk associated with state-level government control is a finding that will be discussed more in the conclusion.

CHAPTER V

CONCLUSION AND DISSCUSION

This thesis has investigated the use of signaling theory and the influence of symbolic capital on state actors' policymaking. The findings from the research illustrate the environment of reproductive rights has evolved for select states during the observed time of study from the passage of FHLs. Abortion has been and will remain a central issue for the foreseeable future because of the conflicted debate.

The objective of the study was to identify state characteristics that influence the passage of an FHL. The results of the study provide an overview of the factors of state-level population share that are least and most likely to impact state passage of a fetal heartbeat law. Findings are similar to recent studies that have been reviewed. The similarity in findings is: (1) Most FHLs (i.e., anti-abortion laws) passed were by state governments that are controlled by Republican trifectas, and (2) Southern states that are found in the Bible Belt region passed FHLs. The hazard factors that increase state policymakers' risk of passing an FHL are several different social, cultural, and political factors.

The review of the literature provides background knowledge on the environment of reproductive rights by providing a historical context of key events that shaped the landscape for sexual and reproductive health and rights. The events include state policymakers' creating passage of various legal challenges to abortion access. The actions of state policymakers' were fueled by the support of interest groups, voters, or political lawmakers who are supporters of the issue. The evolving landscape led to the implementation of fetal heartbeat laws. FHLs and their impact were explained using

supporting literature. Followed by, explaining how state-level variation exists in abortion policymaking. The background knowledge provided by the literature review helped provide insight into the theoretical framework to explain how state social composition impacts state policymakers' passage of fetal heartbeat laws.

Discussion

The research question in this study is a complex issue influenced by multiple factors that cannot be best explained by one single answer. Various state-level factors, such as state-level partisan control, population share affiliated as members of Catholic or Evangelical protestant, population share of females at risk of pregnancy between (15 – 44), and state-level race/ethnicity composition all play a role in shaping the decision – making process. The risk of passage of anti-abortion bills such as FHLs is greater for other state – level factors than others but cannot be stated as a direct cause for causal linkage.

Still, from the research, it seems logical to hypothesize that the risk of a state passing a fetal heartbeat law or anti-abortion bill increases when the state government is controlled by a Republican trifecta. A previous study by Wilson, (2021) of the post-2016 politics of abortion found state governments controlled by a Republican trifecta are enacting and regulating abortion the highest. Republican trifecta is when a state has the Republican majority in the governorship and both chambers of the legislature (Ballotpedia, 2023). One possible explanation found by Bentele et al, (2018) is state governments entirely controlled by Republican trifectas were found to have fewer female Democratic Legislators and a significant presence of Evangelical protestants within the state governments. In this study FHLs were passed in 14 states, 12 state governments

controlled by Republican trifectas passed a fetal heartbeat law. “Unified partisan control of the state legislature and party of the executive are significant predictors of abortion policy” (Wilson 2021;379).

State governments that were under mixed control (e.g., divided control) were responsible for two (2) FHLs passing during this time of study (2010 – 2021). State governments that have mixed control are impactful in the passage of legislative acts when a political party holds primary control of both legislative chambers despite the executive branch (Governorship) being controlled by the opposite party (Wilson 2021). Arkansas (2013) passage of fetal heartbeat legislation is when the state government was divided (Ballotpedia, 2023). Republicans held primary legislative control for both chambers (House of Representatives, Senate). Louisiana’s passage of an FHL in (2019) was under state government control that was divided (Ballotpedia, 2023). Republicans held primary legislative control for both chambers (House of Representatives, Senate). During the case of state governments that were under mixed control, Democrats held the state’s executive branch (Governorship) in (2013) and (2019). Legislative control was more impactful in the passage of fetal heartbeat legislation than control of the state governorship. This risk addresses composition differences like religion or demographics as the political and religious composition of Louisiana is different from Arkansas.

State governments controlled by Republican trifectas explain the state passage of fetal heartbeat laws. State government trifectas provide the political power and alignment necessary to push forward legislation that aligns with Republican policy priorities, including restrictions on reproductive rights (Medoff, & Dennis, 2011).

The control of both the executive and legislative branches by Republicans creates an environment conducive to the passage of fetal heartbeat laws. The results of this study and supporting literature aid in answering how state government controlled by Republican partisanship impacts the success of passing a fetal heartbeat law.

In this study, state government control by a Republican trifecta was found greatest in U.S. southern states. Previous research supports this finding that conservative states residing in the South are more aggressive toward passing anti-abortion legislation such as FHLs (Evans et al,2023). The passage of fetal heartbeat laws was greatest among states that fell under the “Bible Belt” as Arkansas, Georgia, Louisiana, Mississippi, South Carolina, Oklahoma, and Tennessee all passed fetal heartbeat laws during the time of the study (Brunn et al, 2011). States that are a part of the “Bible Belt” are states that are associated with religious conservatives in the South of the United States (Barton 2010). Previous research supports that Catholic and Evangelical Protestant are religious institutions that dominated life in the South and have impacted reproductive rights (Castle 2011, Charles 2014). The findings from this study support this as in Louisiana (LA) of the collected data of population share affiliated as Catholic or Evangelical Protestant, (LA) had the highest percentage of population share affiliated as Catholic or Evangelical Protestant found in a state that passed a FHL.

In a qualitative study conducted by Lambert et al, (2023) an analysis of anti-abortion discourse in South Carolina found fetal heartbeat laws were impacted by anti-abortion supporters who cited religion as the basis of morality and position on the issue. The impact of the population shares of the state that is affiliated as Catholic or Evangelical Protestant were not hazard risks of FHL passage in this study. However, the

religious component is an influence on attitudes and beliefs that do impact state policymakers' and voters.

State policymakers' may use religious beliefs and moral values as signals to appeal to their voter base. Signaling theory and symbolic capital aid in explanation for state policymakers' passage of fetal heartbeat laws. State policymakers' are members of the state government-controlled Republican trifectas or another form of state-partisan controlled government (i.e., Democratic-controlled state, mixed control state) that need support from voters. Anti-abortion laws are attractive to those who don't support abortion for reasons such as religious or moral beliefs. Abortion access laws may signal their alignment with certain cultural or ideological values. The signal of their position on issues such as abortion dictate how these state policymakers' will be received by voters of supporters of anti-abortion.

State policymakers' may use religious beliefs and moral values as signals to appeal to their voter base, demonstrate their alignment with certain cultural or ideological values, and convey their stance on issues related to reproductive rights. State policymakers' attempting to pass anti-abortion laws such as FHLs benefit from demonstrating their religious beliefs as voters of Republican and Catholic or Evangelical Protestant are provided an indicator of favorable policies that may lead to support. Republican states pass fetal heartbeat laws because of the support from constituents that identify as Republican and Catholic or Evangelical Protestant affiliation. State policymakers' that have accrued symbolic capital by advocating or positioning themselves in support of anti-abortion bills will have greater success to pass FHLs.

Symbolic capital helps explain how state policymakers' pass fetal heartbeat laws as religious beliefs and values hold significant influence on abortion. State policymakers may leverage this symbolic capital to signal their alignment with religious values and appeal to their religious voter base. Passing fetal heartbeat laws aligns with the symbolic capital of Republican states by reinforcing religious, conservative, and partisan values. These laws strengthen the cultural identity of these states and enhance the credibility and influence of Republican lawmakers among their constituents who share similar beliefs and values.

State policymakers' that align themselves with religious principles, may gain support for the passage of anti-abortion laws (i.e., FHLs) and shape public perception of these policies. Symbolic capital is gained from the support of religious voter bases contributing to the state legitimacy. Signaling theory and symbolic capital may be used similarly to explain how state governments controlled by Republican trifectas explain the state passage of FHLs. Rather than religious influence the political power of Republican policymakers' is used to signal or convey their alignment on abortion with certain cultural or ideological values, such as those related to religion or conservative beliefs. State republican policymakers maintain their honor, status, and legitimacy by acting like Republicans do. Republicans' policymakers typically pass anti-abortion legislation as supported in the literature review above. State policymakers signal their stance on political issues that will attract voters of the Republican party. State governments controlled by Republican trifectas signal their position on issues such as abortion and in return leverage symbolic capital. State policymakers' that are leveraging symbolic capital and controlled by Republican trifectas impact the passage of fetal heartbeat laws.

Symbolic capital is the social value and influence that individuals or groups possess based on their symbolic resources such as their cultural, political, or religious affiliations.

Symbolic capital is understood as political power and influence that Republicans hold when they have control over the executive and legislative branches of a state government (trifecta). State policymakers' can rally support and pass laws that restrict reproductive rights such as FHLS.

This power allows them to shape policy agendas and advance legislation that aligns with their party's values, including restrictions on reproductive rights like fetal heartbeat laws.

The study observed the passage of fetal heartbeat laws between (2010 – 2021) that demonstrated the recent activity of FHLs increasing. Fetal heartbeat laws were first passed in the U.S. in (2013) as North Dakota (ND) and Arkansas (AR) passed FHLs. Passage of FHLs went through a drought period of time as FHLs did not successfully pass in states again until (2018) by Iowa (IA) and steadily increasing till the end of the study (2021).

The research from previous literature has found that fetal heartbeat laws such as the bill passed in Texas (2021) were influential in other states introducing a FHL of their own (i.e., copy-cat laws) (Bueno et al, 2023). (2019) was an active year for fetal heartbeat laws passed that may be explained by the influence of Georgia. Georgia's LIFE ACT (FHL) may have been an influence for the other several states to create a passage of an FHL in (2019) (Sizemore, 2019). Anti-abortion laws are modeled by other states when successfully enacted in hopes of a successful return in their state. Policymaking consists of copy-cat legislation for state governments seeking passage of laws and policies. Fetal heartbeat laws have spread to other states passing legislation modeled after theirs, the

Alabama Human Life Protection Act cites language used in a FHL of six-weeks as the threshold for when a heartbeat forms and life begins (Bueno et al, 2023, LegiscanHB314, 2019).

The hazard risk of the population shares of state-level race/ethnicity and the population share of females that are at risk of pregnancy between (15 – 44) were examined in this study. The population share of state-level race/ethnicity was not an indicator of a hazard risk of passing an FHL. However, in some of the states that did or did not pass a FHL during the observed time of study their population share of race/ethnicity may have impacted the support for these types of laws. A state that did not pass an FHL had the highest percentage of various state-level races/ethnicities found such as New Mexico (Hispanic) was found to be historically a state government controlled by a Democratic trifecta. Democratic states such as New Mexico don't traditionally pass anti-abortion laws such as FHLs. The remaining race/ethnicity is difficult to claim contributing to the passage of an FHL due to the complexity and intersectionality of the issue.

How state policymakers' create passage of a fetal heartbeat law cannot be answered definitively. The assumption from this study can be made that state – controlled Republican governments or legislative branches (mixed control) are a hazard risk of fetal heartbeat law passage by state policymakers'. This study hopes to have helped provide insight into the various state-level factors that are impactful in anti-abortion laws succeeding in the passage. The use of a quantitative approach and selected variables contributed to finding out how best these variables from available data (estimates) explain state policymaking of FHLs.

The use of signaling theory and symbolic capital as sociological theories is best used to explain how legislative decision-making for fetal heartbeat laws is made possible as state policymakers' (signaler) communicate a signal (FHL) of their position on abortion to voters (receivers) that is well received from the symbolic capital (legitimacy) the state policymaker has acquired. The voters (receivers) in turn provide feedback by voting for these state policymaker's and their proposed bills within the state (signaling environment).

Limitations

Potential limitations to the current study include the complexity of passage and court decisions. The traditional legislative process for passing state laws involves the bill moving through both chambers of the state legislature: The house of Representatives and the Senate. Complexities of passage arose when a bill was passed in the lower house but failed in the upper house. Court decisions impact passage of state laws as legal precedents are decisions made by higher courts that have been established evaluating the constitutionality of proposed laws. These precedents shape the legal reasoning behind court decisions and contribute to the evolving legal landscape surrounding abortion rights.

Other state- level characteristics may influence legislative action that were not accounted for in this study. This study only accounted for select state – level characteristics (i.e., Racial/ethnic composition, Sex composition (share female of the reproductive age 15 – 44), Religious composition (identified as members of Catholic or Evangelical Protestant affiliation) and State –level government (partisan) control. Other state – level characteristics such as public opinion, economic conditions, and social and

cultural factors (i.e., level of education of the general public, lawmakers, or public advocacy groups) may influence the legislative actions.

The limitation for the statistical method of a Cox proportional hazard regression used in this study is the method focuses on associations and may not reflect casual linkages. The cox proportional hazard regression identifies whether there is a statistical relationship between the predictor variables and the risk of the event occurring over time. The statistical method is used to analyze the association between the survival time of individuals and predictor variables.

The method does not establish causation but rather measures the strength and direction of the association between the predictor variables and the hazard or risk of an event.

Future Research

This study has contributed to the future work in the field of policymaking and reproductive rights in the United States. This research offers a look at the relationship between the state and state-level social composition factors related to the risk of an anti-abortion law passing (i.e., passing fetal heartbeat laws). Potential future research may investigate new restrictive abortion laws following the *Dobbs v. Jackson Women's Health Organization* decision. The decision in *Dobbs v. Jackson Women's Health Organization* overturned constitutional protections for abortion access established in the decision of *Roe. v Wade*. The decision to overturn *Roe. v. Wade* allowed the state more greatly to have the power to regulate or prohibit abortion. Allowing possible new restrictive abortion laws to arise such as total bans or other forms of anti-abortion legislation.

As this study found zero (0) fetal heartbeat laws passed were from democratic controlled governments. The decision in *Dobbs v. Jackson Women's Health Organization* has allowed state policymakers' the power to regulate or prohibit abortion. State governments that are controlled by Republican Trifectas pass anti-abortion laws restricting access. In turn, Democratic governance's that are controlled by democratic trifectas may have the opportunity to create laws increasing access to abortion or protections for access. Future research may investigate access to abortion as a newly defining feature of Democratic governance. Future research may investigate the transmission and diffusion of legal text in restrictive laws. This refers to the process through which laws, regulations, or legal frameworks with restrictive elements are communicated, spread, and adopted within and across different jurisdictions or communities. Future research may aid in identifying the language commonalities used in fetal heartbeat laws that may have been adopted in more restrictive anti-abortion laws (e.g., Alabama Human Life Protection Act).

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Appendices

Appendix A

TABLES

Sample Descriptives

Table 1. Description of State-Year Analytic Sample

	Percent	Std. Dev.	Min	Max
Partisan control				
Share of Republican Trifecta	44.83	0.50	0	100
Race/ Ethnicity				
White NH	76.15	13.07	22.2	95.4
Black NH	10.48	9.45	.3	38
Hispanic	11.59	10.23	1.1	50.1
Other (American Indian or Alaskan Native, Asian Pacific Islander, Native Hawaiian, and Other)	9.32	8.28	1	51.6
Religious Affiliation				
Share of Catholic and Evangelical Protestant affiliation	32.94	9.01	8.07	49.97
Age and Sex composition				
Share of female at risk of pregnancy between the age of 15-44	38.52	1.70	33.6	44.5
N = 50 States	N = 600 Observations			

Table 2: Model for Fetal Heartbeat Laws

FHLPASS	DEMOCRATIC TRIFECTA	MIXED CONTROL	REPUBLICAN TRIFECTA	TOTAL
No	136 (23.21%)	193 (32.94%)	257 (43.86%)	586
Yes	0	2 (14.29%)	12 (85.71%)	14
TOTAL	136	195	269	600

Table 3: Cox Proportional Hazard Regression

Table 3. Hazard model for risk of State FHL passage.

_t	Haz. ratio	Std. err.	P> z 	[95% conf. interval]	
Republican Trifecta	5.23	4.18	0.04	1.09	25.07
Reproductive Age of Woman (15-44)	1.50	0.37	0.11	0.92	2.43
Catholic & Evangelical Protestant	1.09	0.04	0.03	1.01	1.17
Non – Hispanic Black	0.99	0.03	0.74	0.92	1.06
Hispanic	0.96	0.05	0.40	0.87	1.06
Other (American Indian or Alaskan Native, Asian Pacific Islander & Native Hawaiian Other)	0.88	0.11	0.29	0.69	1.12

Appendix B

FIGURES

Figure 1: Kaplan – Meier Curve of Fetal Heartbeat Laws Passed by States in 2010 - 2021

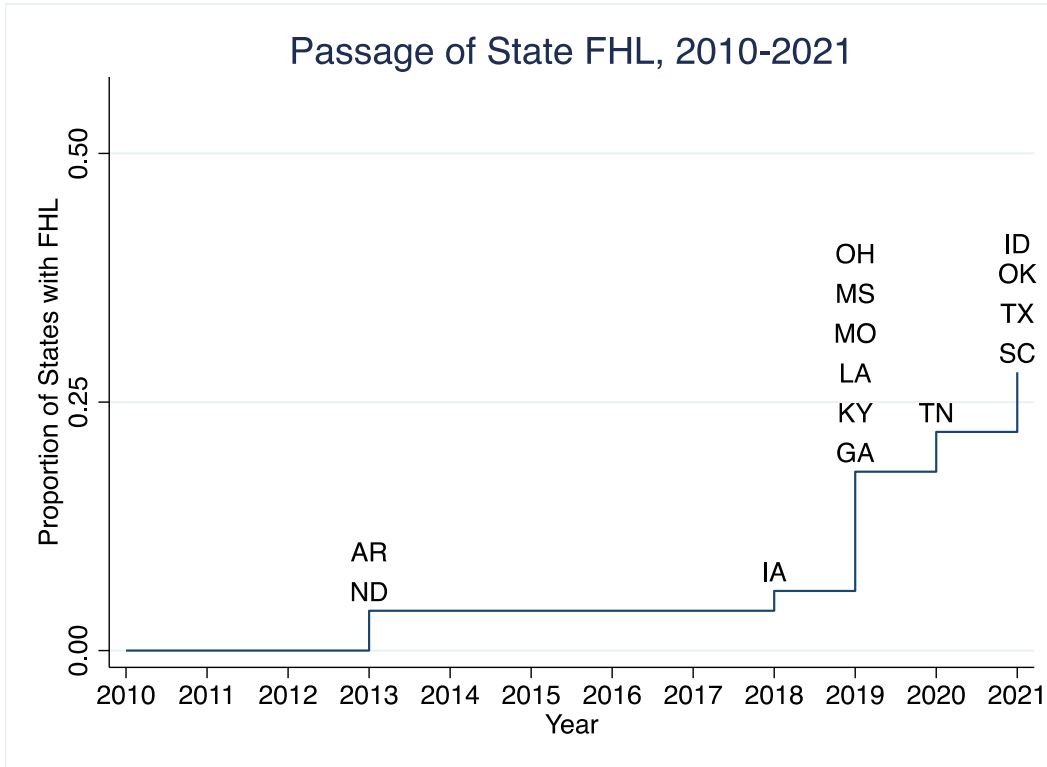


Figure 2: Hazard Plot of State Passage of FHL by State Governmental Control

